HSIS
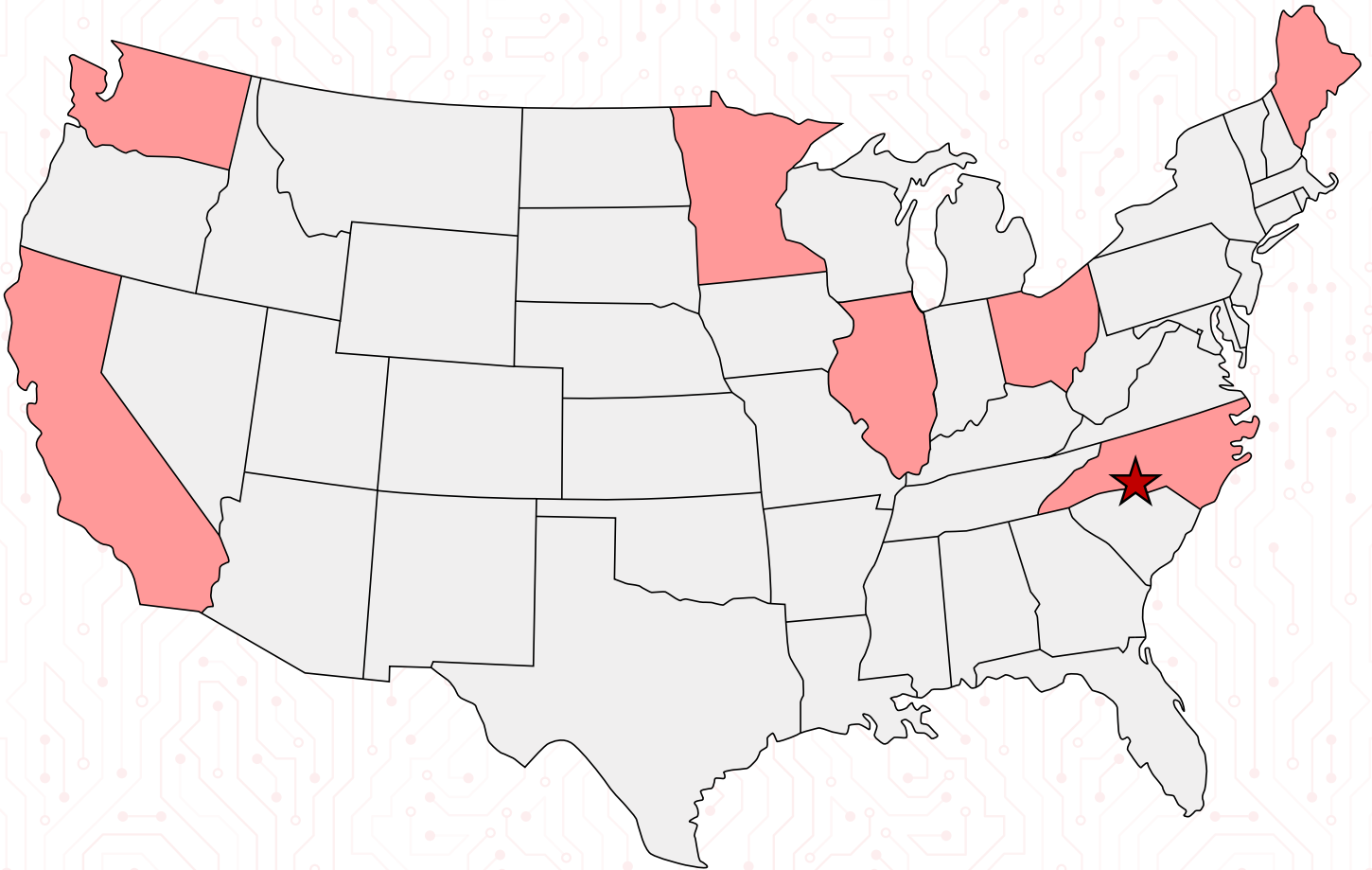## HIGHWAY SAFETY INFORMATION SYSTEM

FHWA-HRT-24-092

GUIDEBOOK FOR THE
City of Charlotte Data Files

U.S. Department of Transportation
Federal Highway Administration

Turner-Fairbank
Highway Research Center

Foreword

The Highway Safety Information System (HSIS) is a roadway-based system that provides quality data on a large number of crash, roadway, and traffic variables. The system comprises data collected by States for managing the highway system and studying highway safety. HSIS is composed of seven States and one urban center: California, Illinois, Ohio, Maine, Minnesota, North Carolina, Washington, and Charlotte, NC. HSIS includes some agencies' highway intersection, interchange, lighting, and curve/grade data. Additional supplementary information includes vulnerable road user infrastructure data, such as sidewalks, greenways, and transit stops.

This guidebook is part of a series of data guidebooks for each HSIS agency that explain the variables and attributes provided by each agency. Each guidebook describes the agency's data system and presents an alphabetized listing of all available variables. All data are derived from police-reported crash records, maintained highway records, and other supplementary inventories.

These guidebooks are available to help researchers, analysts, programmers, and safety professionals use HSIS data to further transportation safety for all road users. Visit the HSIS website (https://highways.dot.gov/research/safety/hsis) to request data and learn about other HSIS products.[1]

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16. Abstract The Highway Safety Information System (HSIS) is composed of seven States and one urban center. The HSIS Program provides linked crash, roadway, and traffic volume data. This guidebook supports the use of Charlotte HSIS data from 2018 and beyond. Data and documentation recorded before 2018 (2004–2017) are available upon request to the virtual HSIS Laboratory.			
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Introduction to the City of Charlotte HSIS Guidebook

Introduction to the Charlotte HSIS Guidebook

The Highway Safety Information System (HSIS), established in 1987, is a foundational highway research data system.[1]* The City of Charlotte has participated in the HSIS program since 2004, providing quality data to HSIS for use by researchers through a request system. In 2021, HSIS began a modernization effort with the goal of expanding the technological and analytic capabilities of the data system. This modernization provides an increased emphasis on spatial analysis and cloud-based data management.

