

HSIS

HIGHWAY SAFETY INFORMATION SYSTEM

Guidebook for Data Files NORTH CAROLINA

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Introduction to the North Carolina HSIS Guidebook

The North Carolina database incorporated into HSIS contains four different files -- accident characteristics, vehicles in the accidents, occupants in the vehicles, and roadway inventory (which includes AADT data). Before 2000, the data was derived from the "MERGE" system, a mainframe database maintained by the NCDOT. Since 2000, the three crash subfiles have been derived from the "NCDMV" system maintained by the NC Department of Motor Vehicles (DMV) while the roadway inventory file has been provided by the NCDOT GIS section.

For ease of use, the three accident subfiles and the Roadlog File have been converted to SAS files in HSIS. Raw file data provided to the Highway Safety Research Center (HSRC) are retained as backup information. The documentation (variable listings, definitions, etc.) for these raw files and for the SAS files that are developed from them are available at Federal Highway Administration (FHWA) offices.

Beginning in 2004, the HSIS system was converted from a SYBASE relational database to an ORACLE relational database for internal use. Data files for a given State are linked and manipulated by HSIS staff using SAS code and, as in the past, we have continued to produce SAS format libraries for each of the variables in each of the files. This Guidebook will concern these SAS files - their formats, completeness, and quality. However, researchers requesting data from HSIS can request the output in various formats such as SAS, Microsoft Excel® and Access®, dBase, ASCII, etc.

As noted above, the accident data are divided into three separate subfiles. The first containing the basic accident information on a case by case basis, the second containing information up to 15 vehicles in each accident, and a third containing all occupants in each of the 15 possible vehicles. The vehicle and occupant data can be linked to the basic accident file for a specific case using the accident report number. The accident subfile can be linked to the Roadway Inventory File using a county/route/milepost variable.

Unlike the accident file, which is referenced to a point on the roadway, each record in the Roadway Inventory File contains information on a homogeneous section of roadway (i.e., a stretch of road which is consistent in terms of certain characteristics, with a new section being defined each time any of the characteristics changes). Each record on the basic inventory file contains current characteristics of the roadway system, and includes such variables as surface width, lane width and type, shoulder width and type, median information and other variables. This file also contains information on traffic volumes -- AADT and some data on total percent trucks and truck percent during peak time periods.

Details of the files noted above are included in the following sections.

DETAILS OF MAJOR FILES

The Accident Files

Accident data are collected statewide by all police departments in North Carolina on a standard form as prescribed by state law. The prescribed accident-reporting threshold is currently personal injury or \$1,000 property damage. Prior to 1996, the crash-reporting threshold was \$500. It is felt that this threshold is generally used for all accidents occurring on the entire North Carolina roadway system, both in rural and urban areas. It is probably more consistently followed in the rural areas where the State Highway Patrol does most of the reporting. However, it is a feeling of North Carolina data users that the overwhelming majority of municipal police agencies also follow the same reporting threshold.

There are currently approximately 280,000 accidents in the entire state each year. For each crash that is investigated, an accident report form is sent to the North Carolina Department of Motor Vehicles (DMV) Accident Reports Division, the central repository of the accident data. The DMV is responsible for coding and keypunching all of the information on the form, including the data used in locating the accident to the roadway system. Of the 230,000 accidents that are keypunched each year, approximately 70% of these are linkable with the Roadway Inventory File. Note that the non-linkable accidents are primarily those occurring on city streets that are not part of the "state system". The number of linkable accidents has increased considerably from 2003 onwards. This is because the number of inventoried miles to which crashes can be mileposted has increased. Hence, for 2012, HSIS has about 144,000 crashes that are linkable to the roadway inventory. Before 2003, the number of linkable crashes was significantly lower (about 100,000 in 2000 and about 95,000 in 1997). The HSIS currently includes data from 1990 through 2012.

In terms of coding accident location, the North Carolina system is different than many of the other state systems. The crash location system is a county/route/milepost system, which is based on a computerized (non-physically mileposted) "paper" reference system. The Department of Motor Vehicles types the basic location information provided by the investigating officer. This includes the route, on which the accident occurred, and a distance and a direction to a reference point such as an intersecting roadway, a bridge, or a city boundary. The computer then assigns a milepost based on these data. In providing their location information, police officers are asked to report distance to the nearest one-tenth of a mile in rural areas when the crash is not at or near an intersection. If an accident occurs within 500 feet of an intersection, the distance is to be reported in feet. In urban areas, locations are generally provided in feet from a nearby intersection. There is some indication that the "less than 500 feet" criterion is not always followed for rural intersections. It is felt by NC DOT and other users that approximately 80 to 90 percent of the mileposted accidents on state-system

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roads in urban areas are correctly mileposted within 100 feet of their true location. Similarly, it is felt that approximately 80% of those in rural areas are mileposted within a tenth of a mile of their true location.

Of the 79,000 miles of roadway on the North Carolina state system, approximately 39,000 miles are included in this computerized reference system until 2001. Accidents could only be located to these 39,000 miles of roadway. For 2002 – 2008, between 60,000 and 70,000 miles are included, resulting in a significant increase in linkable accidents (i.e., approximately 140,000 annually). For 2009 and later, the number of total linkable miles increased to approximately 78,000. However, due to changes in the AADT assignment procedures, the number of linkable miles with AADT decreased to 27,000 in 2009 and 2010 and 43,000 in 2011 and later. The numbers of linkable crashes decreased to 132,000 in 2009-10 and 144,000 in 2011 and later. (It is noted that the 27,000 miles in 2009 and 2010 is still larger than the inventoried and mileposted systems in most states within HSIS). The linkable routes include all Interstate, U.S., and N.C. routes, and major secondary routes (down through collectors) in both rural and urban areas. While AADTs were estimated for a large number of urban and rural roads classified as "local" prior to 2009, they were only estimated for a limited sample of these local roads in 2009 and later. Thus, the un-linkable miles are predominantly secondary roads in rural areas and city streets in urban areas. (Note that there are no "county roads" in North Carolina since all except for non-system city streets are under State control.) Some accidents on primary routes in urban areas cannot be mileposted due to changes in street names, which have not been updated in the computerized mileposting program.

As indicated above, North Carolina is in the process of updating its accident record system by converting to a relational database. An important component of this modified system will be the ability for users of the data (e.g., Traffic Safety Systems Section staff) to make online corrections to accident locations in their use of hard copies.

The North Carolina accident file contains the basic variables found on most state accident files, with some important additions. There is both a first harmful event and a most harmful event variable, allowing one to better correlate injury to specific type of impact. Unlike other HSIS states, North Carolina accident files from 2000 onwards have some work zone related variables which allows one to locate a crash in relation to the location in the work zone and whether the work zone was marked or not.

The Vehicle file contains approximately 250,000 vehicles each year. As in accident file, the number of vehicles for 2002 – 2008 reflects the higher number of crashes that are present for these years because of a higher number of linkable roads. Unlike any other HSIS state, information on truck trailer width and length and total truck length is captured from the accident report form. This allows for categorizations of truck data not usually possible in most

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state truck files. There is a rollover variable that is separate from all other variables and specific to each vehicle, allowing one to separate rollover from both the type of accident and from impact with fixed objects. This allows the study of rollover as a result of other impacts, such as impacts with fixed objects. There is an officer judgment related to "drivability" of the vehicle, which can be used as a towaway threshold in certain analyses. From 2000 onwards, there are event variables in the vehicle file, which allows one to examine the sequence of events of an accident. Finally, there is also an indicator of airbag deployment. Note that due to change in reporting practices from 2000 onwards some variables were dropped and some new variables were added. A NOTE is added under such variables in the format section of the guidebook.

It should also be noted that the North Carolina Vehicle subfile did not contain detailed elements on large truck crashes proposed by the National Governor's Association (NGA) until 2000. In 1999 and earlier, supplemental NGA data were collected by some officers (primarily State Highway Patrol officers) on truck crashes on a supplemental report form. These data are submitted to the Truck Enforcement Unit at the Division of Motor Vehicles for computerization. Unfortunately, no standard accident number is available to link these data with the standard Accident File. However, in 2000, the accident report form was modified to include virtually all of the NGA-specified variables. Thus, these truck-related data are in the 2000 and later accident files.

The Occupant subfile includes information on all occupants in a vehicle, whether injured or not. This file contains approximately 350,000 occupants each year after 2002, and includes standard variables related to seating positions, sex, race, and injury. As with most other states, the injury variable in North Carolina is the KABCO system, which provides police estimates of injury level.

In general, the severity of crashes in North Carolina is somewhat more severe than in the other HSIS states, with more injury crashes and a lower percentage of PDOs. This probably stems from the fact that North Carolina is somewhat rural, as reflected by the slightly higher proportion of crashes in rural areas.

Tabulations were run to examine the question of reporting completeness and data quality for accident, vehicle, and occupant variables. Here, study of percent of "unknown," "not applicable," and "not stated" values for all key variables found in these files indicates that, in general, the data are quite complete. In most cases, non-coding occurs in less than one percent of the cases. For variables in which the percentage of non-coding is somewhat higher, a "NOTE" has been included under that variable listing in the later format sections of this Guidebook.

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To assess the accuracy of the accident variables (and the variables in the other files), we questioned users of the data and examined and compared certain single variable tables. In North Carolina, we questioned staffs in the Management Information Systems office who maintain the computerized files, the Traffic Safety Systems Section who use the data in various hazardous location analyses and other evaluations, and the Highway Safety Research Center staff who have used the data for more than thirty years in a variety of analysis efforts. The staff were interviewed concerning variables they feel are incompletely coded or that might be inaccurate. In general, most indicated that they felt that almost all the variables on the file were accurately coded. It is obvious that the "occupant restraint use" variable on the file is inaccurate, in that regularly conducted field observations of use indicate figures which are at least 10 to 15 percent lower than the values found in the accident file. (This is felt to be the case in accident-based measures of occupant restraint use in all states systems, particularly in states with a strong belt-use law which will cause drivers to report to the investigating officer that they have used the belt whether they have or not).

The Roadway Inventory File

Prior to 2010, the roadway inventory information was the responsibility of the Roadway Inventory Section, GIS Branch, of the NC Division of Highways. In 2010, the inventory information became the responsibility of the Inventory and Assessments unit within the Division of Highways. The traffic volume data is the responsibility of the Traffic Survey Group. Both units provide their data to the GIS Unit, who compiles and distributes the combined inventory and AADT data in quarterly releases. HSIS staff downloads the first-quarter release each year and uses the inventory data as the end-of-year file for the previous year (e.g., the first-quarter 2013 data are used as the 2012 HSIS file.) The AADT for the previous year are usually not released until the third quarter. HSIS staff downloads these data and merges them into the prior-year file. This means that unlike 2001 and earlier HSIS files, the 2002 and later files contain AADT data for that year (e.g., all AADT data in the 2012 file have an AADT Year of 2012).

The original roadway inventory file was based on field inventory and constructions plans and was developed a number of years ago. Since that time, copies of all construction, resurfacing, or major widening plans are sent to the Inventory and Assessments unit who input data from the plans. Thus, the updating is done on an ongoing basis.

As noted above, the basic inventory file contains current characteristics of the state road system. It is estimated that there is approximately 92,000 miles of total roadway mileage in the state. There is 79,000 miles of roadway in the NC DOT roadway inventory system, approximately 14,000 of which are primary roadways. The 79,000 miles represents a very high

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proportion of total existing mileage in the state, much higher than is what is found in almost all of the states in the nation, since there are no “county roads” in North Carolina -- all such roads are controlled by the NC DOT. The remaining 15,000 miles of total state mileage are city streets.

As indicated above in the linkable-accidents discussion, the 2010 change in ownership of the NCDOT inventory and traffic volume files has resulted in new procedures for assigning AADT to roadway segments. This has resulted in changes to both (1) the amount of state-system mileage for which AADT estimates are made, and (2) inconsistencies between older and newer AADTs for some number of segments.

With respect to the first issue, prior to 2002, the HSIS system contains approximately 39,000 miles of crash-linkable roadway. Because of a sustained NCDOT effort to increase the number of miles to which crashes could be linked, the number of miles in the HSIS system increased to between 60,000 and 70,000 for 2002 – 2008. For 2009 and later, the number of total crash-linkable miles increased to approximately 78,000. All these miles are in the HSIS system. However, due to changes in the AADT assignment procedures beginning with the 2009 file, the number of linkable miles with AADT decreased to 27,000 in 2009 and 2010 and 43,000 in 2011 and later. This decrease results from the fact that very few AADT estimates are included for approximately 36,000 miles of rural and urban state-system roads classified as “local” in these 2009 and later files. NCDOT feels that many of the base counts for these local roads are so old that they are no longer usable in estimating AADTs. (Note that the NC roadway inventory file contains an “AADT Year” variable that can be examined by the user to determine when a segment-AADT was estimated.) Even though AADT is perhaps the most important variable in the HSIS inventory file, a decision was made to retain these older local-road AADTs in the pre-2009 HSIS files. However, the user must be aware that they are often based on (very) old raw count data. A decision was also made to retain the 2009 and later road segments without AADT for use by users who either do not need AADT or who wish to develop their own AADT estimates for the segments with missing AADT.

With respect to the consistency across time issue, the new procedures are considered to be much more accurate than past procedures for some unknown number of highway segments. Indeed, example manual comparisons of count station AADTs to AADTs assigned to nearby segments conducted by NCDOT and HSIS staffs show this to be the case. Unfortunately, there is no systematic way of determining which segments have consistent data across the pre- and post-2009 period. After discussions with NCDOT staff, it was decided that the original AADT values for all road segments classified above “local” in the 2002 – 2009 HSIS roadlog files would be replaced with revised values based on the updated procedures to the extent possible. (The 2002 file was the earliest that NCDOT traffic staff had updated data

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for.) This revision required that 2010 "AADT segment" addresses (i.e., county/route/mileposts for the begin and end of each AADT segment) be extrapolated back to the 2002 – 2009 HSIS inventory file segments. This is likely to have introduced some error in the estimates on routes where the "address" of a given segment has changed over time due to major reconstruction efforts (e.g., lengthening an upstream curve). However, both NCDOT and HSIS staff feels that any error introduced is likely much smaller than errors that would have been introduced by not revising the 2002-2008 AADTs. Note that neither the AADT values for road segments classified as "local" for 2002-2008 nor the 2001 and earlier AADT estimates for all road segments have not been revised and are not likely to be revised in the future.

The average homogeneous section length in the NC (and HSIS) roadway inventory file is approximately 0.7 miles. Table 1 presents mileage breakdowns for all paved two-way roadways (i.e., omitting all unpaved and one-way roadways) for the latest available year, 2012. Note that the rows for individual roadway categories show mileage with AADT estimates present. As expected since it is a state-controlled system, the file is predominately rural in nature, with close to 78% of the roadways with AADT estimates being in rural or near-rural areas. (NOTE: Of the total amount of mileposted mileage available for inclusion in the basic Inventory File, approximately 750 miles of roadway were omitted. These roadways are either characterized as couplets (i.e., usually urban roadways with the same route number in which the two directions of travel are separated by one or more city blocks) or as other divided roadway with "unbalanced" geometrics (i.e., roadway segments in which the geometrics, such as shoulder width or type, are not the same in both directions of travel). This relative small amount of mileage is difficult to work with both in terms of characterization of a "standard" cross-section and in terms of appropriate linkage with the accident files.)

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Table 1 HSIS roadway mileage by roadway category (2012 data).

Roadway Category	Mileage
Urban freeways	1,008.68
Urban freeways < 4 Lanes	8.438
Urban multilane divided non-freeways	1,510.16
Urban multilane undivided non-freeways	625.996
Urban 2 In highways	13,754.83
Rural freeways	977.619
Rural freeways < 4 Ins	8.376
Rural multilane divided non-freeways	1,070.51
Rural multilane undivided non-freeways	158.2
Rural 2 In highways	55,533.95
Other	4395.278
Total	79,052.04

The basic HSIS Inventory File contains both route description variables and cross-section variables that would be considered common among state inventory files. It includes such "standard" items as right and left shoulder width and type, lane widths, number of lanes, median width and type, roadway surface description, AADT, percent trucks, and others. In addition, it contains information on terrain, whether a section is a HPMS sample section, information on total truck percentages for certain roadway sections, and an indication of traffic growth factors for sections for which such growth factors have been developed.

While there is no construction zone inventory or project history file in North Carolina, each section of roadway in the basic inventory file contains an "improvement type" flag, which provides the general type of the most recent improvement implemented. This would differentiate between renovation, repaving, major rationing, minor rationing, and traffic safety/traffic engineering improvements. However, it does not provide the types of traffic safety/engineering improvement actually done. The improvement flag is based on construction plans and other sources identified above. Unfortunately, the companion variable related to the year of the last improvement was discontinued in 2009.

The major gaps in the inventory information include intersection/interchange inventory information, passing sight distance, design speed and design volume, information on inside shoulders on divided roadways (as discussed below) and, most importantly, information on

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either horizontal curve or vertical grade data. In addition, there is no current computerized intersection inventory information available. Inventory information does exist on a separate file related to traffic signals. At this point it is not readily mergeable with the location file.

Examination of the single variable tables for key variables in the file indicates very little uncoded mileage for most of the variables -- less than 1.5%. The main problem variables are with the right and left "shoulder type" and "shoulder width," which are coded as "unknown" in over ten percent of the cases. Conversations with DOT staff indicated that this lack of inventory information involves both missing data and the inventory practices on divided roadways. On these divided roadways, "right shoulder" is indeed the outer shoulder on the right in the direction of inventory. However, in the base file, "left shoulder" actually refers to the outer shoulder on the far left side of the roadway, across the opposing lanes of travel. This is unlike other states where "left shoulder" on a divided roadway refers to inside, or median shoulder. Thus, for almost all of the divided roadways in North Carolina, there is no information on the inside, or median shoulder. There is information on median type and width, with the width being measured from the edge of the traveled lane, thus including the inside shoulder.

To determine the accuracy within the roadway file, both user and data maintaining groups within the North Carolina DOT were questioned, and a set of runs of variables that should be similar were compared to each other. Both the data maintenance and users staffs indicated that they felt the data in the universe file to be quite accurate. Field checks of the data in the HPMS samples have been done by the headquarters inventory staff, and indicate that the data accurately represented the cross sections of the roadway. As is the case for most states, the percent trucks assigned to each section are not as accurate as would be desired.

We also attempted to determine if there was consistency between variables for similar variables found in the Inventory File. In general, there was. For example, speed limit appeared to be consistent with functional class. Median type (including undivided) and median width were quite consistent in terms of miles in each category. There are two variables related to urban/rural location, with some differences indicated in the mileage that might be considered "rural" or "urban". One is "Population Group" (including "unincorporated"), and the second is "Urban/Rural Designated by Population". "Population Group" variable indicates that about 93% of the roads fall within rural areas, whereas "Urban/Rural Designated Population" indicates about 89% of the roads fall within rural areas.

Conversations with the DOT staff indicated that each is based on slightly different definitions. "Population Group" is based solely on whether the road segment is inside an incorporated town or city, regardless of city size. The second variable, "Urban/Rural Designation by Population" is based on a combination of incorporation and urbanized area

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classifications. In short, the two define slightly different categories, and, according to the DOT staff, neither is considered to be a better measure of the overall nature of the roadway (i.e., design, roadside, nature of surrounding area, etc.). In general, the roadway inventory file contains a large amount of mileage when compared to other state systems, and the data in the file appear to be quite accurate.

Finally, there remain inconsistencies across time with the variables related to “Total Truck Percent” and “Percent Trucks at Peak.” The latter is uncoded for over 75% of the mileage for all years and is discontinued in 2009. The variable “Total Truck Percent” is uncoded for approximately 90% of the mileage for pre-2000 years, but is present for between 94% and 98% of the mileage for 2000-2011. It should be noted that the 2009-2011 percentages are still based on the older “legacy” estimates and not on the new method of estimating AADT which began in 2009. The 2012 truck percentage estimates are based on the newer method described in the Traffic Data section below, and are felt to be more accurate than the earlier legacy estimates.

Traffic Data

As indicated above, significant improvements to the NC traffic data collection and AADT assignment efforts were made in 2010. The following describes the current program. The Traffic Survey Group of the NCDOT manages a Traffic Monitoring System (TMS) that generates AADT and truck percentage data used in the HSIS. The NCDOT GIS Unit publishes AADT data in the Road Characteristics file and the Traffic Survey Group publishes both AADT and truck data in an ESRI shape file. The TMS consists of a Continuous Count Program, a Coverage Count Program, and a Project Count Program. The Continuous Count Program involves the continuous 24-hour collection of volume, vehicle classification, and truck weight data at a sample of locations across the state. Continuous count sites are located on all types of highway facilities in all regions of the state. Approximately 70 Automatic Traffic Recording stations collect volume data (ATRs) and 44 legacy Weigh-In-Motion stations collected vehicle classification and truck weight data (WIMs). Continuous counts are screened for data quality and used to generate seasonal factors and statistics to support the Coverage and Project Count programs.

The Coverage Count Program involves the collection of short-term volume and vehicle classification counts to provide “coverage” of the major highway systems in North Carolina. Data are collected for 48 hours at each station at periodic intervals. There are approximately 48,000 volume-monitoring stations and 3,000 vehicle classification-monitoring stations. Using seasonal factors generated from the Continuous Count stations, the volume counts are factored to generate Annual Average Daily Traffic (AADT) estimates. This data are screened

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for consistency with historic trends at a station (temporal) and consistency between neighboring stations (spatial). Interstate mainline counts are collected every 5 to 8 interchanges and ramp counts are collected at all interchanges. Mainline interstate counts are factored to generate AADTs at these stations. AADT estimates on intervening segments are calculated by balancing the ramp volumes at interchanges between mainline count stations. Approximately 25,000 monitoring stations are updated annually including all interstate stations. All stations except interstates within major urban planning areas are updated biennially, half of the urban areas being updated each year. All primary route stations in rural areas are updated annually. Stations on rural secondary routes are updated biennially, approximately half of the stations each year. Stations not updated based on a new count during a reporting year have AADT estimated by applying growth factors to the previous count based AADT. Growth factors are calculated using count based AADT data only and are generated and applied by county or major urban area. This process generates a comprehensive volume coverage on all routes with a functional classification above Local. A partial coverage of Local routes is generated also. AADT data are used in Highway Performance Monitoring System (HPMS) reporting to FHWA, calculation of vehicle miles traveled (VMT), and support many processes within the NCDOT.

Vehicle classification counts are collected to provide a coverage of truck data for NC truck routes and National Highway System (NHS) routes. Vehicle classification counts are screened for data quality, seasonally factored to generate annual average volumes and percentages by vehicle class, and compared to historic values at the same station. This data are used to meet HPMS truck monitoring requirements, generate statewide average distributions, and are used for air quality modeling. Annualized truck volumes and percentages are generated for each count station. Vehicle classification coverage counts are updated on a three-year cycle.

The statistics generated from the data collected at the monitoring stations described above are applied to an extent of highway, called traffic segments. The minimum segmentation of the highway system for AADT traffic segments is related to the Functional Classification system (FC). For non-freeway routes, minimum segmentation is generated on a monitored route by the crossing routes with an FC above Local. When a segment is excessively long, or where land use causes high traffic variability along a segment, it will be subdivided into smaller traffic segments to provide a better representation of travel on the route. Freeway routes are segmented for AADT by their interchanges. Each segment extends from the center of an interchange to the center of the next interchange. Traffic segments on divided highways are generated for the inventory direction of the route only (this is defined by the GIS Unit). AADT reported on these segments are total travel for both directions. A volume monitoring station is maintained on each AADT traffic segment. The AADT data generated at the stations

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are reported on the AADT traffic segments. These segments are maintained and new segments added by the Traffic Survey Group when changes in the highway system are published by the GIS Unit. For monitoring stations located on Local FC, segments are not directly maintained. A segment reference is captured by performing a spatial join between the station points and the LRS arcs published by the GIS Unit. This method associates the AADT data with a portion of the route the AADT applies to but does not define where the extent of this AADT ends. For most segments captured using this technique, the actual extent of the AADT extends beyond the segment being reported.

With respect to truck traffic data, note that the updated truck percentages begin with the 2012 HSIS file rather than the 2009 file. Truck percentage data for 2009 - 2011 were still based on the legacy system, and would not be expected to be as accurate as the 2012 and later data. The 2012 and later vehicle classification data is collected to provide a coverage of truck data on NC truck routes and the NHS. No truck data are reported on routes that are not a truck or NHS route. There are 3,000 truck traffic segments across the state, each containing a vehicle classification monitoring station. For non-freeway routes, the minimum segmentation for truck traffic segments is related to the designated truck routes and NHS routes. Minimum segments are generated on a monitored non-freeway route where a truck route or NHS route intersects that route. Segmentation on freeway routes is generated using a two-step process. Major segments on a freeway are setup where other freeway routes intersect them. These segments are then subdivided where intersecting truck routes have higher truck volumes. Due to the high volume of trucks traveling on freeways, low volume truck routes have little effect on the volume of trucks on a freeway and additional segmentation is unnecessary.