What Has Changed

This guidebook supports the use of Charlotte HSIS data for 2018 and beyond. Data and documentation before 2018 (2004–2017) are available on request to the virtual HSIS Laboratory.[2] Before 2018, the Charlotte datasets included variables for the following files:

1. Roadway Inventory.
2. Accident Characteristics.
3. Vehicles Involved in Crashes.
4. Vehicle Occupants Involved in Crashes.

The revised Charlotte database incorporated into HSIS contains 13 different files, as shown in table 1.

Table 1. Current Charlotte database file names.

File Name	Descriptor
Roadway	Roadway inventory (including traffic information)
Crash	Crash characteristics
Unit	Units involved in crashes
Person	Persons involved in the crash
Intersection	Intersection inventory
Bicycle Lane	Bicycle lane inventory
Sidewalk	Sidewalk inventory
Greenway	Greenway inventory
Bus Route	Bus route inventory
Bus Stop	Bus stop inventory
Light Rail Route	Light rail route inventory
Light Rail Stop	Light rail stop inventory
Railroad Line	Railroad line inventory

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*Note: Any reference to HSIS by itself refers to the software.

The appendix summarizes revisions the HSIS Laboratory made to the variables. In addition to the expanded list of files, several key differences exist between the Charlotte HSIS data before and after 2018, as described in the following changes subsections.

Changes in File Names

Previously, HSIS data included Accident, Vehicle, and Occupant files to describe crashes, the vehicles involved in those crashes, and the occupants of those vehicles. Due to changes in reported data, HSIS now uses the nomenclature, of Crash, Unit, and Person files to represent these characteristics. Figure 1 illustrates the connection between the previous file naming convention (2004–2017) and the current file naming convention (2018–2020).

Former (2004–2017)		Present (2018–2020)
Accident	→	Crash
Vehicle	→	Unit
Occupant	→	Person
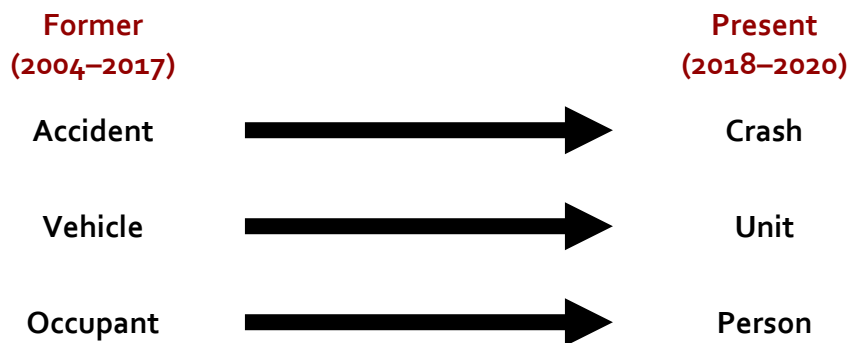
Source: Federal Highway Administration (FHWA).

Figure 1. Graph. Changes to Charlotte HSIS data file-naming convention.

Changes in Variable Names

Previous versions of HSIS guidebooks referred to *SAS Name* as the shorthand for the more descriptive names in the HSIS documentation.[3] With the modernization effort and increased emphasis on flexibility, this name is now referred to as the *Variable Name*. Furthermore, the descriptive names of variables may be different in this guidebook compared to previous versions. This version may reflect changes in the data or definition of the variable to match updates to Charlotte's data documentation. Please consult the virtual HSIS Laboratory for information on changes to the data over time.

Changes in Available Variables

This guidebook reflects the latest high-quality data available to HSIS and the research community. Variables that were available in previous years and documented in past guidebooks may no longer be available or may be otherwise discontinued. This guidebook represents data that are available to requestors for 2018–2020. Please consult past guidebooks or the virtual HSIS Laboratory for information regarding previously available data.

Changes in Variable Linkages

HSIS data are stored in a geographic information systems (GIS)-compatible format. Researchers can request data from HSIS in various additional formats such as SAS®, Microsoft® Excel® and Access®, dBase®, ASCII, etc., to meet their analytical and resource capabilities.[3] Figure 2 provides an overview of the structure and relationships linking the 13 files. The following sections provide a brief summary of each file.
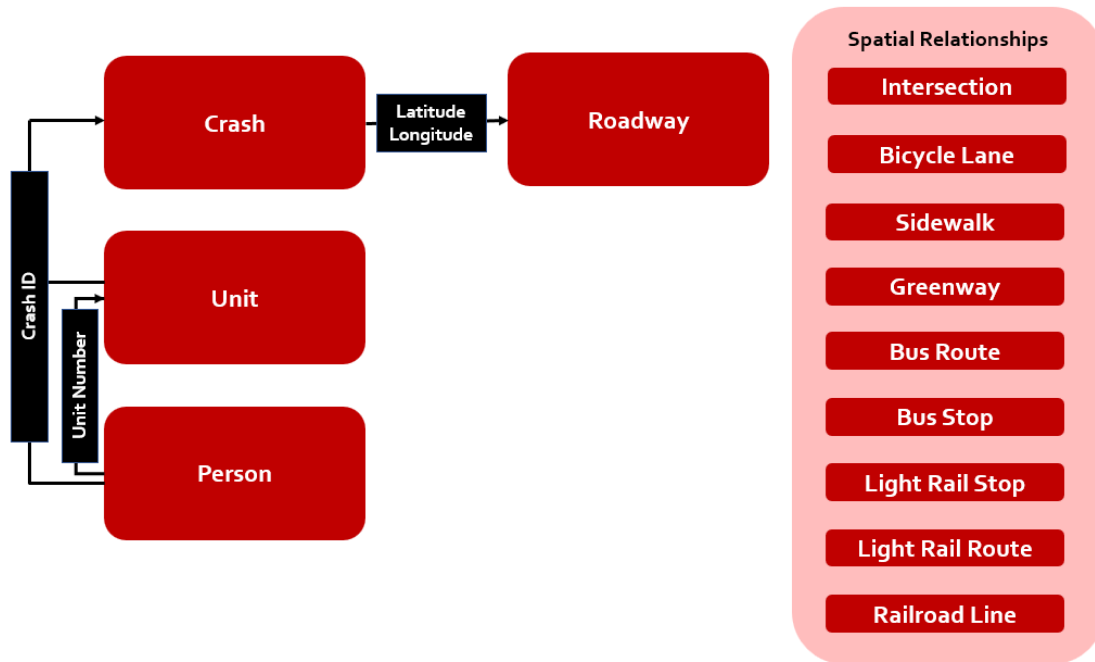
Source: FHWA.
ID = identification.

Figure 2. Chart. Charlotte HSIS data files and linking variables.

Roadway File (2018–2020)

This file contains information about the physical layout of all public roads in Mecklenburg County, NC, as well as the traffic characteristics associated with "on-system" roads in the State (i.e., State maintained). The Roadway file includes variables that describe the number of lanes, median presence, posted speed limit, and other variables. This file also contains information on traffic volumes represented as annual average daily traffic (AADT).

Unlike the North Carolina State file, no tabular link exists between the Roadway file and the Crash file. Users may link crashes, roads, and other supporting files through spatial analysis

using GIS software. If users do not have access to this software, the virtual HSIS Laboratory can assist with file linkages.

Crash File (2018–2020)

Crash data are contained in three separate files. The Crash file contains basic information on the crash. Related information on the vehicles and people involved in each crash is contained in the corresponding Unit file and Person file. Specifically, the Crash file contains information relating to crash-level characteristics and conditions at the time of the crash.

The Crash file can be linked to the Unit and the Person files using the crash report number (*Crash ID* (identification)). All police departments in North Carolina collected crash data statewide on a standard form, as prescribed by State law. The prescribed accident-reporting threshold is currently personal injury or $1,000 of property damage (before 1996, the crash-reporting threshold was $500).

Unit File (2018–2020)

This file provides information on the vehicles or units involved in crashes on roads in the City of Charlotte. The Unit file includes motor vehicle drivers, bicyclists, pedestrians, and other users who represent an involved party in a crash. The Unit file can be linked to the Person file through the combination of the *Crash ID* and *Unit Number* variables.

Person File (2018–2020)

This file includes information on all persons involved in a crash, regardless of whether they are injured. The Person file includes standard variables related to seating positions in a vehicle, sex, race, and injury. The *Injury* variable in North Carolina uses the KABCO classification system (K = fatal, A = incapacitating injury, B = nonincapacitating injury; C = possible injury, and O = no injury), which provides police estimates of injury levels. North Carolina adopted the standard "Suspected Serious Injury" definition in September 2016, leading to a change in how serious injuries are reported and counted (and the resulting statistics) on public roads in the State after adoption.

Intersection File (2018–2020)

This file provides a spatial inventory of intersections of two or more public roads, including the traffic control present at the intersection.

Bicycle Lane File (2018–2020)

This file provides a spatial inventory of on-road bicycle facilities in the City of Charlotte.

Sidewalk File (2018–2020)

This file provides a spatial inventory of sidewalks in the City of Charlotte.

Greenway File (2018–2020)

This file provides a spatial inventory of off-road and road-adjacent greenways in Mecklenburg County. These facilities accommodate bicyclists, pedestrians, and other nonmotorized users.

Bus Route File (2018–2020)

This file provides a spatial inventory of bus routes (local, neighborhood, and express service) operated by the Charlotte Area Transit System (CATS). Routes are associated with individual stops through the *Route Number* variable.

Bus Stop File (2018–2020)

This file provides a spatial inventory of bus stops operated by CATS. Each location represents the physical location of the stop and whether an individual stop services more than one bus route.

Light Rail Route File (2018–2020)

This file provides a spatial inventory of the light rail routes operated by CATS. The Lynx system is the name of the City's light rail system, which opened with the Blue Line in 2007. The City opened an extension to the Blue Line in 2018. The City opened phase 1 of the Gold Line streetcar in 2015 and phase 2 in 2021.

Light Rail Stop File (2018–2020)

This file provides a spatial inventory of the light rail stops operated by CATS, including stops associated with the original Blue Line, Blue Line extension, and Gold Line phases 1 and 2.

Railroad Line Inventory (2020)

This file provides a spatial inventory of freight railroad tracks within Mecklenburg County.

Using the Files Together

Using the Files Together

Figure 2 highlights the linkages between each of the 13 Charlotte files. Researchers can use these files together to understand the circumstances, location, vehicles, and individuals involved in a crash. HSIS data can be linked and aggregated using either spatial or tabular relationships.[*] HSIS data follow four different formats; each variable in this guidebook notes the specific format of that variable:

- **Numeric:** Numeric values absent of alphabetical or special characters. These values can include decimals or whole numbers.