In general, most truck traffic segments are comprised of multiple AADT segments. The annualized truck percentages generated from the vehicle class count data is assigned to each AADT segment that falls within a truck segment. Annual average truck volumes are then generated by applying the annualized truck percentages to the AADT data assigned to each AADT segment. This method ensures that truck travel estimates are synchronized with total travel estimates.

Finally, the Project Count Program within NCDOT provides traffic data collection services to support urban transportation modeling studies, traffic forecasting for TIP projects, and other transportation engineering studies. Services provided include the collection of daily, hourly, and vehicle classification counts using portable counters and turning movement and vehicle classification counts collected manually. Traffic counts are requested to provide more detailed traffic flows within a study area. A study will typically require a variety of data types collected at numerous locations. Counts are screened for data quality and consistency and are factored when requested. Approximately 1,400 portable counts and 400 manual counts are

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collected annually within the program. (It is noted that HSIS does not capture these counts, since there is no NC intersection inventory file. However, the counts could be used if such a file is developed in the future.)

Issues Related to Developing and Merging Files

As noted above, the accident data are subdivided into three subfiles -- accident, vehicle and occupant. These subfiles can be linked together using the "case number" variable, which includes the accident year (i.e., CASENO) present in each of the three files. When linking the occupant subfile, the additional linking variable "vehicle number" (i.e., VEHNO) must match so that the occupants are associated with the vehicle in which they were traveling. To link the Vehicle subfile with the Accident alone, first sort both subfiles by case number. To link the Occupant file with the other two subfiles, first sort both the Vehicle subfile and Occupant subfile by case number and vehicle position number. Next sort the Accident subfile by case number. Alternatively, the separate subfiles can be linked by specifying an SQL JOIN operation with the constraining condition that case number and vehicle number from each table are equal. SQL processing does not require the data to be pre-sorted and the output will not be in any particular sort order unless ORDER BY is specified. The Accident subfile can then be linked with the Roadway Inventory File using information related to county, route number, and milepost on the route. The actual linkage variables on the Accident file that are used in the merging operation are COUNTY, ROUTE and MILEPOST. To prepare the Accident subfile for linking with the Roadway Inventory File using a SAS data step process, the analyst must sort both the Accident and the Roadway File into location order (by COUNTY, ROUTE and MILEPOST on the Accident file and by COUNTY, RTE_NBR and BEGMP on the Roadway File). For the alternative SQL join, the analyst must specify an exact match on COUNTY, an exact match on ROUTE with RTE_NBR and a range match where MILEPOST occurs between BEGMP and ENDMP. (Programs to accomplish this merging and division are documented in the HSIS Programmer's Guidebook, available at FHWA.)

Finally, where appropriate and possible, a format, which defines categories within a given variable, has been developed for HSIS SAS variables. These categories are shown in the pages below. These formats have been saved in a format library, which can be provided to the user. As a naming convention, the "format name" is the same as the variable name; with the only exception being for certain character variables (in contrast with numeric variables). More specifically, a SAS format name has to be preceded by a "\$" if the variable is character in nature. There is an 8-character length limit on both variable name and format name. In cases where the variable name is already eight characters in length, the addition of the preceding "\$"

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would make the format name one character too long. In these cases, the format name is the same as the variable name except the final character of the variable name is dropped

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SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
AADT	AVER ANNUAL DAILY TRAFFIC	Roadway	NUM (8)	129
AADT_YR	YEAR OF ADT	Roadway	CHAR (2)	129
ACC_DATE	ACCIDENT DATE-MMDDYY	Accident	NUM (8)	31
ACCESS	ACCESS CONTROL	Accident	NUM (8)	31
ACCESS	ACCESS CONTROL	Roadway	CHAR (1)	130
ACCTYPE	FIRST HARMFUL EVENT	Accident	NUM (8)	31
ACCYR	ACCIDENT YEAR	Accident	CHAR(4)	32
ACTION	DRIVER CHARGED WITH VIOL	Vehicle	CHAR (1)	71
ADD_DAMG	ADDITIONAL PROPERTY DAMAGE	Accident	NUM (8)	33
AGE	OCCUPANT AGE	Occupant	NUM (8)	120
AGENCY	INVESTIGATING AGENCY	Accident	CHAR(1)	34
AIR_SW	AIRBAG SWITCH STATUS	Occupant	NUM (8)	121
AIRBAGS	AIR BAGS PRESENT IN VEH	Vehicle	CHAR (1)	71
AIRDEPL	AIRBAGS DEPLOYED DURING CRASH	Vehicle	CHAR (1)	72
AIRDEPL	AIRBAG DEPLOYED	Occupant	NUM (8)	121
ALC_DRUG	ALCOHOL/DRUG IN ACC	Vehicle	NUM (8)	72
ALCFLAG	ALCOHOL/DRUGS IN ACC	Accident	CHAR(1)	34
ALCFLAG	ALCOHOL FLAG	Vehicle	CHAR (1)	72
AMB_TIME	TIME OF AMBULANCE REQUEST	Accident	CHAR(4)	34
AMBUL	AMBULANCE REQUESTED	Accident	CHAR(1)	34
AMTDAMG	AMOUNT OF DAMAGE TO VEH	Vehicle	NUM (8)	73
AREATYPE	AREA TYPE	Roadway	CHAR (1)	130
AXLE_NBR	COMMERCIAL CARRIER AXLES	Vehicle	NUM (8)	73
AXLES	NUMBER OF AXLES FOR TRL#1	Vehicle	NUM (8)	74
AXLES2	NUMBER OF AXLES FOR TRL#2	Vehicle	NUM (8)	74
BEGMP	BEGIN MILEPOST	Roadway	NUM (8)	130
BIKEFLAG	BICYCLE IN ACC	Accident	CHAR (1)	35
BIKEFLAG	BICYCLE FLAG	Vehicle	CHAR (1)	74
BODY	CARGO BODY TYPE	Vehicle	NUM (8)	74
CASENO	YEAR + CASE NUMBER	Accident	NUM (8)	35
CASENO	NC ACCIDENT NUMBER WITH YR	Vehicle	NUM (8)	75
CASENO	NC ACCIDENT NUMBER WITH YR	Occupant	NUM (8)	121
CC_CITY	COMMERCIAL CARRIER CITY	Vehicle	CHAR (22)	75
CC_STATE	COMMERCIAL CARRIER STATE	Vehicle	CHAR (2)	75
CC_ZIP	COMMERCIAL CARRIER ZIP CODE	Vehicle	CHAR (9)	75

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SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
CCB_CITY	COMM CARR BUSINESS CITY	Vehicle	CHAR (2)	75
CCB_STAT	COMM CARR BUSINESS STATE	Vehicle	NUM (8)	75
CDL_IND	CDL INDICATOR	Vehicle	CHAR (1)	76
CITY	CITY/TOWN CODE (INCL CO)	Accident	NUM (8)	35
CNT_SEAT	NUMBER OF SEATS OCCUPIED	Vehicle	CHAR (1)	76
CNTR_PEAK_	NUMBER OF LANES IN THE DIRECTION OPPOSITE TO THE PEAK HOUR DIRECTION FLOW	Roadway	NUM (8)	130
CNTY_RTE	COUNTY ROUTE NUMBER	Accident	CHAR(10)	35
CNTYRTE	COUNTY ROUTE NUMBER	Roadway	CHAR (10)	131
COMMFLAG	COMMERCIAL VEHICLE IN ACC	Accident	CHAR (1)	35
CONTRIB1	VIOL/CONTRIBUTION FACTOR#1	Vehicle	NUM (8)	76
CONTRIB2	VIOL/CONTRIBUTION FACTOR#2	Vehicle	NUM (8)	76
CONTRIB3	VIOL/CONTRIBUTION FACTOR#3	Vehicle	NUM (8)	76
CONTRIB4	VIOL/CONTRIBUTION FACTOR#4	Vehicle	NUM (8)	76
CONTRIB5	VIOL/CONTRIBUTION FACTOR#5	Vehicle	NUM (8)	76
COUNTY	NC COUNTY NUMBER	Accident	NUM (8)	36
COUNTY	COUNTY	Roadway	CHAR (2)	131
CROSSMED	CROSS MEDIAN	Vehicle	CHAR (1)	77
DAMSEV	TAD#1 SEVERITY	Vehicle	CHAR (1)	78
DAMSEV2	TAD#2 SEVERITY	Vehicle	CHAR (1)	78
DAMSEV3	TAD#3 SEVERITY	Vehicle	CHAR (1)	78
DAY	DAY OF THE MONTH	Accident	CHAR (2)	38
DEPT_CDE	REPORTING DEPARTMENT CODE	Accident	CHAR (9)	39
DEVELOP	DEVELOPMENT AMOUNT	Accident	CHAR (8)	39
DHRVOL	DESIGN HOUR VOLUME	Roadway	CHAR (2)	132
DIR_TRVL	DIRECT OF TRAVEL ON	Vehicle	CHAR (2)	78
DIV	HIGHWAY DIVISION ROUTE	Roadway	CHAR (2)	132
DRG_RES	DRIVER ALC/DRUG TEST RESULT	Vehicle	CHAR (8)	79
DRG_SUSP	DRIVER ALC/DRUG SUSPECTED	Vehicle	CHAR (8)	79
DRSTATE	OUT OF STATE DRIVERS LIC	Vehicle	CHAR (1)	79

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SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
DRV_AGE	DRIVER/PEDEST AGE	Vehicle	CHAR (3)	79
DRV_BAC	DRIVER BLOOD ALCOHOL IN %	Vehicle	NUM (8)	80
DRV_CITY	DRIVER CITY	Vehicle	CHAR (1)	80
DRV_DOB	DRIVER DATE OF BIRTH	Vehicle	NUM (8)	80
DRV_INJ	DRIVER/PEDESTRIAN INJURY	Vehicle	CHAR (1)	81
DRV_LICENSE_R ESTRICT	DRIVERS LICENSE RESTRICT	Vehicle	NUM (8)	81
DRV_RACE	DRIVER/PEDEST RACE	Vehicle	CHAR (1)	82
DRV_REST	DRIVER RESTRAINT USAGE	Vehicle	CHAR (2)	82
DRV_SEAT	DRIVER/PEDEST SEAT POS	Vehicle	CHAR (1)	83
DRV_SEX	DRIVER/PEDEST SEX	Vehicle	CHAR (1)	83
DRV_ZIP	DRIVER ZIP CODE	Vehicle	CHAR (9)	83
EJECT	EJECTION	Occupant	NUM (8)	121
EMERGUSE	EMERGENCY VEHICLE USE	Vehicle	NUM (8)	83
EMS_DES	EMERGENCY MEDICAL SERVICE	Occupant	NUM (50)	122
ENDMP	ENDING MILEPOST	Roadway	NUM (8)	132
EVENT1	SEQUENCE OF EVENTS 1	Vehicle	NUM (8)	84
EVENT2	SEQUENCE OF EVENTS 2	Vehicle	NUM (8)	84
EVENT3	SEQUENCE OF EVENTS 3	Vehicle	NUM (8)	84
EVENT4	SEQUENCE OF EVENTS 4	Vehicle	NUM (8)	84
EXPR_DT	LICENSE EXPIRATION DATE	Vehicle	NUM (8)	86
FIRE	POSTCRASH FIRE	Vehicle	NUM (8)	86
FRM_RD	FROM ROAD	Accident	CHAR (8)	39
FRMRD_CL	FROM ROAD CLASS	Accident	CHAR (4)	39
FROM_DIR	DIRECTION FROM FRM_RD	Accident	CHAR (2)	40
FUNC_CLS	FUNCTIONAL CLASS	Roadway	CHAR (2)	133
FUNC_ST	FUNCTIONAL CLASS (STATE)	Roadway	CHAR (1)	133
GOV_OWN	GOV OWNED VEH INDICATOR	Vehicle	CHAR (1)	86
GVWR_WGT	COMM CARR GROSS VEH WEIGHT	Vehicle	NUM (8)	86
HAZ_NUM1	1 DIGIT HAZMAT NUM PLACARD	Vehicle	NUM (8)	86
HAZ_NUM4	4 DIGIT HAZMAT NUM PLACARD	Vehicle	CHAR (4)	87
HAZ_PLAC	HAZMAT PLACARD INDICATOR	Vehicle	CHAR (1)	87
HAZFLAG	HAZMAT VEHICLE IN ACC	Accident	CHAR(1)	40
HAZMAT	HAZARDOUS CARGO	Vehicle	CHAR (1)	87

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SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
HITRUN	HIT AND RUN ACC	Accident	CHAR(1)	40
HOUR	HOUR	Accident	CHAR(4)	41
HOV_LN_CNT	NUMBER OF HOV LANES	Roadway	NUM (8)	133
HOV_TYP_CD	TYPE OF LANES USED FOR HOV EXCLUSIVELY OR DURING SPECIFIED TIME PERIODS	Roadway	NUM (8)	133
HPMS1	HPMS SAMPLE ID	Roadway	NUM (8)	133
IMPACTFT	DIST TRAVEL AFTER IMPACT	Vehicle	NUM (8)	87
IMPACTSP	IMPACT SPEED	Vehicle	NUM (8)	88
IMPROVE1	TYPE OF RECENT IMPROVEMENT	Roadway	CHAR (2)	134
INJ	OCCUPANT INJURY	Occupant	NUM (8)	122
INSURED	INSURANCE INDICATOR	Vehicle	CHAR (1)	89
INTOXC	DRIVER INTOXICATION GROUP	Vehicle	NUM (8)	89
INTSTMP	INTERSTATE MILEPOST	Roadway	CHAR (5)	134
INV_CNTL	INVENTORY CONTROL	Roadway	CHAR (1)	135
L_PERMIT	LEARNER PERMIT	Vehicle	CHAR (1)	89
LENGTRL	LENGTH OF TRAILER #1,IN FT	Vehicle	NUM (8)	89
LENGTRL2	LENGTH OF TRAILER #2,IN FT	Vehicle	NUM (8)	89
LIC_IND	DRIVER LICENSE INDICATOR	Vehicle	CHAR (1)	90
LIC_STAT	LICENSE STATE	Vehicle	CHAR (2)	90
LICRESTR	RESTRICT ON DRIV LICENSE	Vehicle	CHAR (2)	90
LICTYPE	TYPE OF DRIVERS LICENSE	Vehicle	CHAR (1)	91
LIGHT	LIGHT CONDITION	Accident	NUM (8)	42
LISTCNTL	LIST CONTROL	Roadway	CHAR (1)	135
LOC_TYPE	ACCIDENT LOCATION TYPE	Accident	NUM (8)	42
LOCALITY	DEVELOPMENT TYPE	Accident	NUM (8)	43
LSHL_TYP	LEFT SHOULDER TYPE	Roadway	CHAR (2)	136
LSHLDWID	LEFT SHOULDER WIDTH	Roadway	NUM (8)	137
LT_PARK	LEFT PEAK PARK	Roadway	CHAR (1)	137
MAKE	VEHICLE MAKE	Vehicle	CHAR (2)	91
MAKENAME	VEHICLE MAKE NAME	Vehicle	CHAR (20)	91
MANEUVER	VEH MANEUVER/PEDEST ACTION	Vehicle	NUM (8)	92

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SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
MCFLAG	MOTORCYCLE IN ACC	Accident	CHAR (1)	44
MEANS	MEANS OF INVOLVEMENT	Accident	CHAR	44
MED_TYPE	MEDIAN TYPE	Roadway	CHAR (1)	137
MEDWID	MEDIAN WIDTH TOTAL	Roadway	NUM (8)	138
MHARM_AC	MOST HARMFUL EVENT	Accident	NUM (8)	45
MILEPOST	MILEPOST	Accident	NUM (8)	45
MISCACT1	MISCELLANEOUS ACTION	Vehicle	CHAR (2)	93
MONTH	MONTH OF ACCIDENT	Accident	CHAR(2)	46
MOPEDFLG	MOPED IN ACCIDENT	Accident	CHAR(1)	46
MOSTHARM	MOST HARMFUL EVENT	Vehicle	NUM (8)	94
MUNI_DIR	DIRECTION FROM MUNICIPALITY TO ACC	Accident	CHAR(2)	47
MUNI_DIS	DISTANCE FROM MUNICIPALITY IN MILES	Accident	NUM (8)	47
MVMT	MILLION VEHICLE MILES TRAVELLED	Accident	NUM (8)	47
MVMT	MILLION VEHICLE MILES TRAVELLED	Roadway	NUM (8)	138
NBR_LANE	NUMBER OF LANES	Accident	NUM (8)	48
NEARTOWN	IN OR NEAR TOWN	Accident	NUM (8)	48
NHS	NATIONAL HIGHWAY SYSTEM	Roadway	CHAR (1)	138
NO_LANES	NUMBER OF LANES- TOTAL	Roadway	CHAR (1)	139
NON_REP	NON-REPORTABLE	Accident	NUM (8)	48
NONMTCNT	NON-MOTORIST COUNT	Accident	NUM (8)	49
NUM_A	TOTAL A INJURIES IN VEH	Vehicle	CHAR (2)	96
NUM_B	TOTAL B INJURIES IN VEH	Vehicle	CHAR (2)	96
NUM_C	TOTAL C INJURIES IN VEH	Vehicle	CHAR (2)	96
NUM_K	TOTAL KILLED IN VEHICLE	Vehicle	CHAR (2)	96
NUM_OCCS	TOTAL OCCUPANTS IN VEH	Vehicle	CHAR (2)	96
NUM_POCS	NO OF POINTS OF CONTACT	Vehicle	CHAR (1)	96
NUM_TADS	NUMBER OF TAD CODES	Vehicle	CHAR (1)	96
NUM_UNIT	NUMBER OF UNITS	Accident	NUM (8)	49
NUMINJ	TOT INJURED IN VEH (K+A+B+C)	Vehicle	CHAR (2)	96
NUMVEHS	NUMBER OF VEH+PED+BIKE	Accident	NUM (8)	49
NUMVIOLS	NUM OF VIOLS INDICATED	Vehicle	CHAR (1)	97

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SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
OBJECT1	TYPE OF OBJECT STRUCK	Vehicle	CHAR (2)	97
OFFCR_ST	REPORTING OFFICER STATE	Accident	CHAR(2)	49
ON_RD	ON ROAD	Accident	CHAR(8)	49
ON_RD	ON ROAD	Vehicle	CHAR (8)	98
ONEWAY_DIR	ONE WAY DIRECTION	Roadway	NUM (8)	139
ONRD_CL	ON ROAD CLASS	Accident	CHAR(4)	50
ONRD_CL	ON ROAD CLASS	Vehicle	CHAR (4)	99
OTH_UNIT	OTHER UNIT TYPE	Vehicle	CHAR (20)	99
OUTSTATE	OUT OF STATE VEH REGIS	Vehicle	CHAR (1)	99
OWN_CITY	VEHICLE OWNER CITY	Vehicle	CHAR (22)	99
OWN_STAT	VEHICLE OWNER STATE	Vehicle	CHAR (2)	100
OWN_ZIP	VEHICLE OWNER ZIP CODE	Vehicle	CHAR (9)	100
OWNERTYP	OWNER CATEGORY	Vehicle	CHAR (3)	100
PARK_VEH	INDICATOR OF PARKED VEH	Vehicle	CHAR (1)	100
PATROLAC	PATROL AREA CODE	Accident	CHAR(2)	50
PAVECOND	PAVEMENT CONDITION	Roadway	CHAR (2)	139
PAVED_LSHLDWID	PAVED SHOULD WIDTH (LEFT)	Roadway	NUM (8)	139
PAVED_RSHLDWID	PAVED SHOULD WIDTH (RIGHT)	Roadway	NUM (8)	139
PCT_TRK1	PERCENT TRUCKS	Roadway	CHAR (2)	140
PEAK_TRK	PERCENT TRUCKS AT PEAK	Roadway	CHAR (1)	140
PEAKLANE	NUMBER OF LANES IN THE PEAK HOUR DIRECTION OF FLOW	Roadway	NUM (8)	141
PED_LOC	NON-MOTORIST LOCATION	Vehicle	NUM (8)	101
PEDACT	NON-MOTORIST ACTION	Vehicle	NUM (8)	102
PEDCONT1	CONTRIB CIRCUM NON-MOT 1	Vehicle	NUM (8)	103
PEDCONT2	CONTRIB CIRCUM NON-MOT 2	Vehicle	NUM (8)	103
PEDFLAG	PEDESTRIAN IN ACC	Accident	CHAR (1)	50
PEDFLAG	PEDESTRIAN IN ACCIDENT	Vehicle	CHAR (1)	103
PEDHITBY	PUPIL PEDEST STRUCK BY (SCHLBUS CRASH)	Vehicle	CHAR (1)	104
PHYSCOND	PHYSICAL COND OF DRIVER	Vehicle	NUM (8)	104
PLOTQUAL	QUALITY OF MILEPOST	Accident	CHAR(1)	51
POP_GRP	CITY POPULATION IN 1000	Accident	NUM (8)	51

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SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
POP_GRP	POPULATION GROUP	Roadway	CHAR (1)	141
PROPDAM	TOTAL PROPERTY DAMAGE	Accident	NUM (8)	52
PRSN_CTY	PERSON COUNTY	Occupant	CHAR (22)	122
PRSN_DOB	PERSON DATE OF BIRTH	Occupant	NUM (8)	122
PRSN_NBR	PERSON NUMBER	Occupant	NUM (8)	122
PRSN_ST	PERSON STATE	Occupant	CHAR (2)	123
PRSN_TYP	PERSON TYPE	Occupant	NUM (8)	123
PRSN_ZIP	PERSON ZIP CODE	Occupant	CHAR (9)	123
PSTD_RTE_C	POSTED ROUTES	Roadway	CHAR (7)	141
PTCONT1	POINT OF CONTACT #1	Vehicle	CHAR (2)	105
PTCONT2	POINT OF CONTACT #2	Vehicle	CHAR (2)	105
PTCONT3	POINT OF CONTACT #3	Vehicle	CHAR (2)	105
PTCONT4	POINT OF CONTACT #4	Vehicle	CHAR (2)	105
PTCONT5	POINT OF CONTACT #5	Vehicle	CHAR (2)	105
PTCSTAT	PORTABLE TRAFFIC COUNTER	Roadway	CHAR (8)	142
PVA	PUBLIC VEHICLE AREA	Accident	CHAR(2)	52
RACE	OCCUPANT RACE	Occupant	NUM (8)	123
RD_CHAR1	ROAD CHARACTER	Accident	NUM (8)	53
RD_CONF	ROAD CONFIGURATION	Accident	NUM (8)	53
RD_PAVE	TYPE OF ROAD SURFACE (REP)	Accident	NUM (8)	54
RD2OBJST	DISTANCE TO OBJECT STRUCK	Vehicle	NUM (8)	106
RDSURF	SURFACE CONDITION	Accident	NUM (8)	54
RECCONTCD	RECORD CONTINUATION CODE	Roadway	CHAR (1)	142
REFDISFT	DIST FROM FRM_RD IN FEET	Accident	NUM (8)	54
REFDISMI	DIST FROM FRM_RD IN MILES	Accident	NUM (8)	55
REGION	REGION OF IMPACT	Vehicle	CHAR (1)	107
REL_RD	RELATION TO ROADWAY	Accident	NUM (8)	55
REPORT	REPORTABLE STATUS	Accident	CHAR(1)	55
REST1	OCCUPANT RESTRAINT	Occupant	NUM (8)	124
RMP_SVRD	RAMP OR SERVICE ROAD	Accident	NUM (8)	56
ROAD_CLS	ROAD CLASSIFICATION	Accident	NUM (8)	56
ROADCNT1	ROADWAY CONTRIBUT CIRCUM 1	Accident	NUM (8)	57
ROADCNT2	ROADWAY CONTRIBUT CIRCUM 2	Accident	NUM (8)	57
RODWYCLS	ROAD WAY CLASS	Accident	CHAR(2)	57
RODWYCLS	ROAD WAY CLASS VARIABLE	Roadway	CHAR (2)	142