- **Coded:** Alphanumerical values that represent fixed-value entries. This guidebook is a data dictionary for coded values.

- **Text:** Free-form, plain text values that are not represented by coded abbreviations or other shorthand values (e.g., US 17 BUS (ROAD ST) & CHURCH ST).

- **Date:** Values representing date and time. Specific formatting is noted in the relevant variable description.

When using the files together, users should note that some variables have the same name in two different files in some cases. For some of these variables, this naming process is by design so that the files can be linked together. Examples of this process include *Crash ID* and *Unit Number*. *Crash ID* links the Crash file, Unit file, and Person file. *Unit Number* is used to link the Unit file and Person file.

Requesting HSIS Data

Researchers can refer to this guidebook to determine variables of interest for their particular research question. This section provides a tutorial example research question to demonstrate how the variables can be requested and how the variables can be linked across the files.

In this sample, a graduate student is interested in exploring intersection-related crashes adjacent to transit in Charlotte. Specifically, the student is interested in pedestrian crashes at different types of intersections and under different road and traffic conditions. This feature is part 1 of the study. The graduate student anticipates undertaking part 2 for the study to

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[*]Crash, Unit, and Person files can be linked tabularly in the original format; all other files may be linked upon request.

spatially combine the HSIS data with county-level socioeconomic data to explore neighborhood characteristics adjacent to transit.

The HSIS Laboratory will work with the student to structure a data request that includes variables that will provide insight into the student's request questions, variables to link the relevant files together, and flexibility to add external data in part 2 of the study. The following variables form the structure of the student's request:

Roadway Variables

- *Whole Street Name.*
- *Roadway Class.*
- *Number of Lanes.*
- *Median Present.*
- *Speed Limit.*
- *AADT.*

Intersection Variables

- *Traffic Control Type.*
- *Latitude* (necessary for linking the intersections to other files in GIS).
- *Longitude* (necessary for linking the intersections to other files in GIS).

Crash Variables

- *Crash ID Number* (linkable to the *Crash ID* variable in the Unit file).
- *Crash Date.*
- *Crash Severity.*
- *Crash Type.*
- *Lighting Condition.*
- *Narrative.*
- *Road Alignment.*

Bus Stop Variables

- *Stop ID.*
- *Latitude.*
- *Longitude.*
- *Routes.*

Bus Route Variables

- *Route Number.*
- *Route Name.*
- *Route Type.*

Light Rail Stop Variables

- *Stop Name.*
- *Latitude.*
- *Longitude.*
- *Station Type.*

Unit Variables

- *Crash ID* (linkable to the *Crash ID* variable in the Crash file).
- *Unit Number* (linkable to the *Unit Number* variable in the Person file).
- *Harmful Event.*
- Requester would only request crashes that included "pedestrians."

Person Variables

- *Crash ID* (linkable to the *Case Number* variable in the Crash file).
- *Unit Number* (linkable to the *Unit Number* variable in the Unit file).
- *Person Age.*
- *Person Number.*
- *Injury Severity.*

A few things to note about the student's request are as follows:

- Some variables in the student's request record similar information. For example, the Crash file includes a variable, *Traffic Control Type*, that may seem redundant with the *Intersection* variable that defined the request as only crashes at signalized intersections. However, these data represent different sources, such as the officer reporting the crash at the scene in the case of the Crash file, and internal North Carolina Department of Transportation records in the case of the Intersection file. The student could request both variables to confirm that the signal was operating as a signal at the time of the crash. For example, the signal may have been under human control or in flashing operation during a power outage or something similar; the Crash file contains this information in the *Traffic Control Type* variable.

- When merging the files, the student should note that the Crash, Unit, Person, and Roadway files contain different numbers of observations or rows. The Crash file contains one observation per crash (e.g., a unique case number on each row), whereas the Unit file contains an observation for each vehicle involved in the crash. If more than

one vehicle is involved in a crash, more than one row will be associated with the same *Crash ID*. Additionally, the Roadway file contains an observation or row for each road segment. Some segments may be associated with multiple crashes, whereas other segments may not be associated with any crashes.

Available Data

Table 2 provides a summary of all variables currently available in HSIS for the 13 files. Attributes and fields have evolved since City of Charlotte data were introduced into the HSIS data system, and users should carefully consider these changes during the data collection research process.

Table 2. Summary of City of Charlotte HSIS variables by data file.

Variable Name	Variable Description	Data File
AADT	Annual average daily traffic	Roadway
BARRIER	Barrier	Roadway
DIVIDED	Divided	Roadway
LL_ADD	Lower left address	Roadway
LR_ADD	Lower right address	Roadway
MEDIAN	Median	Roadway
NUMBEROFLA	Number of lanes	Roadway
ONEWAY	One way	Roadway
PAVEMENTWI	Pavement width	Roadway
RODWYCLS	Roadway class	Roadway
ROADTYPE	Road type	Roadway
LENGTH	Segment length	Roadway
SPEEDHUMP	Speed hump	Roadway
SPEEDLIMIT	Speed limit	Roadway
STANDTYPE	Stand type	Roadway
STREETCLAS	Street classification	Roadway
STREETNAME	Street name	Roadway
STREETTYPE	Street type	Roadway
SUFFIX	Suffix direction	Roadway
THOROUGHFA	Thorough fare	Roadway
UL_ADD	Upper left address	Roadway
UR_ADD	Upper right address	Roadway
WHOLESTNAM	Whole street name	Roadway
ALIGN	Alignment	Crash
CASE_NUM	Case number	Crash

Variable Name	Variable Description	Data File
CNST_ACT	Construction activity	Crash
CNST_TYPE	Construction type	Crash
CRSH_ID	Crash ID	Crash
CRSH_LEVL	Crash severity	Crash
MILT_TIME	Crash time	Crash
CRASH_TYPE	Crash type	Crash
DATE_VAL	Date of crash	Crash
DATE_VAL_D	Day of the crash	Crash
DATE_VAL_W	Day of week	Crash
LATITUDE	Latitude	Crash
LIT	Light condition	Crash
LONGITUDE	Longitude	Crash
DATE_VAL_M	Month of crash	Crash
NARRATIVE	Narrative	Crash
NUM_FATL	Number of fatalities	Crash
NUM_INJY	Number of injuries	Crash
NUM_LNS	Number of lanes	Crash
NUM_INJY_C	Number of possible injuries	Crash
NUM_INJY_B	Number of suspected minor injuries	Crash
NUM_INJY_A	Number of suspected serious injuries	Crash
PRIMARY	Primary cause	Crash
RD_RLTN	Relation to roadway	Crash
RD_COND	Road condition	Crash
RD_SURF	Road surface	Crash
RDWY_AREA	Roadway area	Crash
SECONDARY	Secondary cause	Crash
TRFC_CTRL	Traffic control	Crash
URBAN_RU	Urban rural description	Crash
WTHR	Weather	Crash
DATE_VAL_Y	Year of crash	Crash
CONTRIB_FACTOR1	Contributing factor 1	Unit
CONTRIB_FACTOR2	Contributing factor 2	Unit
CONTRIB_FACTOR3	Contributing factor 3	Unit
CRSH_ID	Crash ID	Unit
HARM_EVNT1	Harmful event 1	Unit
HARM_EVNT2	Harmful event 2	Unit
HARM_EVNT3	Harmful event 3	Unit
HARM_EVNT4	Harmful event 4	Unit

Variable Name	Variable Description	Data File
HARM_EVNT5	Harmful event 5	Unit
PRR_ACTN	Primary action	Unit
SPD_LIMT	Speed limit	Unit
UNIT_NUM	Unit number	Unit
UNIT_TYPE	Unit type	Unit
VEHC_TYPE	Vehicle type	Unit
CRSH_ID	Crash ID	Person
HZRD_ACTN	Contributing action	Person
RSTR_USE	Driver or occupant restraint	Person
PRTY_EJCT	Ejection indicator	Person
INJY_SVTY	Injury severity	Person
PRTY_TYPE_DESC	Party type description	Person
PRTY_AGE	Person age	Person
GNDR_DESC	Person sex	Person
POS	Position	Person
UNIT_NUM	Unit number	Person
CONTROLTYP	Intersection node type	Intersection
INTERSECTI	Intersection number	Intersection
LAT	Latitude	Intersection
LON	Longitude	Intersection
STREETS	Streets at intersection	Intersection
STUNITID1	Street unit ID 1	Intersection
STUNITID2	Street unit ID 2	Intersection
STUNITID3	Street unit ID 3	Intersection
XCOORD	*X* coordinate	Intersection
YCOORD	*Y* coordinate	Intersection
BIKE_LANES	Bike lanes	Bicycle Lane
LANE_NOTES	Lane notes	Bicycle Lane
LENGT_MILE	Length of bike lane	Bicycle Lane
SIDEOFSTRE	Side of the street	Bicycle Lane
WHOLESTNAM	Street name	Bicycle Lane
TOTALWIDTH	Total width	Bicycle Lane
YEAR_BUILT	Year built	Bicycle Lane
ASSETID	Asset ID	Sidewalk
BEG_DESC	Beginning of sidewalk description	Sidewalk
COMMENTS	Comments on the sidewalk	Sidewalk
END_DESC	End of sidewalk description	Sidewalk
ASSETDESC	Location description	Sidewalk

Variable Name	Variable Description	Data File
LOCATION	Location of the sidewalk	Sidewalk
STREET	Street	Sidewalk
WIDTH	Width of sidewalk	Sidewalk
COMPLETION	Date of completion	Greenway
MILES	Length	Greenway
MEMO	Location	Greenway
TRAIL_NAME	Trail name	Greenway
TRAIL_SURF	Trail surface	Greenway
TRAIL_TYPE	Type of trail	Greenway
ROUTE_NAME	Route name	Bus Route
ROUTE_NUM	Route number	Bus Route
ROUTE_TYPE	Route type	Bus Route
DIRECTION	Direction	Bus Stop
Y	Latitude	Bus Stop
POLE_LOCAT	Location of the pole	Bus Stop
X	Longitude	Bus Stop
NEAREST_IN	Nearest intersection	Bus Stop
BENCH	Presence of bench	Bus Stop
SHELTER	Presence of shelter	Bus Stop
ROUTES	Routes	Bus Stop
SIDEWALK	Sidewalk	Bus Stop
STOPDESC	Stop description	Bus Stop
STOPID	Stop ID	Bus Stop
TRANS_P	Transfer point	Bus Stop
TRASHCANS	Trash cans	Bus Stop
LENGTH	Length	Light Rail Route
PROJECT_DE	Project description	Light Rail Route
TRACKDESCR	Track name	Light Rail Route
ADDRESS	Address of the light rail station	Light Rail Stop
BIKELOCKER	Bike locker availability	Light Rail Stop
BIKERACK	Bike rack availability	Light Rail Stop
X	Geographic location X coordinate	Light Rail Stop
Y	Geographic location Y coordinate	Light Rail Stop
STATIONTYP	Light rail line	Light Rail Stop
PLATFORM	Location of the platform	Light Rail Stop
NAME	Name of the light rail station	Light Rail Stop
PARKSPACES	Number of parking spaces	Light Rail Stop
PARKNRIDE	Park and ride availability	Light Rail Stop