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SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
ROLLOVER	VEHICLE ROLLOVER	Vehicle	CHAR (1)	107
ROLLPTCT	ROLLOVER, POINT OF CONTACT	Vehicle	NUM (8)	107
ROLLTAD	ROLLOVER, TAD SEVERITY	Vehicle	NUM (8)	108
ROUGH	PAVEMENT ROUGHNESS	Roadway	CHAR (3)	142
ROW	RIGHT OF WAY	Roadway	CHAR (2)	143
RRX_NUM	RAIL ROAD CROSSING NUMBER	Accident	CHAR(7)	58
RRXFLAG	RAILROAD CROSS NOT INDICATED	Accident	CHAR(1)	58
RSHL_TYP	RIGHT SHOULDER TYPE	Roadway	CHAR (2)	143
RSHLDWID	RIGHT SHOULDER WIDTH	Roadway	NUM (8)	144
RT_PARK	RIGHT PEAK PARK	Roadway	CHAR (1)	144
RTE_NBR	MILEPOSTED ROUTE	Accident	CHAR(8)	58
RTE_NBR	ROUTE INVENTORIED	Roadway	CHAR (8)	144
RTE_TYPE	ROUTE TYPE (1ST DIGIT OF RTE_NBR)	Roadway	CHAR (1)	145
RULURBID	RURAL URBAN IDENTIFICATION	Roadway	CHAR (2)	145
RURURB	RURAL-URBAN IDENTIFICATION	Accident	CHAR(1)	58
SCENIC	SCENIC BYWAY	Roadway	CHAR (1)	145
SCH_BUS1	SCHOOL BUS CONTACT VEH	Vehicle	NUM (8)	108
SCH_BUS2	SCHOOL BUS NON-CONTACT VEH	Vehicle	NUM (8)	108
SCHBUS	SCHOOL BUS INVOLVED IN ACC	Accident	CHAR(1)	58
SEATPOS	SEATING POSITION	Occupant	NUM (8)	124
SEG_LNG	SECTION LENGTH IN MILES	Roadway	NUM (8)	145
SEVERITY	WORST INJURY IN ACC	Accident	CHAR(1)	59
SEX	OCCUPANT SEX	Occupant	NUM (8)	125
SIGHTDIS	SIGHT DISTANCE	Roadway	CHAR (2)	145
SOB_TEST	CHEMICAL TEST GIVEN	Vehicle	NUM (8)	109
SPD_GRP	COMPUTED SPEED OF ACCIDENT	Accident	CHAR(1)	59
SPD_LIMT	SPEED LIMIT	Roadway	CHAR (2)	145
SPDLIM	POSTED SPEED LIMIT	Vehicle	NUM (8)	109
SPEC_SYS	SPECIAL SYSTEM	Roadway	CHAR (1)	146
SPIII	HAZARDOUS CARGO SPILL	Vehicle	CHAR (1)	110
STATE_SY	STATE HIGHWAY SYSTEM	Roadway	CHAR (1)	147
STRCTR_CD	LOCATION OF BRIDGES, TUNNEL AND CAUSEWAYS	Roadway	NUM (8)	147
STREET_NAM	STREET NAME	Roadway	NUM (20)	148

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SURF_TYP	SURFACE TYPE	Roadway	CHAR (2)	148
SURF_WID	SURFACE WIDTH TOTAL	Roadway	NUM (8)	148
TERRAIN	TERRAIN	Roadway	CHAR (1)	148
TICKET1	CITATION ISSUED TO SOMEONE IN ACCIDENT	Accident	CHAR (1)	59
TIME	TIME OF DAY (24 HOUR)	Accident	CHAR (4)	60
TIRESKID	TIRE IMPRESSIONS IN FEET	Vehicle	NUM (8)	110
TO_DIR	DIRECTION TOWARD	Accident	CHAR (2)	61
TO_RD	TOWARD ROAD	Accident	CHAR (8)	61
TOLL_DIRECTION	TOLL CHARGED	Roadway	CHAR (7)	149
TORD_CL	TOWARD ROAD CLASS	Accident	CHAR (4)	61
TOT_KILL	TOTAL KILLED IN ACC	Accident	NUM (8)	62
TOTAINJ	TOTAL A INJURIES IN ACC	Accident	NUM (8)	62
TOTBINJ	TOTAL B INJURIES IN ACC	Accident	NUM (8)	62
TOTCINJ	TOTAL C INJURIES IN ACC	Accident	NUM (8)	62
TOTLENG	TOT LENGTH OF TRAILER(S) IN FEET	Vehicle	CHAR (3)	110
TOWAWAY	VEHICLE DRIVEABLE	Vehicle	NUM (8)	111
TOWED_BY	TOWED BY	Vehicle	CHAR (50)	111
TOWED_TO	TOWED TO	Vehicle	CHAR (50)	111
TOWN	TOWN	Roadway	CHAR (2)	149
TOWN_CD	DOT ASSIGNED TOWN CODE	Accident	NUM (8)	62
TRAPPED	TRAPPED	Occupant	NUM (8)	125
TRF_CNTL	TRAFFIC CONTROL TYPE	Accident	NUM (8)	63
TRF_OPER	TRAFFIC CONTROL OPERATING	Accident	NUM (8)	63
TRF_VIS	TRAFFIC CONTROL VISIBLE	Accident	CHAR (8)	63
TRFGROW	TRAFFIC GROWTH FACTOR	Roadway	NUM (8)	149
TRK_RTE	DESIGNATED TRUCK ROUTE	Roadway	CHAR (1)	149
TRL_TYPE	TRAILER TYPE	Vehicle	NUM (8)	111
TRL1_FLG	DATA PRESENT (TRAILER #1)	Vehicle	CHAR (1)	112
TRL2_FLG	DATA PRESENT (TRAILER #2)	Vehicle	CHAR (1)	112
TRNLNWD	TURN LANE WIDTH	Roadway	NUM (8)	149
TRT_FAC	TREATMENT FACILITY NAME	Occupant	CHAR (100)	125
TRVL_SPD	ESTIMATED ORIGINAL SPEED	Vehicle	NUM (8)	112
UNDEROVR	VEHICLE UNDERRIDE/OVERRIDE	Vehicle	NUM (8)	113
UNIT_TYP	UNIT TYPE	Vehicle	CHAR (1)	113

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UPDATE_	UPDATE	Roadway	NUM (8)	150
URB_LOC	URBAN LOCATION	Roadway	CHAR (1)	150
URB_POP	RUR/URB DESIGNATED BY POP	Roadway	CHAR (1)	150
V_DAMAG2	TAD#2 LOCATION	Vehicle	CHAR (2)	114
V_DAMAG3	TAD#3 LOCATION	Vehicle	CHAR (2)	114
V_DAMAGE	TAD#1 (AREA OF DAMAGE) LOC	Vehicle	CHAR (2)	114
VEH_SEIZ	VEHICLE SEIZURE DWI	Vehicle	CHAR (1)	114
VEH_DEF	VEHICLE DEFECT	Vehicle	NUM (8)	115
VEHNO	VEHICLE POSITION NUMBER	Vehicle	NUM (8)	115
VEHNO	VEHICLE POSITION NUMBER	Occupant	NUM (8)	125
VEHON	VEHICLE LOCATION BASED ON ROAD	Vehicle	CHAR (1)	115
VEHSEV	SEVERITY	Vehicle	NUM (8)	115
VEHTYPE	VEHICLE TYPE	Vehicle	NUM (8)	116
VEHYR	MODEL YEAR OF VEHICLE	Vehicle	NUM (8)	117
VIN	VEHICLE IDENTIFICATION NO	Vehicle	CHAR (17)	117
VIN_ID	VEHICLE IDENTIFICATION NO	Vehicle	CHAR (25)	117
VISION	VISION OBSTRUCTION	Vehicle	NUM (8)	118
WEATHER1	WEATHER CONDITION 1	Accident	NUM (8)	64
WEATHER2	WEATHER CONDITION 2	Accident	NUM (8)	64
WEEKDAY	DAY OF WEEK	Accident	CHAR	64
WETHCONT	WEATHER CONTRIBUT TO ACC	Accident	NUM (8)	64
WIDTRL	WIDTH OF TRAILER #1 (IN)	Vehicle	NUM (8)	118
WIDTRL2	WIDTH OF TRAILER #2 (IN)	Vehicle	NUM (8)	118
WORKZONE	WORK ZONE MARKED	Accident	NUM (8)	65
WTDSGSPD	WEIGHTED DESIGN SPEED	Roadway	CHAR (2)	150
WZ_ACT	WORK ZONE ACTIVITY	Accident	NUM (8)	65
WZ_AREA	WORK ZONE AREA	Accident	NUM (8)	65
WZ_LOC	WORK ZONE CRASH LOCATION	Accident	NUM (8)	65
Y_LINE	NON-MILEPOSTED CROSSING ROUTE LOCATION	Accident	CHAR (1)	66
YEAR	YEAR OF TRAFFIC COUNT	Roadway	NUM (8)	151
YR_IMPR1	YEAR OF RECENT IMPROVEMENT	Roadway	CHAR (2)	151
YRADD	YEAR ADDED	Roadway	CHAR (2)	151

Composite List of Elements

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
ZIP_ADR	REPORTING OFFICER ZIP CODE	Accident	CHAR (9)	66

List of Elements for the NC Accident Subfile

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
ACC_DATE	ACCIDENT DATE-MMDDYY	Accident	NUM (8)	31
ACCESS	ACCESS CONTROL	Accident	NUM (8)	31
ACCTYPE	FIRST HARMFUL EVENT	Accident	NUM (8)	31
ACCYR	ACCIDENT YEAR	Accident	CHAR(4)	32
ADD_DAMG	ADDITIONAL PROPERTY DAMAGE	Accident	NUM (8)	33
AGENCY	INVESTIGATING AGENCY	Accident	CHAR(1)	34
ALCFLAG	ALCOHOL/DRUGS IN ACC	Accident	CHAR(1)	34
AMB_TIME	TIME OF AMBULANCE REQUEST	Accident	CHAR(4)	34
AMBUL	AMBULANCE REQUESTED	Accident	CHAR(1)	34
BIKEFLAG	BICYCLE IN ACC	Accident	CHAR(1)	35
CASENO	YEAR + CASE NUMBER	Accident	NUM (8)	35
CITY	CITY/TOWN CODE (INCL CO)	Accident	NUM (8)	35
CNTY_RTE	COUNTY ROUTE NUMBER	Accident	CHAR(10)	35
COMMFLAG	COMMERCIAL VEHICLE IN ACC	Accident	CHAR (1)	35
COUNTY	NC COUNTY NUMBER	Accident	NUM (8)	36
DAY	DAY OF THE MONTH	Accident	CHAR (2)	38
DEPT_CDE	REPORTING DEPARTMENT CODE	Accident	CHAR (9)	39
DEVELOP	DEVELOPMENT AMOUNT	Accident	CHAR (8)	39
FRM_RD	FROM ROAD	Accident	CHAR(8)	39
FRMRD_CL	FROM ROAD CLASS	Accident	CHAR(4)	39
FROM_DIR	DIRECTION FROM FRM_RD	Accident	CHAR(2)	40
HAZFLAG	HAZMAT VEHICLE IN ACC	Accident	CHAR(1)	40
HITRUN	HIT AND RUN ACC	Accident	CHAR(1)	40
HOUR	HOUR	Accident	CHAR(4)	41
LIGHT	LIGHT CONDITION	Accident	NUM (8)	42
LOC_TYPE	ACCIDENT LOCATION TYPE	Accident	NUM (8)	42
LOCALITY	DEVELOPMENT TYPE	Accident	NUM (8)	43
MCFLAG	MOTORCYCLE IN ACC	Accident	CHAR (1)	44
MEANS	MEANS OF INVOLVEMENT	Accident	CHAR	44
MHARM_AC	MOST HARMFUL EVENT	Accident	NUM (8)	45
MILEPOST	MILEPOST	Accident	NUM (8)	45
MONTH	MONTH OF ACCIDENT	Accident	CHAR(2)	46
MOPEDFLG	MOPED IN ACCIDENT	Accident	CHAR(1)	46

List of Elements for the NC Accident Subfile

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
MUNI_DIR	DIRECTION FROM MUNICIPALITY TO ACC	Accident	CHAR(2)	47
MUNI_DIS	DISTANCE FROM MUNICIPALITY IN MILES	Accident	NUM (8)	47
MVMT	MILLION VEHICLE MILES TRAVELLED	Accident	NUM (8)	47
NBR_LANE	NUMBER OF LANES	Accident	NUM (8)	48
NEARTOWN	IN OR NEAR TOWN	Accident	NUM (8)	48
NON_REP	NON-REPORTABLE	Accident	NUM (8)	48
NONMTCNT	NON-MOTORIST COUNT	Accident	NUM (8)	49
NUM_UNIT	NUMBER OF UNITS	Accident	NUM (8)	49
NUMVEHS	NUMBER OF VEH+PED+BIKE	Accident	NUM (8)	49
OFFCR_ST	REPORTING OFFICER STATE	Accident	CHAR(2)	49
ON_RD	ON ROAD	Accident	CHAR(8)	49
ONRD_CL	ON ROAD CLASS	Accident	CHAR(4)	50
PATROLAC	PATROL AREA CODE	Accident	CHAR(2)	50
PEDFLAG	PEDESTRIAN IN ACC	Accident	CHAR (1)	50
PLOTQUAL	QUALITY OF MILEPOST	Accident	CHAR(1)	51
POP_GRP	CITY POPULATION IN 1000	Accident	NUM (8)	51
PROPDAM	TOTAL PROPERTY DAMAGE	Accident	NUM (8)	52
PVA	PUBLIC VEHICLE AREA	Accident	CHAR(2)	52
RD_CHAR1	ROAD CHARACTER	Accident	NUM (8)	53
RD_CONF	ROAD CONFIGURATION	Accident	NUM (8)	53
RD_PAVE	TYPE OF ROAD SURFACE (REP)	Accident	NUM (8)	54
RDSURF	SURFACE CONDITION	Accident	NUM (8)	54
REFDISFT	DIST FROM FRM_RD IN FEET	Accident	NUM (8)	54
REFDISMI	DIST FROM FRM_RD IN MILES	Accident	NUM (8)	55
REL_RD	RELATION TO ROADWAY	Accident	NUM (8)	55
REPORT	REPORTABLE STATUS	Accident	CHAR(1)	55
RMP_SVRD	RAMP OR SERVICE ROAD	Accident	NUM (8)	56
ROAD_CLS	ROAD CLASSIFICATION	Accident	NUM (8)	56
ROADCNT1	ROADWAY CONTRIBUT CIRCUM 1	Accident	NUM (8)	57
ROADCNT2	ROADWAY CONTRIBUT CIRCUM 2	Accident	NUM (8)	57
RODWYCLS	ROAD WAY CLASS	Accident	CHAR(2)	57
RRX_NUM	RAIL ROAD CROSSING NUMBER	Accident	CHAR(7)	58
RRXFLAG	RAILROAD CROSS NOT INDICATED	Accident	CHAR(1)	58
RTE_NBR	MILEPOSTED ROUTE	Accident	CHAR(8)	58
RURURB	RURAL-URBAN IDENTIFICATION	Accident	CHAR(1)	58
SCHBUS	SCHOOL BUS INVOLVED IN ACC	Accident	CHAR(1)	58

List of Elements for the NC Accident Subfile

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
SEVERITY	WORST INJURY IN ACC	Accident	CHAR(1)	59
SPD_GRP	COMPUTED SPEED OF ACCIDENT	Accident	CHAR(1)	59
TICKET1	CITATION ISSUED TO SOMEONE IN ACCIDENT	Accident	CHAR (1)	59
TIME	TIME OF DAY (24 HOUR)	Accident	CHAR (4)	60
TO_DIR	DIRECTION TOWARD	Accident	CHAR (2)	61
TO_RD	TOWARD ROAD	Accident	CHAR (8)	61
TORD_CL	TOWARD ROAD CLASS	Accident	CHAR (4)	61
TOT_KILL	TOTAL KILLED IN ACC	Accident	NUM (8)	62
TOTAINJ	TOTAL A INJURIES IN ACC	Accident	NUM (8)	62
TOTBINJ	TOTAL B INJURIES IN ACC	Accident	NUM (8)	62
TOTCINJ	TOTAL C INJURIES IN ACC	Accident	NUM (8)	62
TOWN_CD	DOT ASSIGNED TOWN CODE	Accident	NUM (8)	62
TRF_CNTL	TRAFFIC CONTROL TYPE	Accident	NUM (8)	63
TRF_OPER	TRAFFIC CONTROL OPERATING	Accident	NUM (8)	63
TRF_VIS	TRAFFIC CONTROL VISIBLE	Accident	CHAR	63
WEATHER1	WEATHER CONDITION 1	Accident	NUM (8)	64
WEATHER2	WEATHER CONDITION 2	Accident	NUM (8)	64
WEEKDAY	DAY OF WEEK	Accident	CHAR	64
WETHCONT	WEATHER CONTRIBUT TO ACC	Accident	NUM (8)	64
WORKZONE	WORK ZONE MARKED	Accident	NUM (8)	65
WZ_ACT	WORK ZONE ACTIVITY	Accident	NUM (8)	65
WZ_AREA	WORK ZONE AREA	Accident	NUM (8)	65
WZ_LOC	WORK ZONE CRASH LOCATION	Accident	NUM (8)	65
Y_LINE	NON-MILEPOSTED CROSSING ROUTE LOCATION	Accident	CHAR (1)	66
ZIP_ADR	REPORTING OFFICER ZIP CODE	Accident	CHAR (9)	66

Crash File

Accident Subfile

Accident Date – MMDDYY

SAS Name: ACC_DATE

Definition: Date when the accident occurred.

Additional Information: Element has YYYYMMDD format up to 1999, where YYYY = Year, MM = Month and DD = Day. From 2000 onwards the element captures the time of the accident as well.

Access Control

SAS Name: ACCESS

Definition: Access control at the location of the crash

Additional Information: New element added in 2000.

- | | |
|---|------------------------|
| 1 | No Access Control |
| 2 | Full Access Control |
| 3 | Partial Access Control |

First Harmful Event

SAS Name: ACCTYPE

Definition: First harmful event in the crash sequence.

Additional Information:

1. Some changes in codes for this element from 2000 onwards. This resulted in some shifts in categories. Some categories were combined, while some categories were differentiated because of this.
2. There is a significant decrease in run-off road crashes from 1999-2000. This is because quite a few crashes that were coded as run-off road until 1999 were coded as fixed object crashes from 2000 onwards. Similarly, category 18 (movable object) for 2000 and later years appears to be similar to category 34 (other object) for 1999 and earlier years. Also, categories 28 and 29 (sideswipe crashes) for 1999 and earlier years. Also categories 28 and 29 (sideswipe crashes) for 2000 and later years appear to be similar to category 36 for 1999 and earlier years.

- | | |
|-----|-------------------------|
| 00 | Unknown |
| 01 | Ran Off Road – Right |
| 02 | Ran Off Road – Left |
| 03 | Ran Off Road – Straight |
| 04* | Jackknife |

05	Overturn/Rollover
10**	Hit Moped
13**	Other Non-Collision
14	Pedestrian
15	Pedalcyclist
16	RR Train, Engine
17	Animal
18**	Movable Object
19	Fixed Object
20	Parked Motor Vehicle
21	Rear End, Slow or Stop
22	Rear End, Turn
23	Left Turn, Same Roadway
24	Left Turn, Different Roadways
25	Right Turn, Same Roadway
26	Right Turn, Different Roadways
27	Head On
28**	Sideswipe, Same Direction
29**	Sideswipe, Opposite Direction
30	Angle
31	Backing Up
32**	Other Collision with Vehicle
33*	Other in Road
34*	Hit Other Object
35*	Type Not Stated
36	Sideswipe

* Categories discontinued from 2000 onwards.

** Categories added from 2000 onwards.

Accident Year

SAS Name: ACCYR

Definition: Year when the accident occurred.

Additional Information: Format YYYY where YYYY = Year. Element discontinued from 2000 onwards.

Additional Property Damage

SAS Name: ADD_DAMG

Definition: Additional property damage as a result of the crash.

Additional Information: Element discontinued from 2000 onwards.

0	No Damage
1-49	Less than \$50
50-99	\$50-99
100-149	\$100-149
150-199	\$150-199
200-249	\$220-249
250-299	\$250-299
300-349	\$300-349
350-399	\$350-399
400-449	\$400-449
450-499	\$450-499
500-599	\$500-599
600-699	\$600-699
700-799	\$700-799
800-899	\$800-899
900-999	\$900-999
1000-1499	\$1000-1499
1500-1999	\$1500-1999
2000-2499	\$2000-2499
2500-2999	\$2500-2999
3000-3999	\$3000-3999
4000-4999	\$4000-4999
5000-9999	\$5000-9999
10000-HIGH	\$10000 or More

Investigating Agency

SAS Name: AGENCY

Definition: Agency that investigated the crash.

Additional Information: Element discontinued from 2000 onwards.

'0'	Not Stated
'1'	Municipal Police
'2'	Sheriff
'3'	Rural, County Police
'4'	Highway Patrol
'5'	Other Agency

Alcohol/Drugs in Accident

SAS Name: ALCFLAG

Definition: Whether or not alcohol or drugs were involved when the accident occurred.

Additional Information: '0' for Pre 2000. '1' for Pre 2000.

'N'	No Drink or Drug
'Y'	Intoxication Code 2 or 3

Time of Ambulance Request

SAS Name: AMB_TIME

Definition: Time when ambulance was requested to respond to the accident.

Additional Information: Element discontinued from 2000 onwards

Ambulance Requested

SAS Name: AMBUL

Definition: Whether or not an ambulance was requested.

Additional Information: Element discontinued from 2000 onwards.

'0', ' '	Not Stated
'1'	Ambulance Called
'2'	Not Requested

Bicycle in Accident

SAS Name: BIKEFLAG

Definition: Bicycle in Accident

Additional Information: '0' for Pre 2000. '1' for Pre 2000.

'N'	Not Bicycle Accident
'Y'	Bicycle Accident

Year and Case Number

SAS Name: CASENO

Definition: Year and Case Number

Additional Information: Format YYNNNNNN where YY = Year and NNNNN = Case Number.
Element type is CHAR for 1990 to 1999.

City/Town Code (Include CO)

SAS Name: CITY

Definition: City/Town Code (Include CO)

Additional Information: For data before 2010, City/Town Code has to be combined with DIV (i.e. Highway Division Route) variable to get 4-digit City/Town codes. Contact HSIS staff for more information on codes for the city element. Also note that city element codes are different for pre 2000 and post 2000 years. HSIS staff maintains a list of all these codes.

City Route Number

SAS Name: CNTY_RTE

Definition: City route number where the crash occurred.

Additional Information: Computed element, used for linkage with the roadlog element.

Commercial Vehicle in Accident

SAS Name: COMMFLAG

Definition: Whether or not a commercial vehicle was involved in the accident.

Additional Information: Element discontinued from 1999 onwards.

'0'	Not Commercial Vehicle Accident
'1'	Commercial Vehicle Accident

NC County Number

SAS Name: COUNTY

Definition: NC county number where the crash occurred.

00	Alamance
01	Alexander
02	Allegheny
03	Anson
04	Ashe
05	Avery
06	Beaufort
07	Bertie
08	Bladen
09	Brunswick
10	Buncombe
11	Burke
12	Carrabus
13	Caldwell
14	Camden
15	Carteret
16	Caswell
17	Catawba
18	Chatham
19	Cherokee
20	Chowan
21	Clay
22	Cleveland
23	Columbus
24	Craven
25	Cumberland
26	Currituck
27	Care
28	Davidson
29	Davie
30	Duplin
31	Durham
32	Edgecombe
33	Forsyth
34	Franklin

35	Gaston
36	Gates
37	Graham
38	Granville
39	Greene
40	Guilford
41	Halifax
42	Harnett
43	Haywood
44	Henderson
45	Hertford
46	Hoke
47	Hyde
48	Iredell
49	Jackson
50	Johnston
51	Jones
52	Lee
53	Lenoir
54	Lincoln
55	Macon
56	Madison
57	Martin
58	McDowell
59	Mecklenburg
60	Mitchell
61	Montgomery
62	Moore
63	Nash
64	New Hanover
65	Northampton
66	Onslow
67	Orange
68	Pamlico
69	Pasquotank
70	Pender
71	Perquimans
72	Person

73	Pitt
74	Polk
75	Randolph
76	Richmond
77	Robeson
78	Rockingham
79	Rowan
80	Rutherford
81	Sampson
82	Scotland
83	Stanly
84	Stokes
85	Surry
86	Swain
87	Transylvania
88	Tyrell
89	Union
90	Vance
91	Wake
92	Warren
93	Washington
94	Watauga
95	Wayne
96	Wilkes
97	Wilson
98	Yadkin
99	Yancey

Day of the Month

SAS Name: DAY

Definition: Day of the month when the crash occurred.

Additional Information: Format DD where DD = Day of the Month (01-31). Element added in 1998, and discontinued in 2000 onwards.