Variable Name	Variable Description	Data File
ZIPCODE	ZIP code of the light rail station	Light Rail Stop
CONNECTY	Connection type	Railroad Line
INSERVICE	In service	Railroad Line
OPERATOR	Operating organization	Railroad Line
NAME	Operating organization—full name	Railroad Line
OUTSERVICE	Out service	Railroad Line
OWNER	Ownership organization	Railroad Line
OWNERLONG	Ownership organization—full name	Railroad Line
HSR	Presence of high speed rail	Railroad Line
PASSSERVIC	Presence of passenger service	Railroad Line
TRACKTYPE	Type of track	Railroad Line

Roadway File

Roadway File

Annual Average Daily Traffic

Variable Name: AADT

Definition: Annual Average Daily Traffic of the road segment (e.g., 10500).

Field Type: Numeric.

Barrier

Variable Name: BARRIER

Definition: Barrier.

Field Type: Coded:

- 0 = no barrier.
- 1 = barrier.

Divided

Variable Name: DIVIDED

Definition: Indicator that the road is divided into two separate directions of travel. This variable may include couplets separated by planters and vegetation. *Divided* variable is not necessarily synonymous with *Median* variable.

Field Type: Coded:

- 0 = undivided.
- 1 = divided.

Lower Left Address

Variable Name: LL_ADD

Definition: Lower address on left side of the road.

Field Type: Numeric.

Lower Right Address

Variable Name: LR_ADD

Definition: Lower address on right side of road.

Field Type: Numeric.

Median

Variable Name: MEDIAN

Definition: Indicator variable of median present between opposing directions of travel.

Field Type: Coded.

- 0 = no median.
- 1 = median.

Number of Lanes

Variable Name: NUMBEROFLA

Definition: Number of through travel lanes.

Field Type: Numeric.

One Way

Variable Name: ONEWAY

Definition: Whether this section of road carries traffic in both or only one direction.

Field Type: Coded:

- 0 = two way.
- 1 = one way toward uptown.
- 2 = one way away from uptown.

Pavement Width

Variable Name: PAVEMENTWI

Definition: Pavement width.

Field Type: Numeric.

Roadway Class*

Variable Name: RODWYCLS

Definition: The HSIS Laboratory developed the *Roadway Class* variable to readily classifying roadway data. This variable is a combination of the *Number of Lanes*, *Rural Urban Identification*, *Median Type*, and *Functional Class* variables.

Field Type: Text:

- Urban freeways.
- Urban freeways with fewer than four lanes.
- Urban two-lane roads.
- Urban multilane divided nonfreeways.
- Urban multilane undivided nonfreeways.
- Rural freeways.
- Rural freeways with fewer than four lanes.
- Rural two-lane roads.
- Rural multilane divided nonfreeways.
- Rural multilane undivided nonfreeways.
- Others.

Road Type

Variable Name: ROADTYPE

Definition: Road type.

Field Type: Coded:

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*Variable created by HSIS Laboratory.

- 1 = road.
- 2 = named driveway (e.g., shopping center).

Segment Length

Variable Name: LENGTH

Definition: Segment length (feet).

Field Type: Numeric.

Speed Hump

Variable Name: SPEEDHUMP

Definition: Speedhump present.

Field Type: Coded:

- 0 = no speed hump present.
- 1 = speed hump present.

Speed Limit

Variable Name: SPEEDLIMIT

Definition: Posted speed limit.

Field Type: Coded:

- 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.

Stand Type

Variable Name: STANDTYPE

Definition: Road type.

Field Type: Coded:

- ALY = alley.
- AVE = avenue.
- BLVD = boulevard.
- BYWY = byway.
- CIR = circle.
- CT = court.
- CV = cove.
- DR = drive.
- FWY = freeway.
- HWY = highway.
- LN = lane.
- LOOP = loop.
- PKWY = parkway.
- PL = place.
- RAMP = ramp.
- RD = road.
- ROW = row.
- RUN = run.
- ST = street.
- TER = terrace.
- TRCE = trace.
- TRL = trail.
- WAY = way.

Street Classification

Variable Name: STREETCLAS

Definition: Public or private street classification.

Field Type: Coded:

- PUB = public.
- PVT = private.

Street Name

Variable Name: STREETNAME

Definition: Street name.

Field Type: Text.

Street Type

Variable Name: STREETTYPE

Definition: Type of street.

Field Type: Coded:

- AL = alley.
- AV = avenue.
- BV = boulevard.
- BY = byway.
- CR = circle.
- CS = crescent.
- CT = court.
- CV = cove.
- DR = drive.
- FR = freeway.
- HY = highway.
- LN = lane.
- LP = loop.
- PL = place.
- PY = parkway.
- RA = ramp.
- RD = road.
- RN = run.
- RW = row.
- ST = street.
- TC = trace.

- TL = trail.
- TR = terrace.
- WY = way.

Suffix Direction

Variable Name: SUFFIX

Definition: Street suffix direction.

Field Type: Coded:

- E = east.
- EXT = extension.
- N = north.
- NB = northbound.
- S = south.
- SB = southbound.
- W = west.