Reporting Department Code

SAS Name: DEPT_CDE

Definition: Department code of the department who reported to the crash.

Additional Information: New element added in 2000.

Development Amount

SAS Name: DEVELOP

Definition: Development Amount

0	Not Stated
1	Rural (< 30% Developed)
2	Mixed (30% to 70%)
3	Urban (> 70% Developed)

From Road

SAS Name: FRM_RD

Definition: From Road – used in describing crash location for subsequent mileposting.

From Road Class

SAS Name: FRMRD_CL

Definition: From Road Class – used in describing crash location for subsequent mileposting.

Additional Information: New element added in 2000.

'CL'	County Line
'I'	Interstate
'LCL'	Local City Street
'MILE'	Mile Marker
'ML'	Municipal Limit
'NC'	NC Route
'PP'	Private Property
'PVA'	Public Vehicular Area
'RP'	Rural Paved
'RU'	Rural Unpaved
'SL'	State Line
'SR'	State Route
'UNK'	Unknown
'US'	US Route

Direction from Road

SAS Name: FROM_DIR

Definition: Direction from Road – used in describing crash location for subsequent mileposting.

Additional Information: Element discontinued from 2000 onwards.

'E'	East
'N'	North
'NE'	Northeast
'NW'	Northwest
'S'	South
'SE'	Southeast
'SW'	Southwest
'W'	West
'00'	Unknown

Hazmat Vehicle in Accident

SAS Name: HAZFLAG

Definition: Hazmat Vehicle in Accident

Additional Information: Element discontinued from 1999 onwards.

'0'	No Hazmat Vehicle in Accident
'1'	Hazmat Vehicle in Accident

Hit and Run Accident

SAS Name: HITRUN

Definition: Whether or not the accident was a hit and run.

Additional Information: Element discontinued from 2000 onwards.

'0'	Not Hit and Run Accident
'1'	Hit and Run Accident

Hour

SAS Name: HOUR

Definition: Hour when the crash occurred.

Additional Information: Element discontinued from 2000 onwards.

00	12:00-12:59 AM
01	1:00-1:59 AM
02	2:00-2:59 AM
03	3:00-3:59 AM
04	4:00-4:59 AM
05	5:00-5:59 AM
06	6:00-6:59 AM
07	7:00-7:59 AM
08	8:00-8:59 AM
09	9:00-9:59 AM
10	10:00-10:59 AM
11	11:00-11:59 AM
12	12:00-12:59 PM
13	1:00-1:59 PM
14	2:00-2:59 PM
15	3:00-3:59 AM
16	4:00-4:59 AM
17	5:00-5:59 AM
18	6:00-6:59 AM
19	7:00-7:59 AM
20	8:00-8:59 AM
21	9:00-9:59 AM
22	10:00-10:59 Am
23	11:00-11:59 AM
24	Not Stated

Light Condition

SAS Name: LIGHT

Definition: Light condition when the accident occurred.

0	Not Stated (Pre 2000)
1	Daylight
2	Dusk
3	Dawn
4	Dark – Lighted Roadway
5	Dark – Roadway Not Lighted
6	Dark – Unknown Lighting
7	Other
8	Unknown

Accident Location Type

SAS Name: LOC_TYPE

Definition: Location of the crash in relation to nearby roadway feature.

Additional Information:

1. Some changes in codes for this variable from 2000 onwards. This resulted in some shifts in categories. Some categories were combined, while some categories were differentiated because of this.
2. For 2000 and later years, categories 7 to 12 are coded which describe different types of intersections. Prior to 2000, all intersection related crashes were coded as category 27. Similarly, for 2000 and later years categories 15 to 21 are coded which describe different types of ramp crashes. Prior to 2000, all ramp related crashes were coded as category 28.

00	No Feature
01	Bridge
02	Bridge Approach
03	Underpass
04	Driveway, Public
05	Driveway, Private
06	Alleyway Intersection
07**	Four-Way Intersection
08**	T-Intersection
09**	Y-Intersection
10**	Traffic Circle/Roundabout
11**	Five Point or More
12**	Related to Intersection

13	Non-Intersection Median Crossing
14	End or Beginning Divided Highway
15**	Off Ramp Entry
16**	Off Ramp Proper
17**	Off Ramp Terminal on Crossroad
18**	Merge Lane Between On and Off Ramp
19**	On Ramp Entry
20**	On Ramp Proper
21**	On Ramp Terminal on Crossroad
22	Railroad Crossing
23	Tunnel
24	Shared Use Path or Trails
25	Other
26*	Not stated (Pre 2000)
27*	Intersection of Roadway (Pre 2000)
28*	Interchange Ramp (Pre 2000)
29*	Interchange Service Road (Pre 2000)

* Categories coded before 2000.

** Categories coded after 2000.

Development Type

SAS Name: LOCALITY

Definition: Type of development at crash location.

0	Not Stated
1	Farms, Woods, Pastures
2	Residential
3	Commercial
4	Institutional
5	Industrial
6	Unknown

Motorcycle in Accident

SAS Name: MCFLAG

Definition: Whether or not a motorcycle was involved in the accident.

Additional Information: Element discontinued from 2000 onwards.

'0'	Not Motorcycle Accident
'1'	Motorcycle Accident

Means of Involvement

SAS Name: MEANS

Definition: Means of Involvement

Additional Information: Element discontinued from 2000 onwards.

'1'	Ran Off Road
'2'	Hit Fixed Object
'3'	Hit Non-Fixed Object
'4'	Car vs Car
'5'	Car vs Truck or Bus
'6'	More Than 2 Vehicles Involved
'7'	Other 1 or 2 Vehicle Accident

Most Harmful Event

SAS Name: MHARM AC

Definition: Most harmful event in the crash sequence.

Additional Information: New element added in 2000.

00	Unknown
01	Ran Off Road – Right
02	Ran Off Road – Left
03	Ran Off Road – Straight
04	Jackknife
05	Overturn/Rollover
13	Other Non-Collision
14	Pedestrian
15	Pedalcycle
16	RR Train, Engine
17	Animal
18	Movable Object
19	Fixed Object
20	Parked Motor Vehicle
21	Rear End, Slow or Stop
22	Rear End, Turn
23	Left Turn, Same Roadway
24	Left Turn, Different Roadway
25	Right Turn, Same Roadway
26	Right Turn, Different Roadway
27	Head On
28	Sideswipe, Same Direction
29	Sideswipe, Opposite Direction
30	Angle
31	Backing Up
32	Other Collision with Vehicle

Milepost

SAS Name: MILEPOST

Definition: Milepost

Month of Accident

SAS Name: MONTH

Definition: Month of the year when the accident occurred.

Additional Information: Element discontinued from 2000 onwards.

'01'	January
'02'	February
'03'	March
'04'	April
'05'	May
'06'	June
'07'	July
'08'	August
'09'	September
'10'	October
'11'	November
'12'	December

Moped in Accident

SAS Name: MOPEDFLG

Definition: Whether or not a moped was involved in the accident.

Additional Information: Element discontinued from 2000 onwards.

'0'	Not Moped Accident
'1'	Moped Accident

Direction from Municipality to Accident

SAS Name: MUNI_DIR

Definition: Direction from municipality to accident – used in describing crash location for subsequent mileposting.

Additional Information: New element added in 2000.

'E'	East
'N'	North
'NE'	Northeast
'NW'	Northwest
'S'	South
'SE'	Southeast
'SW'	Southwest
'W'	West

Distance from Municipality in Miles

SAS Name: MUNI_DIS

Definition: Distance from the municipality to the crash in miles – used in describing crash location for subsequent mileposting..

Additional Information: New element added in 2000.

Million Vehicle Miles Traveled

SAS Name: MVMT

Definition: Million Vehicle Miles Traveled

Additional Information: Million Vehicle Miles Traveled on Road Segment. Element discontinued from 2000 onwards.

Number of Lanes (Crash Report)

SAS Name: NBR_LANE

Definition: Number of lanes at the crash location.

00	Parking Lot
01	1 Lane
02	2 Lanes
03	3 Lanes
04	4 Lanes
05	5 Lanes
06	6 Lanes
07	7 Lanes
08	8 Lanes
09	9 Lanes
10	10 Lanes
11	11 Lanes
12	12 Lanes
13-99	> 12 Lanes

In or Near Town

SAS Name: NEARTOWN

Definition: In or Near Town – used in describing crash location for subsequent mileposting.

Additional Information: New element added in 2000.

1	Yes
2	No

Non-Reportable

SAS Name: NON_REP

Definition: Whether a crash does not meet the minimum reportability requirement.

Additional Information: New element added in 2000.

1	Yes
2	No

Non-Motorist Count

SAS Name: NONMTCNT

Definition: Non-Motorist Count

Additional Information: New element added in 2000.

Number of Vehicle + Pedestrian + Bike

SAS Name: NUM_UNIT

Definition: Number of Vehicle + Pedestrian + Bike

Number of Units

SAS Name: NUMVEHS

Definition: Number of units involved in the crash.

Reporting Officer State

SAS Name: OFFCR_ST

Definition: Reporting Officer State

Additional Information: New element added in 2000.

On Road

SAS Name: ON_RD

Definition: On Road – used in describing crash location for subsequent mileposting.

On Road Class

SAS Name: ONRD_CL

Definition: On Road Class – used in describing crash location for subsequent mileposting.

Additional Information: New element added in 2000.

'CL'	County Line
'I'	Interstate
'LCL'	Local City Street
'MILE'	Mile Marker
'ML'	Municipal Limit
'NC'	NC Route
'PP'	Private Property
'PVA'	Public Vehicular Area
'RP'	Rural Paved
'RU'	Rural Unpaved
'SL'	State Line
'SR'	State Route
'UNK'	Unknown
'US'	US Route

Patrol Area Code

SAS Name: PATROLAC

Definition: Patrol Area for NC State Highway Patrol

Additional Information: New element added in 2000.

Pedestrian in Accident

SAS Name: PEDFLAG

Definition: Whether or not the accident involved pedestrians.

'N'	Not Pedestrian Accident ('0' for Pre 2000)
'Y'	Pedestrian Accident ('1' for Pre 2000)

Quality of Milepost

SAS Name: PLOTQUAL

Definition: Quality of Milepost

Additional Information: Element discontinued from 2000 onwards.

'0'	Blank
'1'	Good Location
'2'	Loop, Ok Direction
'3'	Bad Direction
'4'	Loop, Bad Direction
'5'	Located on Yline
'6'	Adjust to RT End
'7'	Private Property
'8'	Cannot Milepost
'9'	Route is Invalid

City Population

SAS Name: POP_GRP

Definition: Population of city where crash occurred.

Additional Information: The unit of this element is thousands for years before 1999. So, if the variable is coded as 10, it indicates 10,000. For later years, the variable is coded as the absolute population, which are 10,000 indicates 10,000.

0	< 1000 – Rural
1-4	1000-1499
5-9	5000-9999
10-19	10000-19999
20-34	20000-34999
35-49	35000-49999
50-74	50000-74999
75-99	75000-99999
100-HIGH	100000 +

Total Property Damage

SAS Name: PROPDAM

Definition: Total property damage in dollars as a result of the crash.

0	No Damage
1-49	Less than \$50
50-99	\$50-99
100-149	\$100-149
150-199	\$150-199
200-249	\$220-249
250-299	\$250-299
300-349	\$300-349
350-399	\$350-399
400-449	\$400-449
450-499	\$450-499
500-599	\$500-599
600-699	\$600-699
700-799	\$700-799
800-899	\$800-899
900-999	\$900-999
1000-1499	\$1000-1499
1500-1999	\$1500-1999
2000-2499	\$2000-2499
2500-2999	\$2500-2999
3000-3999	\$3000-3999
4000-4999	\$4000-4999
5000-9999	\$5000-9999
10000-HIGH	\$10000 or More

Public Vehicular Area

SAS Name: PVA

Definition: Public Vehicular Area*Additional Information:* Element discontinued from 2000 onwards.

Road Character

SAS Name: RD_CHAR1

Definition: Character of the road where the crash occurred.

00	Not Stated
01	Straight – Level
02	Straight – Hillcrest
03	Straight – Grade
04	Straight – Bottom
05	Curve – Level
06	Curve – Hillcrest
07	Curve – Grade
08	Curve – Bottom
09	Other
10	Unknown

Road Configuration

SAS Name: RD_CONF

Definition: Road configuration where the crash occurred.

Additional Information: All divided highways coded as category 6 for 1999 and earlier years. For 2000 and later years, all divided highways coded as category 3 and category 4.

0	Not Stated
1	One-Way, Not Divided
2	Two-Way, Not Divided
3**	Two-Way, Divided, Unprotected Median
4**	Two-Way, Divided, Positive Median Barrier
5	Unknown
6*	Divided

* Categories present in 1999 and earlier years.

** Categories present in 2000 and later years.

Type of Road Surface (Rep)

SAS Name: RD_PAVE

Definition: Road surface type where the crash occurred.

''	Uncoded
0	Not Stated
1	Concrete
2	Grooved Concrete
3	Smooth Asphalt
4	Coarse Asphalt
5	Gravel
6	Sand
7	Soil
8	Other

Surface Condition

SAS Name: RDSURF

Definition: The condition of the road surface where the crash occurred.

00	Not Stated
01	Dry
02	Wet
03*	Water (Standing, Moving)
04	Ice
05	Snow
06*	Slush
07	Sand, Mud, Dirt, Gravel
08	Fuel, Oil
09	Other
10	Unknown

*Categories present in 2000 and later years.

Distance from FRM_RD in Feet

SAS Name: REFDISFT

Definition: Distance from FRM_RD in feet – used in describing crash location for subsequent mileposting.*Additional Information:* New element added in 2000.

Distance from FRM_RD in Miles

SAS Name: REFDISMI

Definition: Distance from FRM_RD in miles – used in describing crash location for subsequent mileposting.

Additional Information:

Relation to Roadway

SAS Name: REL_RD

Definition: Location of crash relative to travel lanes

Additional Information: New element in added in 2000.

1	On roadway
2	Shoulder
3	Median
4	Roadside
5	Outside trafficway
6	Unknown

Reportable Status

SAS Name: REPORT

Definition: Reportable Status

'D'	Property Damage Only
'F'	Fatal
'I'	Injury
'N'	Non-Reportable
'P'*	Private Property
'X'*	PVA Property Damage
'Y'*	PVA Injury
'Z'*	PVA Fatal
' '	Unknown

* Categories present in 2000 and later years.

Ramp or Service Road

SAS Name: RMP_SVRD

Definition: Crash occurred on a ramp or service road.

Additional Information: New element added in 2000.

Blank	Uncoded
1	Yes

Road Classification

SAS Name: ROAD_CLS

Definition: Classification of the roadway where the crash occurred.

Additional Information: New element added in 2000.

1	Interstate
2	US Route
3	NC Route
4	State Secondary Route
5	Local Street
6	Public Vehicular Area
7	Private Road, Driveway
8	Other

Roadway Contributing Circumstance 1SAS Name: ROADCONT₁**Roadway Contributing Circumstance 2**ROADCONT₂*Definition:* Roadway circumstance/condition that contributed to the crash

00	None
01	Road Surface Condition
02	Debris
03	Rut, Holes, Bumps
04	Work Zone
05	Worn Travel-Polished Surface
06	Obstruction in Roadway
07	Traffic Control Device Inoperative, Not Visible or Uncoded
08	Shoulders Low, Soft or High
09	No Shoulders
10	Non-Highway Work
11	Other
12	Unknown
13	Repairs, Defects (Pre 2000)
14	No Defects (Pre 2000)

Roadway Class

SAS Name: RODWYCLS

Definition: Roadway Class

'01'	Urban Freeways
'02'	Urban Freeways Less than 4 Lanes
'03'	Urban 2 Lane Roads
'04'	Urban Multilane Divided Non-Freeway
'05'	Urban Multilane Undivided Non-Freeway
'06'	Rural Freeways
'07'	Rural Freeways Less than 4 Lanes
'08'	Rural 2-Lane Roads
'09'	Rural Multilane Divided Non-Freeway
'10'	Rural Multilane Undivided Non-Freeway
'99'	Others

Railroad Crossing Number

SAS Name: RRX_NUM

Definition: Railroad Crossing Number*Additional Information:* New element added in 2000.**Railroad Cross Not Indicated**

SAS Name: RRXFLAG

Definition: Railroad Cross Not Indicated*Additional Information:* Element discontinued from 2000 onwards.

''	Blank
'0'	Not at Railroad Crossing
'1'	At Railroad Crossing

Mileposted Route

SAS Name: RTE_NBR

Definition: Mileposted Route**Rural-Urban Identification**

SAS Name: RURURB

Definition: Rural-Urban Identification*Additional Information:* New element added in 2000.

'R'	Rural
'U'	Urban

School Bus Involved In

SAS Name: SCHBUS

Definition: Whether or not a school bus was involved in the crash.*Additional Information:* Element discontinued from 2000 onwards.

'0'	Not School Bus Accident
'1'	School/Activity Bus Accident

Worst Injury in Accident

SAS Name: SEVERITY

Definition: The most severe injury in the crash.

'1'	Fatal Injury
'2'	Class A Injury
'3'	Class B Injury
'4'	Class C Injury
'5'	No Injury
'6'	Unknown

Computed Speed

SAS Name: SPD_GRP

Definition: Computed speed of vehicles involved in accident.

Additional Information: Element discontinued from 2000 onwards.

''	Blank
'0'	Not Stated
'1'	0-29 MPH
'2'	39-49 MPH
'3'	50+ MPH

Citation Issued to Someone in Accident

SAS Name: TICKET₁

Definition: Whether a citation was issued to someone in accident.

Additional Information: Element discontinued from 2000 onwards. Almost 100% observations are coded as 0. Use this element with caution.

''	Blank
'0'	No Citation Number in Accident
'1'	Citation Number Given

Time of Day (24 Hour)

SAS Name: TIME

Definition: Time of day when the accident occurred.

Additional Information: Element discontinued from 1999 onwards.

0000-0059	12:00-12:59 AM
0100-0159	1:00-1:59 AM
0200-0259	2:00-2:59 AM
0300-0359	3:00-3:59 AM
0400-0459	4:00-4:59 Am
0500-0559	5:00-5:59 AM
0600-0659	6:00-6:59 AM
0700-0759	7:00-7:59 AM
0800-0859	8:00-8:59 AM
0900-0959	9:00-9:59 AM
1000-1059	10:00-10:59 AM
1100-1159	11:00-11:59 AM
1200-1259	12:00-12:59 PM
1300-1359	1:00-1:59 PM
14-1459	2:00-2:59 PM
1500-1559	3:00-3:59 PM
1600-1659	4:00-4:59 PM
1700-1759	5:00-5:59 PM
1800-1859	6:00-6:59 PM
1900-1959	7:00-7:59 PM
2000-2059	8:00-8:59 PM
2100-2159	9:00-9:59 PM
2200-2259	10:00-10:59 PM
2300-2359	11:00-11:59 PM
2460	Not Stated

Direction toward TO_RD

SAS Name: TO_DIR

Definition: Direction toward TO_RD – used in describing crash location for subsequent mileposting.

Additional Information: New element added in 2000.

'E'	East
'N'	North
'NE'	Northeast
'NW'	Northwest
'S'	South
'SE'	Southeast
'SW'	Southwest
'W'	West

Toward Road

SAS Name: TO_RD

Definition: Toward Road – used in describing crash location for subsequent mileposting.

Toward Road Class

SAS Name: TORD_CL

Definition: Toward Road Class – used in describing crash location for subsequent mileposting.

Additional Information: New element added in 2000.

'CL'	County Line
'I'	Interstate
'LCL'	Local City Street
'MILE'	Mile Marker
'ML'	Municipal Limit
'NC'	NC Route
'PP'	Private Property
'PVA'	Public Vehicular Area
'RP'	Rural Paved
'RU'	Rural Unpaved
'SL'	State Line
'SR'	State Route
'UNK'	Unknown
'US'	US Route

Total Killed in Accident

SAS Name: TOT_KILL

Definition: Total number killed in accident.

Additional Information: Element discontinued from 2000 onwards.

Total A Injures in Accidents

SAS Name: TOTAINJ

Definition: Total A Injures in the accident

Additional Information: Element discontinued from 2000 onwards.

Total B Injures in Accident

SAS Name: TOTBINJ

Definition: Total B Injures in Accident

Additional Information: Element discontinued from 2000 onwards.

Total C Injuries in Accident

SAS Name: TOTCINJ

Definition: Total C Injuries in Accident

Additional Information: Element discontinued from 2000 onwards.

DOT Assigned Town Code

SAS Name: TOWN_CD

Definition: DOT Assigned Town Code

Additional Information: New element added in 2000.

Traffic Control Type

SAS Name: TRF_CNTL

Definition: Traffic control device present at the crash location.

0	No Control Present
1	Stop Sign
2	Yield Sign
3	Stop and Go Signal
4	Flashing Signal with Stop Sign
5	Flashing Signal without Stop Sign
6	RR Gate and Flasher
7	RR Flasher
8	RR Crossbucks Only
9	Human Control
10*	Warning Sign
11*	School Zone Signs
12*	Flashing Stop and Go Signal
13*	Double Yellow Line, No Passing Zone
14	Other
15	Not Stated

* Categories present in 2000 and later years.

Traffic Control Operating

SAS Name: TRF_OPER

Definition: Whether the traffic control device was operating when the crash occurred.

0	No
1	Yes
2	Unknown
3	Not Stated (Pre 2000)

Traffic Control Visible

SAS Name: TRF_VIS

Definition: Whether or not the traffic control was visible when the crash occurred.

Additional Information: Element discontinued from 2000 onwards.

'0'	Not Stated
'1'	Visible
'2'	Not Visible

Weather Condition 1SAS Name: WEATHER₁**Weather Condition 2 (From 2000 Onwards)**WEATHER₂*Definition:* Weather conditions when the crash occurred.

0	Not Stated
1	Clear
2	Cloudy
3	Rain
4	Snow
5	Fog, Smog, Smoke
6	Sleet, Hall, Freezing Rain/Drizzle
7*	Severe Crosswinds
8*	Blowing Sand, Dirt, Snow
9*	Other

* Categories coded in 2000 and later years.

Day of Week

SAS Name: WEEKDAY

Definition: Day of the week that the crash occurred.*Additional Information:* Element discontinued from 2000 onwards.

'1'	Monday
'2'	Tuesday
'3'	Wednesday
'4'	Thursday
'5'	Friday
'6'	Saturday
'7'	Sunday

Weather Contributed to Accident

SAS Name: WETHCONT

Definition: Whether or not weather contributed to the accident*Additional Information:* New element added in 2000.

0	No
1	Yes
2	Unknown

Work Zone Marked

SAS Name: WORKZONE

Definition: Whether or not the the crash was in a marked work zone.

Additional Information: New element added in 2000.

- | | |
|---|-----|
| 1 | Yes |
| 2 | No |

Work Zone Activity

SAS Name: WZ_ACT

Definition: Whether or not there was activity in the work zone when the crash occurred

Additional Information: New element added in 2000.

- | | |
|---|----------------------|
| 1 | On Going Activity |
| 2 | No Apparent Activity |

Work Zone Area

SAS Name: WZ_AREA

Definition: Type of work zone

Additional Information: New element added in 2000.

- | | |
|---|--------------------------|
| 1 | Construction Work Area |
| 2 | Maintenance Work Area |
| 3 | Utility Work Area |
| 4 | Intermittent/Moving Work |
| 5 | No |

Work Zone Crash Location

SAS Name: WZ_LOC

Definition: Part of work zone where crash occurred.

Additional Information: New element added in 2000.

- | | |
|---|------------------------------|
| 1 | Before Work Area |
| 2 | In Work Area Approach Taper |
| 3 | Adjacent to Actual Work Area |

Non-Mileposted Crossing Route Location

SAS Name: Y_LINE

Definition: Non-Mileposted Crossing Route Location

Additional Information: Element discontinued from 2000 onwards.

''	Blank
'0'	Normal Milepost
'1'	Y-Line Milepost

Reporting Office Zip Code

SAS Name: ZIP_ADR

Definition: Zip code of the office who reported to the crash.

Additional Information: New element added in 2000.

List of Elements for the NC Vehicle Subfile

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
ACTION	DRIVER CHARGED WITH VIOL	Vehicle	CHAR (1)	71
AIRBAGS	AIR BAGS PRESENT IN VEH	Vehicle	CHAR (1)	71
AIRDEPL	AIRBAGS DEPLOYED DURING CRASH	Vehicle	CHAR (1)	72
ALC_DRUG	ALCOHOL/DRUG IN ACC	Vehicle	NUM (8)	72
ALCFLAG	ALCOHOL FLAG	Vehicle	CHAR (1)	72
AMTDAMG	AMOUNT OF DAMAGE TO VEH	Vehicle	NUM (8)	73
AXLE_NBR	COMMERCIAL CARRIER AXLES	Vehicle	NUM (8)	73
AXLES	NUMBER OF AXLES FOR TRL#1	Vehicle	NUM (8)	74
AXLES2	NUMBER OF AXLES FOR TRL#2	Vehicle	NUM (8)	74
BIKEFLAG	BICYCLE FLAG	Vehicle	CHAR (1)	74
BODY	CARGO BODY TYPE	Vehicle	NUM (8)	74
CASENO	NC ACCIDENT NUMBER WITH YR	Vehicle	NUM (8)	75
CC_CITY	COMMERCIAL CARRIER CITY	Vehicle	CHAR (22)	75
CC_STATE	COMMERCIAL CARRIER STATE	Vehicle	CHAR (2)	75
CC_ZIP	COMMERCIAL CARRIER ZIP CODE	Vehicle	CHAR (9)	75
CCB_CITY	COMM CARR BUSINESS CITY	Vehicle	CHAR (2)	75
CCB_STAT	COMM CARR BUSINESS STATE	Vehicle	NUM (8)	75
CDL_IND	CDL INDICATOR	Vehicle	CHAR (1)	76
CNT_SEAT	NUMBER OF SEATS OCCUPIED	Vehicle	CHAR (1)	76
CONTRIB1	VIOL/CONTRIBUTION FACTOR#1	Vehicle	NUM (8)	76
CONTRIB2	VIOL/CONTRIBUTION FACTOR#2	Vehicle	NUM (8)	76
CONTRIB3	VIOL/CONTRIBUTION FACTOR#3	Vehicle	NUM (8)	76
CONTRIB4	VIOL/CONTRIBUTION FACTOR#4	Vehicle	NUM (8)	76
CONTRIB5	VIOL/CONTRIBUTION FACTOR#5	Vehicle	NUM (8)	76
CROSSMED	CROSS MEDIAN	Vehicle	CHAR (1)	77
DAMSEV	TAD#1 SEVERITY	Vehicle	CHAR (1)	78
DAMSEV2	TAD#2 SEVERITY	Vehicle	CHAR (1)	78
DAMSEV3	TAD#3 SEVERITY	Vehicle	CHAR (1)	78
DIR_TRVL	DIRECT OF TRAVEL ON	Vehicle	CHAR (2)	78
DRG_RES	DRIVER ALC/DRUG TEST RESULT	Vehicle	CHAR (8)	79
DRG_SUSP	DRIVER ALC/DRUG SUSPECTED	Vehicle	CHAR (8)	79
DRSTATE	OUT OF STATE DRIVERS LIC	Vehicle	CHAR (1)	79
DRV_AGE	DRIVER/PEDEST AGE	Vehicle	CHAR (3)	79
DRV_BAC	DRIVER BLOOD ALCOHOL IN %	Vehicle	NUM (8)	80

List of Elements for the NC Vehicle Subfile

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
DRV_CITY	DRIVER CITY	Vehicle	CHAR (1)	80
DRV_DOB	DRIVER DATE OF BIRTH	Vehicle	NUM (8)	80
DRV_INJ	DRIVER/PEDESTRIAN INJURY	Vehicle	CHAR (1)	81
DRV_LICENSE_RESTRICT	DRIVERS LICENSE RESTRICT	Vehicle	NUM (8)	81
DRV_RACE	DRIVER/PEDEST RACE	Vehicle	CHAR (1)	82
DRV_REST	DRIVER RESTRAINT USAGE	Vehicle	CHAR (2)	82
DRV_SEAT	DRIVER/PEDEST SEAT POS	Vehicle	CHAR (1)	83
DRV_SEX	DRIVER/PEDEST SEX	Vehicle	CHAR (1)	83
DRV_ZIP	DRIVER ZIP CODE	Vehicle	CHAR (9)	83
EMERGUSE	EMERGENCY VEHICLE USE	Vehicle	NUM (8)	83
EVENT1	SEQUENCE OF EVENTS 1	Vehicle	NUM (8)	84
EVENT2	SEQUENCE OF EVENTS 2	Vehicle	NUM (8)	84
EVENT3	SEQUENCE OF EVENTS 3	Vehicle	NUM (8)	84
EVENT4	SEQUENCE OF EVENTS 4	Vehicle	NUM (8)	84
EXPR_DT	LICENSE EXPIRATION DATE	Vehicle	NUM (8)	86
FIRE	POSTCRASH FIRE	Vehicle	NUM (8)	86
GOV_OWN	GOV OWNED VEH INDICATOR	Vehicle	CHAR (1)	86
GVWR_WGT	COMM CARR GROSS VEH WEIGHT	Vehicle	NUM (8)	86
HAZ_NUM1	1 DIGIT HAZMAT NUM PLACARD	Vehicle	NUM (8)	86
HAZ_NUM4	4 DIGIT HAZMAT NUM PLACARD	Vehicle	CHAR (4)	87
HAZ_PLAC	HAZMAT PLACARD INDICATOR	Vehicle	CHAR (1)	87
HAZMAT	HAZARDOUS CARGO	Vehicle	CHAR (1)	87
IMPACTFT	DIST TRAVEL AFTER IMPACT	Vehicle	NUM (8)	87
IMPACTSP	IMPACT SPEED	Vehicle	NUM (8)	88
INSURED	INSURANCE INDICATOR	Vehicle	CHAR (1)	89
INTOXC	DRIVER INTOXICATION GROUP	Vehicle	NUM (8)	89
L_PERMIT	LEARNER PERMIT	Vehicle	CHAR (1)	89
LENGTRL	LENGTH OF TRAILER #1,IN FT	Vehicle	NUM (8)	89
LENGTRL2	LENGTH OF TRAILER #2,IN FT	Vehicle	NUM (8)	89
LIC_IND	DRIVER LICENSE INDICATOR	Vehicle	CHAR (1)	90
LIC_STAT	LICENSE STATE	Vehicle	CHAR (2)	90
LICRESTR	RESTRICT ON DRIV LICENSE	Vehicle	CHAR (2)	90
LICTYPE	TYPE OF DRIVERS LICENSE	Vehicle	CHAR (1)	91
MAKE	VEHICLE MAKE	Vehicle	CHAR (2)	91
MAKENAME	VEHICLE MAKE NAME	Vehicle	CHAR (20)	91
MANEUVER	VEH MANEUVER/PEDEST ACTION	Vehicle	NUM (8)	92

List of Elements for the NC Vehicle Subfile

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
MISCACT1	MISCELLANEOUS ACTION	Vehicle	CHAR (2)	93
MOSTHARM	MOST HARMFUL EVENT	Vehicle	NUM (8)	94
NUM_A	TOTAL A INJURIES IN VEH	Vehicle	CHAR (2)	96
NUM_B	TOTAL B INJURIES IN VEH	Vehicle	CHAR (2)	96
NUM_C	TOTAL C INJURIES IN VEH	Vehicle	CHAR (2)	96
NUM_K	TOTAL KILLED IN VEHICLE	Vehicle	CHAR (2)	96
NUM_OCCS	TOTAL OCCUPANTS IN VEH	Vehicle	CHAR (2)	96
NUM_POCS	NO OF POINTS OF CONTACT	Vehicle	CHAR (1)	96
NUM_TADS	NUMBER OF TAD CODES	Vehicle	CHAR (1)	96
NUMINJ	TOT INJURED IN VEH (K+A+B+C)	Vehicle	CHAR (2)	96
NUMVIOLS	NUM OF VIOLS INDICATED	Vehicle	CHAR (1)	97
OBJECT1	TYPE OF OBJECT STRUCK	Vehicle	CHAR (2)	97
ON_RD	ON ROAD	Vehicle	CHAR (8)	98
ONRD_CL	ON ROAD CLASS	Vehicle	CHAR (4)	99
OTH_UNIT	OTHER UNIT TYPE	Vehicle	CHAR (20)	99
OUTSTATE	OUT OF STATE VEH REGIS	Vehicle	CHAR (1)	99
OWN_CITY	VEHICLE OWNER CITY	Vehicle	CHAR (22)	99
OWN_STAT	VEHICLE OWNER STATE	Vehicle	CHAR (2)	100
OWN_ZIP	VEHICLE OWNER ZIP CODE	Vehicle	CHAR (9)	100
OWNERTYP	OWNER CATEGORY	Vehicle	CHAR (3)	100
PARK_VEH	INDICATOR OF PARKED VEH	Vehicle	CHAR (1)	100
PED_LOC	NON-MOTORIST LOCATION	Vehicle	NUM (8)	101
PEDACT	NON-MOTORIST ACTION	Vehicle	NUM (8)	102
PEDCONT1	CONTRIB CIRCUM NON-MOT 1	Vehicle	NUM (8)	103
PEDCONT2	CONTRIB CIRCUM NON-MOT 2	Vehicle	NUM (8)	103
PEDFLAG	PEDESTRIAN IN ACCIDENT	Vehicle	CHAR (1)	103
PEDHITBY	PUPIL PEDEST STRUCK BY (SCHLBUS CRASH)	Vehicle	CHAR (1)	104
PHYSCOND	PHYSICAL COND OF DRIVER	Vehicle	NUM (8)	104
PTCONT1	POINT OF CONTACT #1	Vehicle	CHAR (2)	105
PTCONT2	POINT OF CONTACT #2	Vehicle	CHAR (2)	105
PTCONT3	POINT OF CONTACT #3	Vehicle	CHAR (2)	105
PTCONT4	POINT OF CONTACT #4	Vehicle	CHAR (2)	105
PTCONT5	POINT OF CONTACT #5	Vehicle	CHAR (2)	105
RD2OBJST	DISTANCE TO OBJECT STRUCK	Vehicle	NUM (8)	106
REGION	REGION OF IMPACT	Vehicle	CHAR (1)	107

List of Elements for the NC Vehicle Subfile

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
ROLLOVER	VEHICLE ROLLOVER	Vehicle	CHAR (1)	107
ROLLPTCT	ROLLOVER, POINT OF CONTACT	Vehicle	NUM (8)	107
ROLLTAD	ROLLOVER, TAD SEVERITY	Vehicle	NUM (8)	108
SCH_BUS1	SCHOOL BUS CONTACT VEH	Vehicle	NUM (8)	108
SCH_BUS2	SCHOOL BUS NON-CONTACT VEH	Vehicle	NUM (8)	108
SOB_TEST	CHEMICAL TEST GIVEN	Vehicle	NUM (8)	109
SPDLIM	POSTED SPEED LIMIT	Vehicle	NUM (8)	109
SPILL	HAZARDOUS CARGO SPILL	Vehicle	CHAR (1)	110
TIRESKID	TIRE IMPRESSIONS IN FEET	Vehicle	NUM (8)	110
TOTLENG	TOT LENGTH OF TRAILER(S) IN FEET	Vehicle	CHAR (3)	110
TOWAWAY	VEHICLE DRIVEABLE	Vehicle	NUM (8)	111
TOWED_BY	TOWED BY	Vehicle	CHAR (50)	111
TOWED_TO	TOWED TO	Vehicle	CHAR (50)	111
TRL_TYPE	TRAILER TYPE	Vehicle	NUM (8)	111
TRL1_FLG	DATA PRESENT (TRAILER #1)	Vehicle	CHAR (1)	112
TRL2_FLG	DATA PRESENT (TRAILER #2)	Vehicle	CHAR (1)	112
TRVL_SPD	ESTIMATED ORIGINAL SPEED	Vehicle	NUM (8)	112
UNDEROVR	VEHICLE UNDERRIDE/OVERRIDE	Vehicle	NUM (8)	113
UNIT_TYP	UNIT TYPE	Vehicle	CHAR (1)	113
V_DAMAG2	TAD#2 LOCATION	Vehicle	CHAR (2)	114
V_DAMAG3	TAD#3 LOCATION	Vehicle	CHAR (2)	114
V_DAMAGE	TAD#1 (AREA OF DAMAGE) LOC	Vehicle	CHAR (2)	114
VEH_SEIZ	VEHICLE SEIZURE DWI	Vehicle	CHAR (1)	114
VEH_DEF	VEHICLE DEFECT	Vehicle	NUM (8)	115
VEHNO	VEHICLE POSITION NUMBER	Vehicle	NUM (8)	115
VEHON	VEHICLE LOCATION BASED ON ROAD	Vehicle	CHAR (1)	115
VEHSEV	SEVERITY	Vehicle	NUM (8)	115
VEHTYPE	VEHICLE TYPE	Vehicle	NUM (8)	116
VEHYR	MODEL YEAR OF VEHICLE	Vehicle	NUM (8)	117
VIN	VEHICLE IDENTIFICATION NO	Vehicle	CHAR (17)	117
VIN_ID	VEHICLE IDENTIFICATION NO	Vehicle	CHAR (25)	117
VISION	VISION OBSTRUCTION	Vehicle	NUM (8)	118
WIDTRL	WIDTH OF TRAILER #1 (IN)	Vehicle	NUM (8)	118
WIDTRL2	WIDTH OF TRAILER #2 (IN)	Vehicle	NUM (8)	118

Note:

- (1) SAS variable names and longer explanatory names are shown above each listing. (See Discussion for information on SAS formats.)
- (2) For all SAS-formatted variables below, an extra category labeled as "ERROR CODES" consolidates all values not listed as legitimate codes. This category is printed when variables are listed in tables.
- (3) For consistency with other State's files and ease of handling, driver-related variables have been included in this Vehicle Subfile as well as in the Occupant Subfile.

Driver Charged with Violation

SAS Name: ACTION

Definition: Whether or not the driver of the vehicle involved in the crash was charged with a violation.

Additional Information: Element discontinued from 2000 onwards.

‘ ‘, ‘0’	Not Stated
‘1’	Charged with Violation
‘2’	Not Charged

Airbags Present in Vehicle

SAS Name: AIRBAGS

Definition: Whether or not airbags were present in the vehicle when the accident occurred.

Additional Information: Element discontinued from 2000 onwards.

‘ ‘	Blank
‘0’	Unknown
‘1’	Air Bag Present
‘2’	No Air Bag

Airbags Deployed in Crash

SAS Name: AIRDEPL

Definition: Whether or not the airbag deployed.

Additional Information: Element discontinued from 2000 onwards. There is an increase in the number of observations coded as “Airbags Deployed”. This is because for later years, more vehicles were equipped with air bags.

‘ ‘	Blank
‘0’	Unknown
‘1’	Air Bag Deploy
‘2’	Not Deployed

Alcohol/Drug in Accident

SAS Name: ALC_DRUG

Definition: Whether alcohol or drugs were involved in the accident.

Additional Information: Element discontinued from 2000 onwards.

0	No
1	Yes – Alcohol, Impairment Suspected
2	Yes – Alcohol, No Impairment Suspected
3	Yes – Other Drugs, Impairment Suspected
4	Yes – Other Drugs, No Impairment Suspected
5	Yes – Alcohol and Other Drugs, Impairment Suspected
6	Yes – Alcohol and Other Drugs, No Impairment Suspected
7	Unknown
8	Not State
9	Drinking – Unable to Determine Impairment

Alcohol Flag

SAS Name: ALCFLAG

Definition: Alcohol Flag

Additional Information: New element added in 2000.

‘N’	No Drink or Drug
‘Y’	Intoxication Code 2 or 3

Amount Damage to Vehicle

SAS Name: AMTDAMG

Definition: Amount of damage to vehicle

0	No Damage
1-49	Less Than \$50
50-99	\$50-99
100-149	\$100-149
150-199	\$150-199
200-249	\$200-249
250-299	\$250-299
300-349	\$300-349
350-399	\$350-399
400-449	\$400-449
450-499	\$450-499
500-599	\$500-599
600-699	\$600-699
700-799	\$700-799
800-899	\$800-899
900-999	\$900-999
1000-1499	\$1000-1499
1500-1999	\$1500-1999
2000-2499	\$2000-2499
2500-2999	\$2500-2999
3000-3999	\$3000-3999
4000-4999	\$4000-4999
5000-9999	\$5000-9999
10000-High	\$10,000 or More

Commercial Carrier Number of Axles

SAS Name: AXLE_NBR

Definition: Commercial carrier total number of axles.*Additional Information:* New element added in 2000.

Number of Axles for TRL#1

SAS Name: AXLES

Definition: Number of Axles for TRL#1**Number of Axles for TRL#2**

SAS Name: AXLES2

Definition: Number of Axles for TRL#2**Bicycle Flag**

SAS Name: BIKEFLAG

Definition: Whether or not the crash involved a bicycle.*Additional Information:* New element added in 2000.

'N'	Not Bicycle Accident
'Y'	Bicycle Accident

Cargo Body Type

SAS Name: BODY

Definition: Cargo Body Type*Additional Information:* New element added in 1999. We are unsure about the quality of this element for 1999. From 2000 onwards, the variable appears consistent.

01	Bus (Seats for 16 or More, Including Driver)
02	Bus (Seats for Less Than 16, Including Driver)
03	Van/Enclosed Box
04	Grain/Chips/Gravel Truck
05	Pole Truck
06	Cargo Tank
07	Flatbed
08	Dump
09	Concrete Mixer
10	Auto Transporter
11	Garbage/Refuse
12	Log truck
13	Other

NC Accident Number with Year

SAS Name: CASENO

Definition: NC accident number with year for the crash.

Additional Information: Format YYNNNNNN, Where YY = Year, and NNNNNN = CASENUM.

Element type is CHAR for 1990 to 1999.

Commercial Carrier City

SAS Name: CC_CITY

Definition: Commercial Carrier City

Additional Information: New element added in 2000.

Commercial Carrier State

SAS Name: CC_STATE

Definition: Commercial Carrier State

Additional Information: New element added in 2000.

Commercial Carrier Zip Code

SAS Name: CC_ZIP

Definition: Commercial Carrier Zip Code

Additional Information: New element added in 2000.

Commercial Carrier Business City

SAS Name: CCB_CITY

Definition: Commercial Carrier Business City

Additional Information: New element added in 2000.

Commercial Carrier Business State

SAS Name: CCB_STAT

Definition: Commercial Carrier Business State

Additional Information: New element added in 2000.

CDL Indicator

SAS Name: CDL_IND

Definition: CDL Indicator

Additional Information: New element added in 2000.

Number of Seats

SAS Name: CNT_SEAT

Definition: Number of Seats

Additional Information: Element discontinued from 2000 onwards.

Violation/Contributing Factor #1

SAS Name: CONTRIB1

Violating/Contributing Factor #2

CONTRB2

Violating/Contributing Factor #3

CONTRIB3

Violating/Contributing Factor #4

CONTRIB4

Violating/Contributing Factor #5

CONTRIB5

Definition: Violating/Contributing Factor

Additional Information: Elements CONTRIB4 and CONTRIB5 discontinued from 2000 onwards.

00	No Contributing Factors
01*	Disregarded Yield Sign
02	Disregarded Stop Sign
03*	Disregarded Other Traffic Signs
04	Disregarded Traffic Signals
05*	Disregarded Road Signals
06	Exceeded Authorized Speed Limit
07	Exceeded Safe Speed for Conditions
08*	Failure to Reduce Speed
09	Improper Turn
10	Right Turn on Red
11	Crossed Center Line/Going Wrong Way
12	Improper Lane Change
13	Use of Improper Lane
14*	Overcorrected/Oversteered
15	Passed Stopped School Bus

16	Passed on Hill
17	Passed on Curve
18	Other Improper Passing
19	Failed to Yield Right of Way
20*	Inattention
21	Improper Backing
22	Improper Parking
23*	Driver Distracted
24	Improper or No Signal
25	Followed Too Closely
26	Operated Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner
27*	Swerved or Avoided Due to Wind, Slippery Surface, Vehicle, Object, Non-Motorist
28*	Visibility Obstructed
29	Operated Defective Equipment
30	Alcohol Use
31	Drug Use
32	Other
33	Unable to Determine
34*	Unknown
35**	Not Stated (Pre 2000)
36**	Minimum Speed Law (Pre 2000)
37**	Safe Movement Violation (Pre 2000)

* Categories coded for 2000 and later years.

** Categories code for 1999 and earlier years.

Cross Median

SAS Name: CROSSMED

Definition: Whether the vehicle crossed the median during the crash.

Additional Information: Element discontinued from 2000 onwards.

''	Blank
'0'	Not Stated
'1'	Crossed Median
'2'	Median Not Crossed

TAD#1 Severity

SAS Name: DAMSEV

TAD#2 SeverityDAMSEV₂**TAD#3 Severity**DAMSEV₃

Definition: Severity of damage to the vehicle (based on the TAD level).

'0'	Not Stated
'1'	Least Severe Damage #1
'2'	Some Severe Damage #2
'3'	Some Severe Damage #3
'4'	Some Severe Damage #4
'5'	Severe Damage #5
'6'	More Severe Damage #6
'7'	Most Severe Damage #7
'8'	Invalid

Direct Travel on Route

SAS Name: DIR_TRVL

Definition: Direction of travel of the vehicle when the crash occurred.

Additional Information: Categories coded 1-4 for 1999 and earlier years. For earlier years of data, 1-4 indicated, North, East, South, and West respectively.

'E', '2'	East
'N', '1'	North
'NE'	Northeast
'NW'	Northwest
'S', '3'	South
'SE'	Southeast
'SW'	Southwest
'W', '4'	West

Driver Alcohol/Drug Test Result

SAS Name: DRG_RES

Definition: Driver Alcohol/Drug Test Result

Additional Information: New element added in 2000.

0	Not Stated
1	No Alcohol or Other Drugs
2	Alcohol (Present BAC)
3	Other Drugs Reported
4	Contaminated Sample/Unusable
5	Pending
6	Unknown

Driver Alcohol/Drug Suspected

SAS Name: DRG_SUSP

Definition: Driver Alcohol/Drug Suspected

Additional Information: New element added in 2000.

Out of State Drivers

SAS Name: DRSTATE

Definition: Whether the driver involved in the crash is out of state or not.

Additional Information: Element discontinued from 2000 onwards.

''	Unknown
'0'	NC Driver License
'1'	Out of State Driver

Driver/Pedestrian Age

SAS Name: DRV_AGE

Definition: Age of the driver or pedestrian involved in the crash.

00-01	Infant – 1 yr
02-04	02-04 yrs
05-10	05-10 yrs
11-14	11-14 yrs
15	15 yrs

16	16 yrs
17	17 yrs
18	18 yrs
19	19 yrs
20	20 yrs
21-25	21-25 yrs
26-30	26-30 yrs
31-35	31-35 yrs
36-45	36-45 yrs
46-55	46-55 yrs
56-65	56-65 years
66-75	66-75 yrs
76-85	76-85 years
86-97	86+ yrs
98	Not Occupied
99	Not Stated

Driver Blood Alcohol Percentage

SAS Name: DRV_BAC

Definition: Driver Blood Alcohol Percentage

Additional Information: New element added in 2000.

Driver City

SAS Name: DRV_CITY

Definition: City where the driver involved in the crash is from.

Additional Information: New element added in 2000.

Driver Date of Birth

SAS Name: DRV_DOB

Definition: Date of birth of the driver involved in the crash.

Driver/Pedestrian Injury

SAS Name: DRV_INJ

Definition: Driver/Pedestrian Injury

''	Blank
'0'	Not Stated
'1'	Killed
'2'	A Type Injury
'3'	B Type Injury
'4'	C Type Injury
'5'	PDO NO Injury
'6'	Not Occupied
'7'	Unknown

Driver License Restrict

SAS Name: DRV_LICENSE_RESTRICT

Definition: Whether or not there was a restriction noted on the driver's license.

''	Out of State or Unlicensed Driver
'0'	No Restriction or No NC License
'1'	Corrective Lense
'2'	45 MPH Limit
'3'	Daylight Driving Only
'4'	Corrective Lenses, and 45 MPH Limit
'5'	Corrective Lenses, 45 MPH Limit and Daylight Driving Only
'6'	Corrective Lenses, and Daylight Driving Only
'7'	45 MPH Limit, and Daylight Driving Only
'8'	No Interstate Driving
'9'	Other Restriction

Driver/Pedestrian Race

SAS Name: DRV_RACE

Definition: Race of the driver/pedestrian involved in the crash.

''	Blank
'0'	Not Stated
'1'	White
'2'	Black
'3'	Indian
'4'	Other
'5'	Not Occupied
'6'*	Hispanic
'7'	Non-White

* Category coded from 2000 onwards.

Driver Restraint

SAS Name: DRV_REST

Definition: Type of safety restraint used by the driver.

Additional Information: The data included under this variable is inaccurate, in that regularly conducted field observations of use indicate figures which are at least 10 to 15 percent lower than the values found in the accident file.