Thorough Fare

Variable Name: THOROUGHFA

Definition: Thoroughfare classification.

Field Type: Coded:

- C2EX = class 2 expressway—access controlled but right in/right out driveways.
- EXCOLLMJ = existing major collector.
- EXCOLLMN = existing minor collector.
- EXFRY = existing freeway.
- EXMINTH = existing minor thoroughfare.
- EXMJTH = existing major thoroughfare.
- EXMJTHC3C = class 3 commercial arterial.
- LOCAL = local.
- PROPFRY = proposed freeway.
- PROPMINTH = proposed minor thoroughfare.
- PROPMJTH = proposed major thoroughfare.
- RAMP = ramp.

Upper Left Address

Variable Name: UL_ADD

Definition: Upper address on the left side of the road.

Field Type: Numeric.

Upper Right Address

Variable Name: UR_ADD

Definition: Upper address on right side of the road.

Field Type: Numeric.

Whole Street Name

Variable Name: WHOLESTNAM

Definition: Full-text street name with street type (e.g., Bridges Farm Road).

Field Type: Text.

Crash File

Crash File

Alignment

Variable Name: ALIGN

Definition: Alignment of the road at the location of the crash (e.g., straight, level).

Field Type: Text.

Case Number

Variable Name: CASE_NUM

Definition: Unique number assigned to the crash report by North Carolina Department of Motor Vehicles. However, Crash ID should be used to link files in the Charlotte dataset.

Field Type: Numeric.

Construction Activity

Variable Name: CNST_ACT

Definition: Construction activity (e.g., ongoing).

Field Type: Text.

Construction Type

Variable Name: CNST_TYPE

Definition: Construction type (e.g., maintenance work area).

Field Type: Text.

Crash ID

Variable Name: CRSH_ID

Definition: Unique crash ID used to link *Crash*, *Person*, and *Unit* variables across tables.

Field Type: Numeric.

Crash Severity

Variable Name: CRSH_LEVL

Definition: Highest injury severity level of any participant in the crash.

Field Type: Coded:

- 1 = K= killed.
- 2 = A = type injury (suspected serious).
- 3 = B = type injury (suspected minor).
- 4 = C = type injury (possible).
- 5 = O = no injury.

Crash Time

Variable Name: MILT_TIME

Definition: Time of the crash according to a 24-hour clock (e.g., 1712 for 5:12 p.m.).

Field Type: Numeric.

Crash Type

Variable Name: CRASH_TYPE

Definition: Type of crash; reflects the most harmful event (e.g., angle).

Field Type: Text.

Date of Crash

Variable Name: DATE_VAL

Definition: Date of the crash (MM/DD/YYYY).

Field Type: Date.

Day of Crash

Variable Name: DATE_VAL_D

Definition: Day of the month of the crash.

Field Type: Numeric.

Day of Week

Variable Name: DATE_VAL_W

Definition: Day of the week of the crash (e.g., Tuesday).

Field Type: Text.

Latitude

Variable Name: LATITUDE

Definition: Latitude of crash.

Field Type: Numeric.

Light Condition

Variable Name: LIT

Definition: Light condition when crash occurred (e.g., dawn).

Field Type: Text.

Longitude

Variable Name: LONGITUDE

Definition: Longitude of crash.

Field Type: Numeric.

Month of Crash

Variable Name: DATE_VAL_M

Definition: Month of the crash (e.g., May).

Field Type: Text.

Narrative

Variable Name: NARRATIVE

Definition: Text narrative description of the crash.

Field Type: Text.

Number of Fatalities

Variable Name: NUM_FATL

Definition: Number of fatalities in the crash.

Field Type: Numeric.

Number of Injuries

Variable Name: NUM_INJY

Definition: Total number of nonfatal injuries in the crash.

Field Type: Numeric.

Number of Lanes

Variable Name: NUM_LNS

Definition: Number of lanes as reported by the officer in the crash report.

Field Type: Numeric.

Number of Possible Injuries

Variable Name: NUM _INJY_C

Definition: Total number of C injuries in the crash (refers to possible injury).

Field Type: Numeric.

Number of Suspected Minor Injuries

Variable Name: NUM_INJY_B

Definition: Total number of B injuries in the crash (refers to suspected minor injury).

Field Type: Numeric.

Number of Suspected Serious Injuries

Variable Name: NUM_INJY_A

Definition: Total number of A injuries in the crash (refers to suspected serious injury).

Field Type: Numeric.

Primary Cause

Variable Name: PRIMARY

Definition: Primary cause of the crash (e.g., inattention).

Field Type: Text.

Relation to Roadway

Variable Name: RD_RLTN

Definition: Type of roadway facility where crash occurred (e.g., T-intersection).

Field Type: Text.

Road Condition

Variable Name: RD_COND

Definition: Road condition at time of the crash (e.g., wet).

Field Type: Text.

Road Surface

Variable Name: RD_SURF

Definition: Road surface type at the location of the crash (e.g., coarse asphalt).

Field Type: Text.

Roadway Area

Variable Name: RDWY_AREA

Definition: Roadway configuration and direction of traffic (e.g., two-way, not divided).

Field Type: Text.

Secondary Cause

Variable Name: SECONDARY

Definition: Secondary cause of the crash, if applicable (e.g., debris).

Field Type: Text.

Traffic Control

Variable Name: TRFC_CTRL

Definition: Traffic control device present at the crash location (e.g., stop-and-go signal).

Field Type: Text.

Urban Rural Description

Variable Name: URBAN_RU

Definition: Degree of urban development at crash location as determined by the reporting officer (e.g., rural (<30-percent developed)).