''	Blank
'00'	Not Stated
'01'	None
'02'	Lap Belt
'03'	Lap and Shoulder Belt
'04'	Child Restraint
'05'	Unknown
'06'	Not Occupied
'07'	Xhelmet
'08'*	Shoulder Belt Only
'09'*	Reflective Clothing
'10'*	Lighting
'11'*	Other
'12'*	Unable to Determine

* Categories coded from 2000 onwards.

Driver/Pedestrian Seat Position

SAS Name: DRV_SEAT

Definition: Driver/Pedestrian Seat Position

'1'	Driver
'2'	Center Front
'3'	Right Front
'4'	Left Rear
'5'	Center Rear
'6'	Right Rear

Driver/Pedestrian Sex

SAS Name: DRV_SEX

Definition: Sex of the driver or pedestrian involved in the crash.

' '	Blank
'0'	Not Stated
'1'	Male
'2'	Female
'3'	Not Occupied
'4'	Unknown

Driver Zip Code

SAS Name: DRV_ZIP

Definition: Zip code of the driver who was involved in the crash.

Additional Information: New element added in 2000.

Emergency Vehicle Use

SAS Name: EMERGUSE

Definition: Emergency Vehicle Use

Additional Information: New element added in 2000.

1	Firetruck
2	Ambulance
3	Military
4	Police
5	Other

Sequence of Events 1	SAS Name: EVENT1
Sequence of Events 2	EVENT2
Sequence of Events 3	EVENT3
Sequence of Events 4	EVENT4

Definition: Description of each event in the crash sequence for this vehicle.

Additional Information: New element added in 2000.

00	Unknown
01	Ran off Road Right
02	Ran Off Road Left
03	Ran Off Road Straight Ahead
04	Jackknife
05	Overturn/Rollover
06	Crossed Centerline/Median
07	Downhill Runaway
08	Cargo/Equipment Loss or Shift
09	Fire/Explosion
10	Immersion
11	Equipment Failure
12	Separation of Units
13	Other Non-Collision
14	Pedestrian
15	Pedalcyclist
16	RR Train, Engine
17	Animal
18	Movable Object
20	Parked Motor Vehicle
21	Rear End, Slow or Stop
22	Rear End, Turn
23	Left Turn, Same Roadways
24	Left Turn, Different Roadways
25	Right Turn, Same Roadways
26	Right Turn, Different Roadways
27	Head On
28	Sideswipe, Same Direction
29	Sideswipe, Opposite Direction

30	Angle
31	Backing Up
32	Other Collision with Vehicle
33	Tree
34	Military Route
35	Luminaire Pole Non-Breakaway
36	Luminaire Pole Breakaway
37	Official Highway Sign Non-Breakaway
38	Official Highway Sign Breakaway
39	Overhead Sign Support
40	Commercial Sign
41	Guardrail End on Shoulder
42	Guardrail Face on Shoulder
43	Guardrail End on Median
44	Guardrail Face on Median
45	Shoulder Barrier End
46	Shoulder Barrier Face
47	Median Barrier End
48	Median Barrier Face
49	Bridge Rail End
50	Bridge Rail Face
51	Overhead Part Underpass
52	Pier on Shoulder of Underpass
53	Pier in Median of Underpass
54	Abutment of Underpass
55	Traffic Island Curb or Median
56	Catch Basin or Culvert on Shoulder
57	Catch Basin or Culvert on Median
58	Ditch
59	Embankment
60	Mailbox
61	Fence or Fence Post
62	Construction Barrier
63	Crash Cushion
64	Other Fixed Object

License Expiration Date

SAS Name: EXPR_DT

Definition: Expiration date of license of the driver involved in the crash.

Additional Information: New element added in 2000.

Post –Crash Fire

SAS Name: FIRE

Definition: Whether or not the crash resulted in a fire.

Additional Information: From 2000 onwards almost 100% observations are coded as missing.

'1'	Yes
'2'	Unknown
'3'	Not Stated

Government Owned Vehicle Indicator

SAS Name: GOV_OWV

Definition: Government Owned Vehicle Indicator

Additional Information: New element added in 2000.

' '	Uncoded
'Y'	Yes
'N'	No

Commercial Carrier Gross Vehicle Weight

SAS Name: GVWR_WGT

Definition: Commercial Carrier Gross Vehicle Weight

Additional Information: New element added in 2000.

1 Digit Hazmat Number Bottom Placard

SAS Name: HAZ_NUM1

Definition: 1 Digit Hazmat Number Bottom Placard

Additional Information: New element added in 2000.

4 Digit Hazmat Number Bottom Placard

SAS Name: HAZ_NUM4

Definition: 4 Digit Hazmat Number Bottom Placard*Additional Information:* New element added in 2000.**Hazmat Placard Indicator**

SAS Name: HAZ_PLAC

Definition: Hazmat Placard Indicator*Additional Information:* New element added in 2000.

'1'	Present
''	Not Present

Hazardous Cargo

SAS Name: HAZMAT

Definition: Whether or not the vehicle was carrying hazardous material when the crash occurred.*Additional Information:* From 2000 onwards, almost all observations coded as missing.

''	Blank
'0'	Unknown
'1'	Hazardous Material
'2'	No Hazardous Material

Distance Travel After Impact

SAS Name: IMPACTFT

Definition: Distance traveled by the vehicle after the impact occurred.

000	0 Feet
01-05	01-05 ft
06-10	06-10 ft
11-15	11-15 ft
16-20	16-20 ft
21-40	21-40 ft
41-60	41-60 ft
61-80	61-80 ft
81-100	81-100 ft

101-120	101-120 ft
121-140	121-140 ft
141-160	141-160 ft
161-180	161-180 ft
181-200	181-200 ft
201-510	Over 200 ft
511	Distance N.S.

Impact Speed

SAS Name: IMPACTSP

Definition: Estimated speed of the vehicle when impact occurred.

00	Not Moving
01-05	01-05 MPH
06-10	06-10 MPH
11-15	11-15 MPH
16-20	16-20 MPH
21-25	21-25 MPH
26-30	26-30 MPH
31-35	31-35 MPG
36-40	36-40 MPH
41-45	41-45 MPH
46-50	46-50 MPH
51-55	51-55 MPH
56-60	56-60 MPH
61-65	61-65 MPH
66-70	66-70 MPH
71-75	71-75 MPH
76-80	76-80 MPH
81-85	81-85 MPH
86-HIGH	Over 85 MPH

Insurance Indicator

SAS Name: INSURED

Definition: Whether or not this vehicle was insured.*Additional Information:* New element added in 2000.

‘’, ‘0’	Unknown
‘1’	Yes
‘2’	No

Driver Intoxication Group

SAS Name: INTOXC

Definition: Driver Intoxication Group*Additional Information:* Element added in 1996, and discontinued from 1998 onwards.

1	Drinking
2	Not Drinking
3	Unknown

Learner Permit

SAS Name: L_PERMIT

Definition: Learner Permit*Additional Information:* Element discontinued from 2000 onwards.

‘0’, ‘ ’	No or Not Stated
‘1’	Learner’s Permit
‘2’	Limited Permit

Length of Trailer #1 in Feet

SAS Name: LENGTRL

Definition: Length of Trailer #1 in Feet**Length of Trailer #2 in Feet**

SAS Name: LENGTRL2

Definition: Length of Trailer #2 in Feet

Driver License Indicator

SAS Name: LIC_IND

Definition: Whether or not the driver had a driver's license.

Additional Information: New element added in 2000.

'N'	No
'Y'	Yes

License State

SAS Name: LIC_STAT

Definition: State of the license of the driver involved in the crash.

Additional Information: New element added in 2000.

Restrict on Driver License

SAS Name: LICRESTR

Definition: Restrict on Driver License

Additional Information: Element discontinued from 2000 onwards. For years 1995 and 1996, all categories coded as missing.

'-'	Out of State or Unlicensed Driver
'0'	NO Restriction or No NC License
'1'	Corrective Lenses
'2'	45 MPH Limit
'3'	Daylight Driving Only
'4'	Corrective Lenses, and 45 MPH Limit
'5'	Corrective Lenses, 45 MPH Limit, Daylight Driving Only
'6'	Corrective Lenses, and Daylight Driving Only
'7'	45 MPH Limit, and Daylight Driving Only
'8'	No Interstate Driving
'9'	Other Restriction

Type of Driver License

SAS Name: LICTYPE

Definition: Type of driver license held by the driver of the vehicle involved in the crash.

Additional Information: From 2000 onwards all observations are coded as missing. For 1995 and 1996, all observations coded as 0.

'0'	Hit and Run
'1'	Class A – NC Operator’s License
'2'	Class B – NC Chauffer’s License
'3'	Class C – NC Chauffer and Operator’s License
'4'	NC Control Number
'5'	New Control Number
'8'	Learner’s Permit
'9'	Limited Permit
'A'	Any combination of vehicle with a gross vehicle weight rating, GVWR, of 26,0001 pounds and <= 10,000 pounds
'B'	Any single vehicle with a GVWR of 26,0001 pounds not in excess of 10,000 pounds
'C'	Any vehicle not described in Class A or B above
'H'	Authorizes you to drive a vehicle transporting hazardous materials (hazmat)
'T'	Authorizes you to drive double trailers
'P'	Authorizes you to drive passenger vehicles
'L'	Restricts you to driving vehicles not equipped with air brakes
'S'	Restricts you to operating school buses only
'N'	Authorizes you to drive tank vehicles
'X'	Is a combination of the hazmat and tank vehicle endorsements
'M'	Authorizes you to drive a motorcycle

Vehicle Make

SAS Name: MAKE

Definition: Make of the vehicle involved in the crash.

Additional Information: Element added in 1999, and discontinued from 2000 onwards.

Vehicle Make Name

SAS Name: MAKENAME

Definition: Vehicle Make Name

Vehicle Maneuver/Pedestrian Action

SAS Name: MANEUVER

Definition: Vehicle Maneuver/Pedestrian Action

- | | |
|----|----------------------------|
| 01 | Stopped in Travel Lane |
| 02 | Parked Out of Travel Lanes |
| 03 | Parked in Travel Lanes |
| 04 | Going Straight Ahead |
| 05 | Changing Lanes or Merging |
| 06 | Passing |
| 07 | Making Right Turn |
| 08 | Making Left Turn |
| 09 | Making U Turn |
| 10 | Backing |
| 11 | Slowing or Stopping |
| 12 | Starting in Roadway |
| 13 | Parking |
| 14 | Leaving Parked Position |
| 15 | Avoiding Object in Road |
| 16 | Other |
| 17 | Not Stated (Pre 2000) |

Miscellaneous Action

SAS Name: MISCACT₁

Definition: Miscellaneous Action

Additional Information: Element discontinued from 2000 onwards.

' '	Blank
'00'	Not Stated
'01'	Avoiding Pedestrian
'02'	Avoiding Other Vehicle
'03'	Avoiding Fixed Object
'04'	Avoiding Animal
'05'	Fire or Mechanical Failure
'06'	Falling from Vehicle
'07'	Driverless Moving Vehicle
'08'	Skidding Out of Control
'09'	Pushing or Towing Vehicle (Not Trailer)
'10'	Vehicle Parked on Private Property
'11'	Vehicle Legally Parked
'12'	Vehicle and Driver Info Omitted
'13'	Driver Info Added to Statistical Report Only
'14'	Moped Info Added to Statistical Report Only

Most Harmful Event

SAS Name: MOSTHARM

Definition: Most Harmful Event in the crash sequence.

Additional Information:

1. Categories 33-63 are present for 2000 onwards. For earlier years all these information was captured in a single category 68 (hit fixed object).
2. Similarly categories 18, 28, 29 and 32 are present for 2000 onwards. For earlier years they were coded either as Sideswipe (category 96) or other road (category 65).
3. Categories 4.6.7.8.9.11.12 and 13 are coded from 2000 onwards.
4. Categories 65, 66, 68 and 69 coded for years prior to 2000.

00	Unknown
01	Ran off Road Right
02	Ran Off Road Left
03	Ran Off Road Straight Ahead
04	Jackknife
05	Overturn/Rollover
06	Crossed Centerline/Median
07	Downhill Runaway
08	Cargo/Equipment Loss or Shift
09	Fire/Explosion
10	Immersion
11	Equipment Failure
12	Separation of Units
13	Other Non-Collision
14	Pedestrian
15	Pedalcyclist
16	RR Train, Engine
17	Animal
18	Movable Object
20	Parked Motor Vehicle
21	Rear End, Slow or Stop
22	Rear End, Turn
23	Left Turn, Same Roadways
24	Left Turn, Different Roadways
25	Right Turn, Same Roadways
26	Right Turn, Different Roadways
27	Head On

28	Sideswipe, Same Direction
29	Sideswipe, Opposite Direction
30	Angle
31	Backing Up
32	Other Collision with Vehicle
33	Tree
34	Utility Pole
35	Luminaire Pole Non-Breakaway
36	Luminaire Pole Breakaway
37	Official Highway Sign Non-Breakaway
38	Official Highway Sign Breakaway
39	Overhead Sign Support
40	Commercial Sign
41	Guardrail End on Shoulder
42	Guardrail Face on Shoulder
43	Guardrail End on Median
44	Guardrail Face on Median
45	Shoulder Barrier End
46	Shoulder Barrier Face
47	Median Barrier End
48	Median Barrier Face
49	Bridge Rail End
50	Bridge Rail Face
51	Overhead Part Underpass
52	Pier on Shoulder of Underpass
53	Pier in Median of Underpass
54	Abutment of Underpass
55	Traffic Island Curb or Median
56	Catch Basin or Culvert on Shoulder
57	Catch Basin or Culvert on Median
58	Ditch
59	Embankment
60	Mailbox
61	Fence or Fence Post
62	Construction Barrier
63	Crash Cushion
64	Other Fixed Object
65	Type Not Stated (Pre 2000)

66	Other in Road (Pre 2000)
67	Hit Moped (Pre 2000)
68	Hit Fixed Object (Pre 2000)
69	Sideswipe (Pre 2000)

Total A Injuries in Vehicle	SAS Name: NUM_A
Total B Injuries in Vehicle	NUM_B
Total C Injuries in Vehicle	NUM_C

Definition: Injuries in Vehicle

Total Killed in Vehicle	SAS Name: NUM_K
--------------------------------	-----------------

Definition: Total number killed in this vehicle.

Total Occupants in Vehicle	SAS Name: NUM_OCCS
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Definition: Total number of occupants in this vehicle when the crash occurred.

Additional Information: Element discontinued from 2000 onwards.

Number of Points of Contact	SAS Name: NUM_POCS
------------------------------------	--------------------

Definition: Number of Points of Contact

Additional Information: Element discontinued from 2000 onwards.

Number of TAD Codes	SAS Name: NUM_TADS
----------------------------	--------------------

Definition: Number of Tad Codes

Additional Information: Element discontinued from 2000 onwards.

Total Injured in Vehicle (K + A + B + C)	SAS Name: NUMINJ
---	------------------

Definition: Total number of occupants injured in this vehicle (including fatal injuries). *Additional Information:* Element discontinued from 2000 onwards.

Number of Violations Indicated

SAS Name: NUMVIOLS

Definition: Number of Violations Indicated

Additional Information: Element discontinued from 2000 onwards.

'00'	No Violations
'01'	1 Contrib/Viol
'02'	2 Contrib/Viols
'03'	3 Contrib/Viols
'04'	4 Contrib/Viols
'5' – '99'	5+ Contrib/Viols

Type of Object Struck

SAS Name: OBJECT1

Definition: Type of object struck by this vehicle when the crash occurred.

Additional Information: Element discontinued from 2000 onwards. See EVENT1-EVENT4.

' '	Blank
'00'	Not Stated
'01'	None
'02'	Parked Vehicle
'03'	Bicycle or Moped
'04'	Pedestrian
'05'	Animal
'06'	Tree
'07'	Utility Pole (With/Without Pole)
'08'	Luminaire Pole (Non-Breakaway)
'09'	Luminaire Pole (Breakaway)
'10'	Highway Sign (Non-Breakaway)
'11'	Highway Sign (Breakaway)
'12'	Commercial Sign
'13'	Guardrail End on Shoulder
'14'	Guardrail Fence on Shoulder
'15'	Guardrail End in Median
'16'	Guardrail Fence in Median
'17'	Shoulder Barrier End
'18'	Shoulder Barrier Face
'19'	Median Barrier End

'20'	Median Barrier Face
'21'	Bridge Rail End
'22'	Bridge Rail Face
'23'	Overhead Part of Underpass
'24'	Pier on Shoulder of Underpass
'25'	Pier in Median of Underpass
'26'	Abutment (Supporting Wall) of Underpass
'27'	Traffic Island Curb or Median
'28'	Catch Basin or Culvert on Shoulder
'29'	Catch Basin or Culvert on Median
'30'	Ditch Bank
'31'	Mailbox
'32'	Fence or Fence Post
'33'	Construction Barrier
'34'	Crash Cushion
'35'	Other Object

On Road

SAS Name: ON_RD

Definition: On Road

Additional Information: Element discontinued from 2000 onwards.

On Road Class

SAS Name: ONRD_CL

Definition: On Road Class

Additional Information: New element added in 2000.

'CL'	County Line
'I'	Interstate
'LCL'	Local City Street
'MILE'	Mile Marker
'ML'	Municipal Limit
'NC'	NC Route
'PP'	Private Property
'PVA'	Public Vehicular Area
'RP'	Rural Paved
'RU'	Rural Unpaved
'SL'	State Line
'SR'	State Route
'UNK'	Unknown
'US'	US Route

Other Unit Type

SAS Name: OTH_UNIT

Definition: Other Unit Type

Additional Information: Element discontinued from 2000 onwards.

Out of State Vehicle Registration

SAS Name: OUTSTATE

Definition: Out of State Vehicle Registration

Additional Information: Element discontinued from 2000 onwards.

Vehicle Owner City

SAS Name: OWN_CITY

Definition: Vehicle Owner City

Additional Information: Element discontinued from 2000 onwards.

Vehicle Owner State

SAS Name: OWN_STAT

Definition: Vehicle Owner State

Additional Information: Element discontinued from 2000 onwards.

Vehicle Owner Zip Code

SAS Name: OWN_ZIP

Definition: Vehicle Owner Zip Code

Additional Information: Element discontinued from 2000 onwards.

Owner Category

SAS Name: OWNERTYP

Definition: Owner Category

Additional Information: Element format changed from 2000 onwards.

'0'	Privately Owned Vehicle (Pre 2000)
'1'	Military Vehicle (Pre 2000)
'2'	Emergency Vehicle (Pre 2000)
'3'	State Owned Vehicle (Pre 2000)
'4'	Public Owned Vehicle (Pre 2000)
'5'	Privately Owned School Bus (Pre 2000)
'6'	Commercial Owned School Bus (Pre 2000)
'7'	State Owned School Bus (Pre 2000)

Indicator of Parked Vehicle

SAS Name: PARK_VEH

Definition: Indicator of Parked Vehicle

Additional Information: New element added in 2000.

' '	Traveling
'1'	Parked

Non-Motorist Location Prior to Crash

SAS Name: PED_LOC

Definition: Location of the non-motorist prior to the crash.

Additional Information: New element added in 2000.

01	Marked Crosswalk at Intersection
02	At Intersection but No Crosswalk
03	Non-Intersection Crosswalk
04	Driveway Access Crosswalk
05	In Roadway
06	Not In Roadway
07	Median
08	Island
09	Shoulder
10	Sidewalk
11	Within 10 ft of Roadway
12	Beyond 10 ft of Roadway
13	Outside Trafficway
14	Shared Use Path or Trails

Non-Motorist Action

SAS Name: PEDACT

Definition: Non-Motorist Action

Additional Information: Categories 1-9 coded for years prior to 2000. For later years, categories 10-18 coded. The categories defined appear to be different and it seems there has been a change in what information is collected by this variable from years prior to 2000 and later years.

00	Unknown
01	Entering or Crossing Specified Location
02	Walking, Riding, Running/Jogging with Traffic
03	Walking, Riding, Running/Jogging against Traffic
04	Working
05	Pushing Vehicle
06	Approaching or Leaving Vehicle
07	Playing
08	Standing
09	Other
10	Pedestrian Crossing at Intersection
11	Pedestrian Crossing not at Intersection
12	Pedestrian From Behind Parked Vehicle
13	Pedestrian Walking with Traffic
14	Pedestrian Walking Against Traffic
15	Getting On or Off Vehicle
16	Lying in Road
17	Not in Road
18	Getting On or Off School Bus

Contributing Circumstances, Non-Motorist 1
Contributing Circumstances, Non-Motorists 2

SAS Name: PEDCONT1
PEDCONT2

Definition: Contributing Circumstances, Non-Motorist

Additional Information: New element added in 2000.

- 00 None
- 01 Coming From Behind Parked Vehicle
- 02 Darting
- 03 Lying and/or Illegally in Roadway
- 04 Failure to Yield Right of Way
- 05 Not Visible (Dark Clothing, Etc.)
- 06 Inattentive (Talking, Eating, Etc.)
- 07 Failure to Obey Traffic Signs, Signals
- 08 Wrong Side of Road
- 09 Other
- 10 Unknown

Pedestrian in Accident

SAS Name: PEDFLAG

Definition: Whether or not a pedestrian was involved in this accident.

Additional Information: New element added in 2000.

- 'N' Not Pedestrian Accident
- 'Y' Pedestrian Accident

Pupil Pedestrian Struck By (School Bus Crash)

SAS Name: PEDHITBY

Definition: What struck the pupil pedestrian in a school bus crash.

Additional Information: Element discontinued from 2000 onwards. Almost all observations are coded as missing.

''	Blank
'0'	Not Applicable
'1'	Pupil Pedestrian Struck by School Bus
'2'	Pupil Pedestrian Struck by Passenger Car
'3'	Pupil Pedestrian Struck by Truck
'4'	Pupil Pedestrian Struck by Other Vehicle
'5'	Pupil Pedestrian Struck by Flying Object
'6'	Non-Pupil Pedestrian Struck by School Bus
'7'	Non-Pupil Pedestrian Struck by Other Vehicle
'8'	Non-Pupil Pedestrian Struck by Flying Object

Physical Condition of Driver

SAS Name: PHYSCOND

Definition: Physical condition of the driver when the crash occurred.

01	Apparently Normal
02	Illness
03	Fatigue
04	Fell Asleep, Fainted, Loss of Consciousness
05	Impairment Due to Medications, Drugs, Alcohol
06	Medical Condition
07	Other Physical Impairment
08	Restriction Not Complied With
09	Other
10	Unknown
11	Not Stated (Pre 2000)

Point of Contact #1	SAS Name: PTCONT ₁
Point of Contact #2	PTCONT ₂
Point of Contact #3	PTCONT ₃
Point of Contact #4	PTCONT ₄
Point of Contact #5	PTCONT ₅

Definition: Description of each point of contact for this vehicle.

''	Blank
'00'	Not Stated
'01'	RF VEH, CAB
'02'	CF VEH, CAB
'03'	LF VEH, CAB
'04'	LF CRNR VEH, CAB
'05'	LSF VEH, CAB
'06'	LS CNTR VEH
'07'	LSB VEH, CAB
'08'	LR CRNR VEH, CB
'09'	TRUNK VEH
'10'	R Windshield VEH
'11'	TOP VEH, CAB
'12'	F W_SHLD VEH, CAB
'13'	HOOD VEH, CAB
'14'	LR VEH, CAB/F TRL
'15'	CR VEH, CAB/F TRL
'16'	RR VEH, CAB/F TRL
'17'	RR CRNR VEH, CAB
'18'	RSB VEH
'19'	RS CNTR VEH, CAB
'20'	RSF VEH, CAB
'21'	RF CRNR VEH, CAB
'22'	Underneath Front
'23'	Underneath Center
'24'	Underneath Rear
'25'	Rollover
'26'	Unknown
'27'	Front, 2-WHL VEH

'28'	Left, 2-WHL VEH
'29'	Rear, 2-WHL VEH
'30'	Right, 2-WHL VEH
'31'	LSF TRLR
'32'	LSB TRLR
'33'	LR CRNR TRL
'34'	LR TRL
'35'	CR TRLR
'36'	RR TRLR
'37'	RR CRNR TRL
'38'	RS BACK TRLR
'39'	RF FRNT TRLR
'40'	TOP TRL
'41'	FRONT END-DISTR
'42'	LEFT SIDE-DISTR
'43'	REAR END-DISTR
'44'	RIGHT SIDE DISTR

Distance to Object Struck

SAS Name: RD2OBJST

Definition: Location and distance from road to object struck by this vehicle.

00	None
01	In Road
02	Right of Road 0-10 ft
03	Right of Road 11-30 ft
04	Right of Road Over 30 ft
05	Left of Road 0-10 ft
06	Left of Road 11-30 ft
07	Left of Road Over 30 ft
08	Straight Ahead 0-10 ft
09	Straight Ahead 11-30 ft
10	Straight Ahead Over 30 ft

Region of Impact

SAS Name: REGION

Definition: Region of impact for this vehicle.

Additional Information: Element discontinued from 2000 onwards. See Point of Contact.

''	Blank
'1'	Front Impact
'2'	Right Side Impact
'3'	Left Side Impact
'4'	Rear End Impact
'5'	Unspecified

Vehicle Rollover

SAS Name: ROLLOVER

Definition: Whether or not this vehicle rolled over during the crash sequence.

Additional Information: Element discontinued from 2000 onwards.

''	Unknown
'0'	Rolled Over
'1'	No Roll Over

Vehicle Rollover – Determined by Using Point of Contact

SAS Name: ROLLPTCT

Definition: Vehicle Rollover – Determined by Using Point of Contact

Additional Information: Element added in 1996, and discontinued from 1998 onwards.

1	Rolled Over
2	No Rollover

Vehicle Rollover – Determined by Using TAD Severity

SAS Name: ROLLTAD

Definition: Vehicle Rollover – Determined by Using Tad Severity

Additional Information: Element added in 1996, and discontinued from 1998 onwards.

- | | |
|---|-------------|
| 1 | Rolled Over |
| 2 | No Rollover |

School Bus Contact Vehicle

SAS Name: SCH_BUS1

Definition: Whether or not this vehicle was a school bus and was a contact vehicle in this crash.

Additional Information: New element added in 2000.

- | | |
|---|-----|
| 1 | Yes |
| 2 | No |

School Bus Non-Contact Vehicle

SAS Name: SCH_BUS2

Definition: Whether or not this vehicle was a school bus and was a non-contact vehicle in this crash

Additional Information: New element added in 2000.

- | | |
|---|-----|
| 1 | Yes |
| 2 | No |

Chemical Test Given

SAS Name: SOB_TEST

Definition: Presence and type of chemical test administered to this driver.

Additional Information: For years before 2000 all observations were coded as not stated.

Observations coded as categories 1-6 for later years.

0	Not Test
1	Alcohol Test
2	Test for Other Drugs
3	Alcohol and Other Drugs Test
4	Test Refused
5	Unknown
6	Not Stated
7	Tested

Posted Speed Limit

SAS Name: SPDLIM

Definition: Posted speed limit for this vehicle.

00	Not Stated
01	Unknown
10	10 Mph
15	15 Mph
20	20 Mph
25	25 Mph
30	30 Mph
35	35 Mph
40	40 Mph
45	45 Mph
50	50 Mph
55	55 Mph
60	60 Mph
65	65 Mph
70	70 Mph
75	75 Mph
Other	Error Codes

Hazardous Cargo Spilled

SAS Name: SPILL

Definition: Whether or not this vehicle spilled hazardous cargo when the crash occurred.

Additional Information: From 2000 onwards almost 100% observations coded as missing.

''	Blank
'0'	Not Stated
'1'	Hazardous Spill
'2'	No Spill

Tire Impressions in Feet

SAS Name: TIRESKID

Definition: Length of tire impressions (skid marks) in feet.

000	00 ft
01-05	01-05 ft
06-10	06-10 ft
11-15	11-15 ft
16-20	16-20 ft
21-40	21-40 ft
41-60	41-60 ft
61-80	61-80 ft
81-100	81-100 ft
101-120	101-120 ft
121-140	121-140 ft
141-160	141-160 ft
161-180	161-180 ft
181-200	181-200 ft
201-510	Over 200 ft
511	Tire Impression Not Stated

Total Length of Trailer (S) (FT)

SAS Name: TOTLENG

Definition: Total length of all trailer(s) in feet for this commercial motor carrier.

Additional Information: Element discontinued from 2000 onwards.

Vehicle Drivable

SAS Name: TOWAWAY

Definition: Whether or not this vehicle was drivable after the crash (i.e., was not towed from scene).

1	Yes
2	No
3	Not Stated

Towed By

SAS Name: TOWED_BY

Definition: Who the vehicle involved in the crash was towed by.

Additional Information: Element discontinued from 2000 onwards.

Towed To

SAS Name: TOWED_TO

Definition: Where the vehicle involved in the crash was towed to.

Additional Information: Element discontinued from 2000 onwards.

Trailer Type

SAS Name: TRL_TYPE

Definition: Trailer Type

00	No Trailer
01	Boat Trailer
02	Camper
03	Utility Trailer
04	Horse Trailer
05	House Trailer
06	Towed Vehicle
07	Other Non-Semi Trailer
08	Tanker
09	Enclosed Van
10	Flatbed or Platform
11	Other Semi Trailer
12	Double Trailer

Data Present (Trailer #1)

SAS Name: TRL1_FLG

Data Present (Trailer #2)

TRL2_FLG

Definition: Data Present (Trailer)*Additional Information:* Element discontinued from 2000 onwards.

'0'	No Trailer Dimension Available
'1'	Dimensions Given
Other	Error/Other Code

Estimated Original Speed

SAS Name: TRVL_SPD

Definition: Estimated original speed of the vehicle involved in the crash.

00	Not Moving
01-05	01-05 MPH
06-10	06-10 MPH
11-15	11-15 MPH
16-20	16-20 MPH
21-25	21-25 MPH
26-30	26-30 MPH
31-35	31-35 MPH
36-40	36-40 MPH
41-45	41-45 MPH
46-50	46-50 MPH
51-55	51-55 MPH
56-60	56-60 MPH
61-65	61-65 MPH
66-70	66-70 MPH
71-75	71-75 MPH
76-80	76-80 MPH
81-85	81-85 MPH
86-HIGH	Over 85 MPH

Vehicle Underride/Override

SAS Name: UNDEROVR

Definition: Whether this vehicle underrides (e.g., goes under) or overrides (e.g., runs over) another vehicle in this crash.

Additional Information: New element added in 2000.

1	Underride
2	Override
3	Neither Underride or Override
4	Unknown

Unit Type

SAS Name: UNIT_TYP

Definition: Unit Type

Additional Information: For years prior to 2000 only categories 0 and 2 were coded. Other categories, C, H, O, P and V are coded for later years.

''	Blank
'0'	Unknown
'2'	Not Commercial Vehicle
'C'	Commercial
'H'	Hit and Run
'O'	Other
'P'	Pedestrian
'V'	Vehicle

TAD #1 (Area of Damage) Location

SAS Name: V_DAMAGE

TAD #2 Location

V_DAMAGE2

TAD #3 Location

V_DAMAGE3

Definition: Area(s) of damage to this vehicle based on TAD location.

' '	Blank
'00'	Not Stated
'01'	FL
'02'	FC
'03'	FD
'04'	FR
'05'	RFQ
'06'	RP
'07'	RD, RSS
'08'	RBQ
'09'	R and T
'10'	BR
'11'	BC
'12'	BD
'13'	BBL
'14'	L =and T
'15'	LBQ
'16'	LD, LSS
'17'	LP
'18'	LFQ
'19'	TOP
'20'	Uncodeable

Vehicle Seizure DWI

SAS Name: VEH_SEIZ

Definition: Whether or not this vehicle was seized due to a DWI violation.

Additional Information: New element added in 2000.

1	Yes
2	Unknown

Vehicle Defect

SAS Name: VEH_DEF

Definition: Vehicle Defect

Additional Information: Element renamed in 2000 to veh_def.

'0'	Not Stated
'1'	Defective Brakes
'2'	Defective Headlights
'3'	Defective Rear Lights
'4'	Defective Steering
'5'	Defective Tires
'6'	Other Defects
'7'	Unknown
'8'	No Defects

Vehicle Position

SAS Name: VEHNO

Definition: Vehicle Position

Vehicle Location Based on Road

SAS Name: VEHON

Definition: Vehicle Location Based on Road

Additional Information: Element discontinued from 2000 onwards.

Severity

SAS Name: VEHSEV

Definition: Most severe injury in this vehicle.

Additional Information: Element added in 1998, and discontinued from 1998 onwards.

1	No Injury
2	Class C Injury
3	Class B Injury
4	Class A Injury
5	Fatal Injury

Vehicle Type

SAS Name: VEHTYPE

Definition: Vehicle type of vehicle involved in the crash.

Additional Information: Coding for two-axle trucks changed between 1991 and 1992, when new codes were added (see discussion).

01	Passenger Car
02	Pickup
03	Light Truck (Mini-Van, Panel)
04*	Sport Utility
05	Van
06	Commercial Bus
07	School Bus
08	Activity Bus
09*	Other Bus
10	Single Unit Truck (2-Axle, 6-Tire)
11	Single Unit Truck (3 Axles or More)
12	Truck/Trailer
13	Truck/Tractor
14*	Tractor/Semi Trailer
15*	Tractor/Doubles
16*	Unknown Heavy Truck
17	Taxicab
18	Farm Equipment
19	Farm Tractor
20	Motorcycle
21	Moped
22	Motor Scooter Or Motor Bike
23	Pedalcycle
24	Pedestrian
25	Motor Home/Recreational Vehicle
26	Other
27*	All Terrain Vehicle (ATV)
28*	Fire Truck
29	EMS Vehicle, Ambulance, Rescue Squad
30	Military
31*	Police
32*	Unknown

33**	Not Stated
34**	2, 4 Door Sedan
35**	Station Wagon (Passenger)
36**	Station Wagon (Truck)
37**	Truck with Four Axles

* Categories Present in 2000 and later years.

** Categories present in years prior to 2000.

Model Year of Vehicle

SAS Name: VEHYR

Definition: Model year of vehicle involved in the crash.

Additional Information: Format YYYY where YYYY = Year.

Vehicle Identification Number

SAS Name: VIN

Definition: Vehicle Identification Number

Additional Information: Element discontinued from 2000 onwards. See next variable.

Vehicle Identification Number

SAS Name: VIN_ID

Definition: Vehicle Identification Number

Additional Information: New variable added in 2000.

Vision Obstruction

SAS Name: VISION

Definition: Vision obstruction for this vehicle's driver that contributed to the crash.

00	None
01	Vehicle Window(s) Obscured
02	Trees, Crops, Brush, Etc
03	Building(s)
04	Embankment
05	Sign(s)
06	Hillcrest
07	Parked Vehicle(s)
08	Vehicle(s) in Traffic/Moving
09	Blinded, Headlights
10	Blinded, Sunlight
11	Blinded, Other Lights
12	Other
13	Unknown
14	Not Stated (Pre 2000)

Width of Trailer #1 (Inches)

SAS Name: WIDTRL

Definition: Width of Trailer #1 (Inches)

Width of Trailer #2 (Inches)

SAS Name: WIDTRL2

Definition: Width of Trailer #2 (Inches)

Additional Information: New element added in 1996.

List of Elements for the NC Occupant Subfile

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
AGE	OCCUPANT AGE	Occupant	NUM (8)	120
AIR_SW	AIRBAG SWITCH STATUS	Occupant	NUM (8)	121
AIRDEPL	AIRBAG DEPLOYED	Occupant	NUM (8)	121
CASENO	NC ACCIDENT NUMBER WITH YR	Occupant	NUM (8)	121
EJECT	EJECTION	Occupant	NUM (8)	121
EMS_DES	EMERGENCY MEDICAL SERVICE	Occupant	NUM (50)	122
INJ	OCCUPANT INJURY	Occupant	NUM (8)	122
PRSN_CTY	PERSON COUNTY	Occupant	CHAR (22)	122
PRSN_DOB	PERSON DATE OF BIRTH	Occupant	NUM (8)	122
PRSN_NBR	PERSON NUMBER	Occupant	NUM (8)	122
PRSN_ST	PERSON STATE	Occupant	CHAR (2)	123
PRSN_TYP	PERSON TYPE	Occupant	NUM (8)	123
PRSN_ZIP	PERSON ZIP CODE	Occupant	CHAR (9)	123
RACE	OCCUPANT RACE	Occupant	NUM (8)	123
REST1	OCCUPANT RESTRAINT	Occupant	NUM (8)	124
SEATPOS	SEATING POSITION	Occupant	NUM (8)	124
SEX	OCCUPANT SEX	Occupant	NUM (8)	125
TRAPPED	TRAPPED	Occupant	NUM (8)	125
TRT_FAC	TREATMENT FACILITY NAME	Occupant	CHAR (100)	125
VEHNO	VEHICLE POSITION NUMBER	Occupant	NUM (8)	125

SAS Format Definitions for Elements from the North Carolina Occupant Subfile

(1) SAS element names and longer explanatory names are shown above each listing. (See Discussion for information on SAS formats.)

(2) For all SAS-formatted elements below, an extra category labeled as "ERROR CODES" consolidates all values not listed as legitimate codes. This category is printed when elements are listed in tables.

(3) For consistency with other State's files and ease of handling, driver-related elements have been included in this Occupant Subfile as well as in the Vehicle Subfile.

Occupant Age

SAS Name: AGE

Definition: Age of occupant in the vehicle involved in the crash.

0-1	Infant -1 yr
2-4	02 -04 yrs
5-10	05-10 yrs
11-14	11-14 yrs
15	15 yrs
16	16 yrs
17	17 yrs
18	18 yrs
19	19 yrs
20	20 yrs
21-25	21-25 yrs
26-30	26-30 yrs
31-35	31-35 yrs
36-45	36-45 yrs
46-55	46-55 yrs
56-65	56-65 yrs
66-75	65-77 yrs
76-85	76-85 yrs
86-97	86+ yrs
98	Not Occupied
99	Not Stated

Airbag Switch Status

SAS Name: AIR_SW

Definition: Airbag Switch Status

Additional Information: New element added in 2000.

0	No On-Off Switch
1	Switch in On Position
2	Switch in Off Position
3	Unknown if Switch Present
4	Unknown Position in Vehicle

Airbag Deployed

SAS Name: AIRDEPL

Definition: Whether or not the vehicle's airbag was deployed when the crash occurred.

Additional Information: New element added in 2000.

' '	Blank
'0'	Unknown
'1'	Air Bag Deployed
'2'	Not Deployed

NC Accident Number with Year

SAS Name: CASENO

Definition: NC Accident Number with Year

Additional Information: Format YYNNNNNN, where YY = Year and NNNNNN = CASENUM.
Element type is CHAR for 1990 to 1999.

Ejection

SAS Name: EJECT

Definition: Ejection

Additional Information: New element added in 2000.

1	Not Ejected
2	Totally Ejected
3	Partially Ejected
4	Unknown

Emergency Medical Service

SAS Name: EMS_DES

Definition: Emergency Medical Service

Additional Information: New element added in 2000.

Occupant Injury

SAS Name: INJ

Definition: Injury to the occupant of the vehicle involved in the crash.

- 1 K Killed
- 2 A Type Injury (Disabling)
- 3 B Type Injury (Evident)
- 4 C Type Injury (Possible)
- 5 O No Injury
- 6 Not Stated (Pre 2000)
- 7 Not Occupied (Pre 2000)

Person City

SAS Name: PRSN_CTY

Definition: Person City

Additional Information: Element added in 2000 and discontinued from 2009 onwards.

Person Date of Birth

SAS Name: PRSN_DOB

Definition: Date of birth for this occupant.

Additional Information: New element added in 2000.

Person Number

SAS Name: PRSN_NBR

Definition: Person Number

Additional Information: New element added in 2000.

Person State

SAS Name: PRSN_ST

Definition: Person State

Additional Information: New element added in 2000.

Person Type

SAS Name: PRSN_TYP

Definition: Person Type

Additional Information: New element added in 2000.

1	Driver
2	Passenger
3	Pedestrian
4	Pedalcyclist
5	Roller Skater, Roller Blader, Etc.
6	Other
7	Unknown

Person Zip Code

SAS Name: PRSN_ZIP

Definition: Person Zip Code

Additional Information: New element added in 2000.

Occupant Race

SAS Name: RACE

Definition: Race of the occupant of the vehicle involved in the crash.

1	White
2	Black
3	Native American
4	Hispanic
5	Asian
6	Other
7	Unknown
8	Not Occupied (Pre 2000)
9	Non-White (Pre 2000)

Occupant Restraint

SAS Name: REST1

Definition: Occupant restraint used by this occupant.

00	None Used
01	Lap Belt Only
02	Shoulder and Lap Belt
03	Shoulder Belt Only
04	Child Restraint
05	Helmet
06	Protective Pads
07	Reflective Clothing
08	Lighting
09	Other
10	Unable to Determine
11	Not Stated (Pre 2000)
12	Unknown (Pre 2000)
13	Not Occupied (Pre 2000)

Seating Position

SAS Name: SEATPOS

Definition: Seating position for this occupant.

01	Front – Left
02	Front – Middle
03	Front – Right
04	Second Seat – Left
05	Second Seat – Middle
06	Second Seat – Right
07	Third Row – Left
08	Third Row – Middle
09	Third Row – Right
10	Sleeper Section of Cab
11	Passenger in Other Enclosed Area
12	Passenger in Unenclosed Area
13	Trailing Unit
14	Riding on Vehicle Exterior
15	Unknown

Occupant Sex

SAS Name: SEX

Definition: Sex of the occupant in the vehicle involved in the crash.

1	Male
2	Female
3	Unknown
4	Not Stated (Pre 2000)
5	Not Occupied (Pre 2000)

Trapped

SAS Name: TRAPPED

Definition: Whether this occupant was trapped in the vehicle as a result of the crash.

Additional Information: New element added in 2000.

0	No
1	Yes
2	Unknown

Treatment Facility Name

SAS Name: TRT_FAC

Definition: Treatment Facility Name

Additional Information: New element added in 2000.

Vehicle Position Number

SAS Name: VEHNO

Definition: Vehicle Position Number

Additional Information: Number of vehicle on accident report. The vehicle position number is needed (along with CASENO) for linking this seated occupant to the corresponding vehicle observation in the vehicle file. This information was copied from the North Carolina Vehicle Subfile element named VEHNO.

List of Elements for the NC Roadway file

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
AADT	AVER ANNUAL DAILY TRAFFIC	Roadway	NUM (8)	129
AADT_YR	YEAR OF ADT	Roadway	CHAR (2)	129
ACCESS	ACCESS CONTROL	Roadway	CHAR (1)	130
AREATYPE	AREA TYPE	Roadway	CHAR (1)	130
BEGMP	BEGIN MILEPOST	Roadway	NUM (8)	130
CNTR_PEAK_	NUMBER OF LANES IN THE DIRECTION OPPOSITE TO THE PEAK HOUR DIRECTION FLOW	Roadway	NUM (8)	130
CNTYRTE	COUNTY ROUTE NUMBER	Roadway	CHAR (10)	131
COUNTY	COUNTY	Roadway	CHAR (2)	131
DHRVOL	DESIGN HOUR VOLUME	Roadway	CHAR (2)	132
DIV	HIGHWAY DIVISION ROUTE	Roadway	CHAR (2)	132
ENDMP	ENDING MILEPOST	Roadway	NUM (8)	132
FUNC_CLS	FUNCTIONAL CLASS	Roadway	CHAR (2)	133
FUNC_ST	FUNCTIONAL CLASS (STATE)	Roadway	CHAR (1)	133
HOV_LN_CNT	NUMBER OF HOV LANES	Roadway	NUM (8)	133
HOV_TYP_CD	TYPE OF LANES USED FOR HOV EXCLUSIVELY OR DURING SPECIFIED TIME PERIODS	Roadway	NUM (8)	133
HPMS1	HPMS SAMPLE ID	Roadway	NUM (8)	133
IMPROVE1	TYPE OF RECENT IMPROVEMENT	Roadway	CHAR (2)	134
INTSTMP	INTERSTATE MILEPOST	Roadway	CHAR (5)	134
INV_CNTL	INVENTORY CONTROL	Roadway	CHAR (1)	135
LISTCNTL	LIST CONTROL	Roadway	CHAR (1)	135
LSHL_TYP	LEFT SHOULDER TYPE	Roadway	CHAR (2)	136
LSHLDWID	LEFT SHOULDER WIDTH	Roadway	NUM (8)	137
LT_PARK	LEFT PEAK PARK	Roadway	CHAR (1)	137
MED_TYPE	MEDIAN TYPE	Roadway	CHAR (1)	137
MEDWID	MEDIAN WIDTH TOTAL	Roadway	NUM (8)	138
MVMT	MILLION VEHICLE MILES TRAVELLED	Roadway	NUM (8)	138
NHS	NATIONAL HIGHWAY SYSTEM	Roadway	CHAR (1)	138
NO_LANES	NUMBER OF LANES- TOTAL	Roadway	CHAR (1)	139
ONEWAY_DIR	ONE WAY DIRECTION	Roadway	NUM (8)	139
PAVECOND	PAVEMENT CONDITION	Roadway	CHAR (2)	139

List of Elements for the NC Roadway file

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
PAVED_LSHLDWID	PAVED SHOULDER WIDTH (LEFT)	Roadway	NUM (8)	139
PAVED_RSHLDWID	PAVED SHOULDER WIDTH (RIGHT)	Roadway	NUM (8)	139
PCT_TRK1	PERCENT TRUCKS	Roadway	CHAR (2)	140
PEAK_TRK	PERCENT TRUCKS AT PEAK	Roadway	CHAR (1)	140
PEAKLANE	NUMBER OF LANES IN THE PEAK HOUR DIRECTION OF FLOW	Roadway	NUM (8)	141
POP_GRP	POPULATION GROUP	Roadway	CHAR (1)	141
PSTD_RTE_C	POSTED ROUTES	Roadway	CHAR (8)	141
PTCSTAT	PORTABLE TRAFFIC COUNTER	Roadway	CHAR (8)	142
RECONTCD	RECORD CONTINUATION CODE	Roadway	CHAR (1)	142
RODWYCLS	ROAD WAY CLASS VARIABLE	Roadway	CHAR (2)	142
ROUGH	PAVEMENT ROUGHNESS	Roadway	CHAR (3)	142
ROW	RIGHT OF WAY	Roadway	CHAR (2)	143
RSHL_TYP	RIGHT SHOULDER TYPE	Roadway	CHAR (2)	143
RSHLDWID	RIGHT SHOULDER WIDTH	Roadway	NUM (8)	144
RT_PARK	RIGHT PEAK PARK	Roadway	CHAR (1)	144
RTE_NBR	ROUTE INVENTORIED	Roadway	CHAR (8)	144
RTE_TYPE	ROUTE TYPE (1ST DIGIT OF RTE_NBR)	Roadway	CHAR (1)	145
RULURBID	RURAL URBAN IDENTIFICATION	Roadway	CHAR (2)	145
SCENIC	SCENIC BYWAY	Roadway	CHAR (1)	145
SEG_LNG	SECTION LENGTH IN MILES	Roadway	NUM (8)	145
SIGHTDIS	SIGHT DISTANCE	Roadway	CHAR (2)	145
SPD_LIMT	SPEED LIMIT	Roadway	CHAR (2)	145
SPEC_SYS	SPECIAL SYSTEM	Roadway	CHAR (1)	146
STATE_SY	STATE HIGHWAY SYSTEM	Roadway	CHAR (1)	147
STRCTR_CD	LOCATION OF BRIDGES, TUNNEL AND CAUSEWAYS	Roadway	NUM (8)	147
STREET_NAM	STREET NAME	Roadway	NUM (20)	148
SURF_TYP	SURFACE TYPE	Roadway	CHAR (2)	148
SURF_WID	SURFACE WIDTH TOTAL	Roadway	NUM (8)	148
TERRAIN	TERRAIN	Roadway	CHAR (1)	148
TOLL_DIRECTION	TOLL CHARGED	Roadway	CHAR (7)	149
TOWN	TOWN	Roadway	CHAR (2)	149
TRFGROW	TRAFFIC GROWTH FACTOR	Roadway	NUM (8)	149
TRK_RTE	DESIGNATED TRUCK ROUTE	Roadway	CHAR (1)	149

List of Elements for the NC Roadway file

SAS VARIABLE NAME	DESCRIPTION	SAS VARIABLE FILE	FORMAT TYPE	PAGE NO.
TRNLNWD	TURN LANE WIDTH	Roadway	NUM (8)	149
UPDATE_	UPDATE	Roadway	NUM (8)	150
URB_LOC	URBAN LOCATION	Roadway	CHAR (1)	150
URB_POP	RUR/URB DESIGNATED BY POP	Roadway	CHAR (1)	150
WTDSGSPD	WEIGHTED DESIGN SPEED	Roadway	CHAR (2)	150
YEAR	YEAR OF TRAFFIC COUNT	Roadway	NUM (8)	151
YR_IMPR1	YEAR OF RECENT IMPROVEMENT	Roadway	CHAR (2)	151
YRADD	YEAR ADDED	Roadway	CHAR (2)	151

Roadway File

Roadway Inventory File

SAS Format Definitions for Elements from the North Carolina Roadway Inventory File

SAS element names and longer explanatory names are shown above each listing. (See Discussion for information on SAS formats.)

Average Annual Daily Traffic

SAS Name: AADT

Definition: Average Annual Daily Traffic

Additional Information: AADT estimates for a roadway segment in the 2001 and earlier files will not necessarily be consistent with estimates in 2002 and later. AADT estimates for road segments with a functional class of rural or urban “local” in 2008 and earlier files are often based on (very) old raw count data. See Discussion.

00000	Unknown
00001-00100	0-1000
00101-00500	101-500
00501-01000	501- 1000
01001-02000	1001- 2000
02001-05000	2001-5000
05001-10000	5001-10000
10001-15000	10000-15000
15001-20000	15001-20000
20001-40000	20001-40000
40001-999999	40000

Year of ADT

SAS Name: AADT_YR

Definition: Year of ADT

Additional Information: Format YY where YY = Year.

Access Control

SAS Name: ACCESS

Definition: Access Control

'1'	No Access Control
'2'	Partial Control
'3'	Full Control

Area Type

SAS Name: AREATYPE

Definition: Area Type

Additional Information: Element discontinued from 2009.

'0'	Rural Not Within Urban Area
'1'	Rural Within Metro Area Not AQNA
'2'	Rural Within Metro Area with AQNA
'3'	Rural Not Within Metro Area with AQNA
'4'	Small Urban Area Within Metro Area Not AQNA
'5'	Small Urban Area Within Metro Area with AQNA
'6'	Small Urban Area Not In Metro Not AQNA
'7'	Small Urban Area Not in Metro with AQNA
'8'	Urban Area Not AQNA
'9'	Urban Area with AQNA

Begin Milepost

SAS Name: BEGMP

Definition: Begin Milepost

Additional Information: Coincidence routes 1-6 information is also available in the data.

Number of Lanes in the Direction Opposite To the Peak Hour Direction Flow

SAS Name: CNTR_PEAK_

Definition: Number of Lanes in the Direction Opposite To the Peak Hour Direction Flow.

Additional Information: New variable added in 2010.

County Route Number

SAS Name: CNTYRTE

Definition: County Route Number**County**

SAS Name: COUNTY

Definition: County

'00'	Alamance	'31'	Durham
'01'	Alexander	'32'	Edgecombe
'02'	Allegheny	'33'	Forsyth
'03'	Anson	'34'	Franklin
'04'	Ashe	'35'	Gaston
'05'	Avery	'36'	Gates
'06'	Beaufort	'37'	Graham
'07'	Bertie	'38'	Granville
'08'	Bladen	'39'	Greene
'09'	Brunswick	'40'	Guilford
'10'	Buncombe	'41'	Halifax
'11'	Burke	'42'	Harnett
'12'	Cabarrus	'43'	Haywood
'13'	Caldwell	'44'	Henderson
'14'	Camden	'45'	Hertford
'15'	Carteret	'46'	Hoke
'16'	Caswell	'47'	Hyde
'17'	Catawba	'48'	Iredell
'18'	Chatham	'49'	Jackson
'19'	Cherokee	'50'	Johnston
'20'	Chowan	'51'	Jones
'21'	Clay	'52'	Lee
'22'	Cleveland	'53'	Lenoir
'23'	Columbus	'54'	Lincoln
'24'	Craven	'55'	Macon
'25'	Cumberland	'56'	Madison
'26'	Currituck	'57'	Martin
'27'	Dare	'58'	McDowell
'28'	Davidson	'59'	Mecklenburg
'29'	Davie	'60'	Mitchell
'30'	Duplin	'61'	Montgomery

'62'	Moore	'81'	Sampson
'63'	Nash	'82'	Scotland
'64'	New Hanover	'83'	Stanly
'65'	North Hampton	'84'	Stokes
'66'	Onslow	'85'	Surry
'67'	Orange	'86'	Swain
'68'	Pamlico	'87'	Transylvania
'69'	Pasquotank	'88'	Tyrrell
'70'	Pender	'89'	Union
'71'	Perquimans	'90'	Vance
'72'	Person	'91'	Wake
'73'	Pitt	'92'	Warren
'74'	Polk	'93'	Washington
'75'	Randolph	'94'	Watauga
'76'	Richmond	'95'	Wayne
'77'	Robeson	'96'	Wilkes
'78'	Rockingham	'97'	Wilson
'79'	Rowan	'98'	Yadkin
'80'	Rutherford	'99'	Yancey

Design Hour Volume

SAS Name: DHRVOL

Definition: Design Hour Volume

Additional Information: Discontinued from 2008 onwards.

Highway Division Route

SAS Name: DIV

Definition: Highway Division

Additional Information: For data before 2010, City/Town Code has to be combined with DIV (i.e. Highway Division Route) variable to get 4-digit City/Town codes. Contact HSIS staff for more information on codes for the city element.

Ending Milepost

SAS Name: ENDMP

Definition: Ending Milepost

Additional Information: Coincidence routes 1-6 information is available in the data.

Functional Class

SAS Name: FUNC_CLS

Definition: Functional Class

'01'	Rural Principle Arterial – Interstate
'03'	Rural Principal Arterial – Other
'04'	Rural Minor Arterial
'06'	Rural Major Collector
'07'	Rural Minor Collector
'08'	Rural Local
'09'	Urban Principal Arterial – Interstate
'10'	Urban Principal Arterial – Freeways and Expressways
'11'	Urban Principal Arterial – Other
'12'	Urban Minor Arterial
'13'	Urban Collector
'14'	Urban Local

Functional Class Provided by the State

SAS Name: FUNC_ST

Definition: Functional Class Provided by the State*Additional Information:* Element for internal use. Use the element FUNC_CLS to capture the information about FUNCTIONAL CLASS.**Number of HOV Lanes**

SAS Name: HOV_LN_CNT

Definition: Number of HOV Lanes**Type of Lanes Used For HOV Exclusively or During Specified Time Periods**

SAS Name: HOV_TYP_CD

Definition: Type of Lanes Used For HOV Exclusively or During Specified Time Periods.**HPMS Sample ID**

SAS Name: HPMS1

Definition: HPMS Sample ID*Additional Information:* This element was not available from 2002-2008.

Type of Recent Improvement

SAS Name: IMPROVE1

Definition: Type of Recent Improvement

'NL'	Relocation
'NR'	New Construction
'NE'	New Construction-HPMS
'RF'	Reconstruction of Freeway
'RL'	Reconstruction with More Lanes
'RW'	Reconstruction to Widen Lanes
'RP'	Pavement Reconstruction
'RI'	ISO Reconstruction
'MA'	Major Widening
'MI'	Minor Widening
'CS'	Conc. Resurface with Shoulder Improvement
'BS'	Bituminous Resurface with Shoulder Improvement
'RC'	Concrete Resurfacing
'RB'	Bituminous Resurfacing
'IP'	Initial Paving
'00-41'	Surface Type Change
'RE'	Restoration and Rehab
'BR'	Bridge Replacement
'BH'	Major Bridge Rehab
'BM'	Minor Bridge Rehab
'ST'	Safety/ Traffic Oper
'OT'	Environmentally Related

Interstate Milepost

SAS Name: INTSTMP

Definition: Interstate Milepost

Inventory Control

SAS Name: INV_CNTL

Definition: Inventory Control

Additional Information: Element discontinued from 2009 onwards.

'1'	Both Directions
'2'	Northbound Only
'3'	Southbound Only
'4'	Eastbound Only
'5'	Westbound Only
'6'	Common Record
'7'	Gap Record

List Control

SAS Name: LISTCNTL

Definition: List Control

Additional Information: Element discontinued from 2009 onwards.

'1'	Normal Listing Sequence
'2'	Information Listed at the End of Route
'3'	Additional Group Listed at the End of Route

Left Shoulder Type

SAS Name: LSHL_TYP

Definition: Left Shoulder Type

Additional Information: This element doesn't provide information on the inside shoulder for divided highways. It gives the shoulder type for the outside shoulder across the opposite direction travel lanes. Inside shoulder information for divided highways is available for a very few miles and it is not possible to identify those. Hence for all analysis consider this to be the outside shoulder type for the opposite direction travel lane. See discussion section.

' '	Unknown
'01'	Grass/Sod
'02'	Gravel
'B3'	Paved 1-2 ft
'B4'	Paved 3-4 ft
'B5'	Paved 5-6 ft
'B6'	Paved 7-8 ft
'B7'	Paved 9 ft
'B8'	Paved 10+ ft
'B9'	Curb
'C3'	P.C. Concrete 1-2 ft
'C4'	P.C. Concrete 3-4 ft
'C5'	P.C. Concrete 5-6 ft
'C6'	P.C. Concrete 7-8 ft
'C7'	P.C. Concrete 9 ft
'C8'	P.C. Concrete 10+ ft
'C9'	P.C. Concrete Curb
'T4'	P.C.C. 3-4 ft w/ Tie Bars
'T5'	P.C.C. 5-6 ft w/ Tie Bars
'T6'	P.C.C. 7-8 ft w/ Tie Bars
'T7'	P.C.C. 9 ft w/ Tie Bars
'T8'	P.C.C. 10+ ft w/ Tie Bars
New Formats for Data from 2009 onwards	
'00'	Unknown
'03'	Bituminous Material
'04'	Curb Bituminous (Butimouns with Curb)
'05'	Concrete (Portland Cement Concrete Surface)
'06'	Curb Concrete (Concrete Curb)
'07'	Tie Bar (Shoulder Contains Tie Bars)

Left Shoulder Width

SAS Name: LSHLDWID

Definition: Width of the left shoulder.

0,	Unknown
1-3	1-3 ft
4-6	4-6 ft
7-9	7-9 ft
10-13	10-13 ft
14-25	14-25 ft
26	No Parking
27	Parallel Parking
28	Angle Parking

Peak Parking Left

SAS Name: LT_PARK

Definition: Type of parking on the left side of the road segment during the peak period.

'A'	Angular Parking
'N'	No Parking
'P'	Parallel Parking

Median Type

SAS Name: MED_TYPE

Definition: Median Type

'0'	Undivided Roadway
'1'	Rigid Pos Barrier
'2'	Continuous Turn Lane
'3'	Paved Mountable
'4'	Curb
'5'	Grass
'6'	Positive Barrier
'7'	Parkland, Business
'8'	Couplet
'9'	Flexible Pos Barrier
'10'	Striped
'11'	Semi-Rigid Pos Barrier

Median Width –Total

SAS Name: MEDWID

Definition: Median Width –Total*Additional Information:* Median width is measured from edge of traveled lane to edge of opposing lane. It includes paved and unpaved inside shoulder width.

000	Zero ft
1-10	1-10 ft
11-20	11-20 ft
21-30	21-30 ft
31-40	31-40 ft
41-50	41-50 ft
51-60	51-60 ft
61-90	61-90 ft
91-99	91+ ft
100	Unknown or N/A
101	Couplet – 1 Way
102	Couplet – 2 Way

Million Vehicle Miles Traveled

SAS Name: MVMT

Definition: Million Vehicle Miles Traveled*Additional Information:* Million vehicle miles traveled.**National Highway System**

SAS Name: NHS

Definition: Whether this roadway section is part of the National Highway System*Additional Information:* New element added in 1993.

'0'	Not NHS Section
'2'	NHS Section

Number of Lanes – Total

SAS Name: NO_LANES

Definition: Number of lanes – total for both directions

'0'	Unknown
'1'	1 Lane
'2'	2 Lanes
'3'	3 Lanes
'4'	4 Lanes
'5'	5 Lanes
'6'	6 Lanes
'7'	7Lanes
'8'	8 Lanes
'9'	9 or More Lanes

One Way Direction

SAS Name: ONEWAY_DIR

Definition: Whether or not this section of road carries traffic in both or only one direction.*Additional Information:* New element added in 2009.

0	Both Directions
1	One Direction

Pavement Condition

SAS Name: PAVECOND

Definition: Pavement Condition*Additional Information:* Discontinued from 2009 onwards see pvmt_y_qlty element.**Paved Shoulder Width (Left)**

SAS Name: PAVED_LSHLDWID

Definition: Paved Shoulder Width (Left)**Paved Shoulder Width (Right)**

SAS Name: PAVED_RSHLDWID

Definition: Paved Shoulder Width (Right)

Total Percent Trucks

SAS Name: PCT_TRK1

Definition: Total Percent Trucks

Additional Information: Here, approximately 90% of the section mileage is coded as “unknown” for years prior to 2000. From 2000 – 2011, only 2% - 6% is coded as “unknown” or zero. The percent estimates in 2011 and earlier are based on “legacy” counts. The 2012 and later percent estimates are based on a new vehicle classification method felt to be more accurate. See Discussion.

0	Unknown
01-10	1-10%
11-20	11-20%
21-30	21-30%
31-40	31-40%
41-50	41-50%
51-50	51-60%
61-70	61-70%
71-80	71-80%
81-90	81-90%
91-99	91-99%

Percent Trucks at Peak

SAS Name: PEAK_TRK

Definition: Percent Trucks at Peak

Additional Information: This element is coded as “unknown” or zero for over 75% of the mileage. Element discontinued from 2009 onwards.

'0'	Unknown
'1'	Under 5%
'2'	5-9.99%
'3'	10% and Over

Number of Lanes in the Peak

SAS Name: PEAKLANE

Hour Direction of Flow

Definition: Number of Lanes in the Peak Hour Direction of Flow

Additional Information: Number of lanes in the peak hour direction of flow, only if the value is not equals to ½ the number of lanes for undivided roads, or the number of lanes in the peak direction if the road is divided in the LRS. No data indicates that the information can be derived from the Number of Lanes Table.

Population Group

SAS Name: POP GRP

Definition: Population Group

Additional Information: Categories are defined by size of incorporated area. (See RURUB, URB_POP and Discussion)

'0'	UNINCORP + Rural
'1'	Under 100o Population
'2'	1000-2499
'3'	2500-4999
'4'	5000-9999
'5'	10000-24999
'6'	25000-49999
'7'	50000-99999
'8'	100000 Plus

Posted Routes

SAS Name: PSTD_RTE_C

Definition: Posted Routes

Additional Information: A system of designated secondary routes where truck traffic with axle weights exceeding 13,000 pounds is prohibited by ordinance. The value is the ordinance number; any value present indicates that the segment is part of the Posted Route system. New variable from 2012.

Portable Traffic Counter

SAS Name: PTCSTAT

Definition: Portable Traffic Counter

Additional Information: Variable was discontinued from 2008 onwards.

Record Continuation Code

SAS Name: RECCONTCD

Definition: Record Continuation Code

Additional Information: New element added in 1999 and discontinued from 2009 onwards.

Roadway Class

SAS Name: RODWYCLS

Definition: Roadway class.

Additional Information: For 2003 and later years, the number of miles available in the system is greater than earlier years. This results in higher mileages for some categories – especially in rural 2-lane and others. See discussion.

'01'	Urban Freeways
'02'	Urban Freeways Less Than 4 Lanes
'03'	Urban 2-Lane Road
'04'	Urban Multilane Divided Non-Freeway
'05'	Urban Multilane Undivided Non-Freeway
'06'	Rural Freeways
'07'	Rural Freeways Less than 4 Lanes
'08'	Rural 2-Lane Roads
'09'	Rural Multilane Divided Non-Freeway
'10'	Rural Multilane Undivided Non-Freeway
'99'	Others

Pavement Roughness

SAS Name: ROUGH

Definition: Roughness of the pavement.

Additional Information: Discontinued from 2009 onwards.

Right of Way

SAS Name: ROW

Definition: Width of right of way.

Right Shoulder Type

SAS Name: RSHL_TYP

Definition: Right Shoulder Type

Additional Information: Approximately 3 to 5 percent of the mileage is coded as unknown.

' '	Unknown
'01'	Grass/Sod
'02'	Gravel
'B3'	Paved 1-2 ft
'B4'	Paved 3-4 ft
'B5'	Paved 5-6 ft
'B6'	Paved 7-8 ft
'B7'	Paved 9 ft
'B8'	Paved 10+ ft
'B9'	Curb
'C3'	P.C. Concrete 1-2 ft
'C4'	P.C. Concrete 3-4 ft
'C5'	P.C. Concrete 5-6 ft
'C6'	P.C. Concrete 7-8 ft
'C7'	P.C. Concrete 9 ft
'C8'	P.C. Concrete 10+ ft
'C9'	P.C. Concrete Curb
'T4'	P.C.C. 3-4 ft w/ Tie Bars
'T5'	P.C.C. 5-6 ft w/ Tie Bars
'T6'	P.C.C. 7-8 ft w/ Tie Bars
'T7'	P.C.C. 9 ft w/ Tie Bars
'T8'	P.C.C. 10+ ft w/ Tie Bars
New Formats for Data from 2009 onwards	
'00'	Unknown
'03'	Bituminous Material
'04'	Curb Bituminous (Butimouns with Curb)
'05'	Concrete (Portland Cement Concrete Surface)
'06'	Curb Concrete (Concrete Curb)
'07'	Tie Bar (Shoulder Contains Tie Bars)

Right Shoulder Width

SAS Name: RSHLDWID

Definition: Right Shoulder Width

Additional Information: Approximately 12 percent of the mileage have unknown shoulder widths.

0, .	Unknown
1-3	1-3 ft
4-6	4-6 ft
7-9	7-9 ft
10-13	10-13 ft
14-25	14-25 ft
26	No Parking
27	Parallel Parking
28	Angle Parking

Peak Parking Right

SAS Name: RT_PARK

Definition: Type of parking on the right side of the road segment during the peak period.

'A'	Angular Parking
'N'	No Parking
'P'	Parallel Parking

Route Inventoried

SAS Name: RTE_NBR

Definition: Route Inventoried

Additional Information: Coincidence routes 1-6 information is also available in the data.

Route Type (1st Digit of RTE_NBR)

SAS Name: RTE_TYPE

Definition: Route Type (1st Digit of RTE_NBR)

Additional Information: Coincidence routes 1-6 information is also available in the data.

'1'	Interstate
'2'	US Route
'3'	NC Route
'4'	Secondary

Rural Urban Identification

SAS Name: RULURBID

Definition: Rural Urban Identification

Additional Information: New element added in 1992.

Scenic Byway

SAS Name: SCENIC

Definition: Scenic Byway

Additional Information: New element added in 1999 and discontinued from 2002 onwards.

Section Length in Miles

SAS Name: SEG_LNG

Definition: Section Length in Miles

Sight Distance

SAS Name: SIGHTDIS

Definition: Sight Distance

Speed Limit

SAS Name: SPD_LIMT

Definition: Speed Limit

Special System

SAS Name: SPEC_SYS

Definition: Special System designator,

0	Road is Owned by NCDOT
1	State Highway Agency
2	County Highway Agency
3	Town or Township Highway Agency
4	City or Municipal Highway Agency
5	State Park, Forest, or Reservation Agency
6	Local Park, Forest, or Reservation Agency
7	Other State Agency
8	Other Local Agency
9	Private (Other Than Railroad)
10	Railroad
11	State Toll Authority
12	Local Toll Authority
13	Other Public Instrumentality (e.g. Airport, School, University)
14	Indian Tribe Nation
15	Other Federal Agency
16	Bureau of Indian Affairs
17	Bureau of Fish and Wildlife
18	US Forest Service
19	National Park Service
20	Tennessee Valley Authority
21	Bureau of Land Management
22	Bureau of Reclamation
23	Corps of Engineers
24	Air Force
25	Navy/Marine
26	Army
27	Other
28	Appalachian Highway Access Road
29	National Forest Highway System Not Common with Appalachian
30	Blue Ridge Parkway (Mainline)
31	National Park, Including Great Smokies National Park, National Seashore Rec. Area, National Monuments Areas Maintained by NPS
32	Cherokee Indian Reservation Roads on or off the State System Not Common with Appalachian

- 33 Military Reservations (Non-Strahnet)
- 34 National Wildlife Refuge
- 35 Addition to Interstate(s) Approved on or after March 9, 1984
- 36 Addition to Interstate 23 USC 139 B
- 37 Addition to Interstate 23 USC 139 (A) Approved before March 8, 1984
- 38 Appalachian Development Highway, Common with and Addition to Interstate System -23 USC 139 (A) Approved before March 9, 1984
- 39 App. Development Highway Not Common with the NFH System and Outside the National Forest
- 40 App. Development Highway Not Common with the NFH System and Inside the National Forest
- 41 Section 332 Interstate Systems that Meet Interstate Design Standards
- 42 Designated Future Section 332 Interstate Systems
- 43 Not Known, State Park, State Forest, State Recreation Area

Following Formats for Pre 2009 Data

- 50 Appalachian Highway
- 51 National Forest Highway
- 52 National Forest Development Roads
- 53 Blue Ridge Service Road
- 54 Priority Primary Highways
- 55 Additional to Interstate System 139 (A)
- 56 Appalachian Development Highway

State Highway System

SAS Name: STATE_SY

Definition: State Highway System

Additional Information: Discontinued from 2009 onwards.

Location of Bridges, Tunnels and Causeways

SAS Name: STRCTR_CD

Definition: Location of Bridges, Tunnels and Causeways

Additional Information: New element added in 2010.

Street Name

SAS Name: STREET_NAM

Definition: Street Name**Surface Type**

SAS Name: SURF_TYP

Definition: Surface Type

'00'	00 Primitive (Not Use don State System)
'10'	10 – Unimproved
'20'	20 – Graded and Drained
'30'	30 – Soil Surfaced
'41'	41 – Gravel or Stone
'51'	51 – Bituminous Surf Treatment on Topsoil
'52'	52 – Bituminous Surf Treatment on Gravel or Stone
'60'	60 – Mixed Bituminous, Non-Rigid Base
'61'	61 – Mixed Bituminous, Rigid Base
'62'	62 – Bituminous Penetration, Rigid Base
'63'	63 – Bituminous Penetration, Non-Rigid Base
'65'	65 – Sand Asphalt on Types Other Than 66, 67
'66'	66 – Sand Asphalt on Bituminous Concrete
'67'	67 – Bituminous Concrete
'70-76'	70 Portland Cement Concrete
'80'	80 – Brick
'90'	90 – Block
'99'	99 – Hard Surface

Surface Width – Total

SAS Name: SURF_WID

Definition: Surface Width – Total**Terrain**

SAS Name: TERRAIN

Definition: Terrain

'1'	Flat
'2'	Rolling
'3'	Mountainous

Toll Charged

SAS Name: TOLL_DIRECTION

Definition: The travel direction, if any, that a toll is charged

'1'	One direction
'2'	Both directions
'3'	No charge

Additional Information: New variable in 2012.

Town

SAS Name: TOWN

Definition: Town

Additional Information:

Traffic Growth Factor

SAS Name: TRFGROW

Definition: Traffic Growth Factor

Additional Information: Discontinued from 2009 onwards.

Designated Truck Route

SAS Name: TRK_RTE

Definition: Designated Truck Route

'1'	Not a Truck Route
'2'	Parkway – No Truck Allowed
'3'	Trucks Prohibited
'4'	Trucks Limited
'5'	Truck Route

Turn Lane Width

SAS Name: TRNLNWD

Definition: Turn Lane Width

Additional Information: New element added in 1992 and discontinued from 2009 onwards.

Update

SAS Name: UPDATE_

Definition: Update

Additional Information: Format MM/DD/YY where MM = Month, DD = Day, and YY = Year.
New element added in 1999 and discontinued from 2009 onwards.

Urban Location

SAS Name: URB_LOC

Definition: Urban Location

Additional Information: Element discontinued from 2002 onwards.

Rural/Urban Designated by Population

SAS Name: URB_POP

Definition: Rural/Urban Designated by Population

Additional Information: Categories are defined by a combination of the census-related “urbanized area” definition and population groups. (See POP_GRP and Discussion)

'0'	Unincorporated
'1'	Rural Incorporated < 2500
'2'	Rural Incorporated < 5000
'3'	Urban < 25000
'4'	Urban < 50000
'5'	City < 100000
'6'	City < 200000
'7'	City < 500000

Weighted Design Speed

SAS Name: WTDSGSPD

Definition: Weighted Design Speed

Additional Information: Calculated value based on degree and lengths of curves of tangents in the HPMS sample section.

Year of Traffic Count

SAS Name: YEAR

Definition: Year of Traffic Count

Additional Information: Format YYYY where YYYY = Year. New element added in 1999 and discontinued from 2009 onwards.

Year of Recent Improvement

SAS Name: YR_IMPR1

Definition: Year of Recent Improvement

Year Added

SAS Name: YRADD

Definition: Year Added