Field Type: Text.

Weather

Variable Name: WTHR

Definition: Weather conditions when the crash occurred (e.g., clear).

Field Type: Text.

Year of Crash

Variable Name: DATE_VAL_Y

Definition: Year of the crash.

Field Type: Numeric.

Unit File

Unit File

Crash ID

Variable Name: CRSH_ID

Definition: Crash ID that is used to link *Crash*, *Person*, and *Unit* variables across tables.

Field Type: Numeric.

Contributing Factor 1

Variable Name: CONTRIB_FACTOR1

Definition: Contributing factor description (e.g., drug use).

Field Type: Text.

Contributing Factor 2

Variable Name: CONTRIB_FACTOR2

Definition: Contributing factor description (e.g., drug use).

Field Type: Text.

Contributing Factor 3

Variable Name: CONTRIB_FACTOR3

Definition: Contributing factor description (e.g., drug use).

Field Type: Text.

Harmful Event 1

Variable Name: HARM_EVNT1

Definition: Most harmful event in the crash sequence (e.g., ran off road right).

Field Type: Text.

Harmful Event 2

Variable Name: HARM_EVNT2

Definition: Most harmful event in the crash sequence (e.g., ran off road right).

Field Type: Text.

Harmful Event 3

Variable Name: HARM_EVNT3

Definition: Most harmful event in the crash sequence (e.g., ran off road right).

Field Type: Text.

Harmful Event 4

Variable Name: HARM_EVNT4

Definition: Most harmful event in the crash sequence (e.g., ran off road right).

Field Type: Text.

Harmful Event 5

Variable Name: HARM_EVNT5

Definition: Most harmful event in the crash sequence (e.g., ran off road right).

Field Type: Text.

Primary Action

Variable Name: PRR_ACTN

Definition: Primary action of the unit during the crash (e.g., backing up).

Field Type: Text.

Speed Limit

Variable Name: SPD_LIMT

Definition: Posted speed limit.

Field Type: Numeric.

Unit Type

Variable Name: UNIT_TYPE

Definition: Unit type (e.g., vehicle).

Field Type: Text.

Unit Number

Variable Name: UNIT_NUM

Definition: Number assigned to vehicle/person involved.

Field Type: Numeric.

Vehicle Type

Variable Name: VEHC_TYPE

Definition: Vehicle type (e.g., sport utility).

Field Type: Text.

Person File

Person File

Crash ID

Variable Name: CRSH_ID

Definition: Crash ID that is used to link *Crash*, *Person*, and *Unit* variables across tables.

Field Type: Numeric.

Contributing Action

Variable Name: HZRD_ACTN

Definition: Contributing circumstance on the part of the person involved in the crash that contributed to the crash (e.g., failure to reduce speed).

Field Type: Text.

Driver or Occupant Restraint

Variable Name: RSTR_USE

Definition: Restraint used in crash (e.g., shoulder and lap belt).

Field Type: Text.

Ejection Indicator

Variable Name: PRTY_EJCT

Definition: Indicator that occupant was ejected from the vehicle (e.g., not ejected).

Field Type: Text.

Injury Severity

Variable Name: INJY_SVTY

Definition: The severity of injury for the person involved in the crash (e.g., no injury).

Field Type: Text.

Party Type Description

Variable Name: PRTY_TYPE_DESC

Definition: Type of person involved in crash (e.g., pedalcyclist).

Field Type: Text

Person Age

Variable Name: PRTY_AGE

Definition: Person age.

Field Type: Numeric.

Person Sex

Variable Name: GNDR_DESC

Definition: Sex of the person involved in the crash (e.g., female).

Field Type: Text.

Position

Variable Name: POS

Definition: Position of the person within or on the vehicle (where applicable; e.g., front right).

Field Type: Text.

Unit Number

Variable Name: UNIT_NUM

Definition: Number assigned to vehicle involved.

Field Type: Numeric.

Intersection File

Intersection File

Intersection Node Type

Variable Name: CONTROLTYP

Definition: Intersection type.

Field Type: Coded:

- 1 = cul-de-sac.
- 2 = uncontrolled.
- 3 = sign controlled.
- 4 = end.
- 5 = signalized.
- 6 = permanent barrier.
- 7 = nonintersection.

Intersection Number

Variable Name: INTERSECTI

Definition: Unique intersection number.

Field Type: Numeric.

Latitude

Variable Name: LAT

Definition: Geographic latitude of the intersection.

Field Type: Numeric.

Longitude

Variable Name: LON

Definition: Geographic longitude of the intersection.

Field Type: Numeric.

Streets at Intersection

Variable Name: STREETS

Definition: Streets at intersection.

Field Type: Text.

Street Unit ID 1

Variable Name: STUNITID1

Definition: Street ID 1.

Field Type: Numeric.

Street Unit ID 2

Variable Name: STUNITID2

Definition: Street ID 2.

Field Type: Numeric.

Street Unit ID 3

Variable Name: STUNITID3

Definition: Street ID 3.

Field Type: Numeric.

X Coordinate

Variable Name: XCOORD

Definition: X coordinate of the intersection in North Carolina State Plane.

Field Type: Numeric.

Y Coordinate

Variable Name: YCOORD

Definition: Y coordinate of the intersection in North Carolina State Plane.

Field Type: Numeric.

Bicycle Lane File

Bicycle Lane File

Bike Lanes

Variable Name: BIKE_LANES

Definition: Type of bike lanes (e.g., buffered).

Field Type: Text.

Lane Notes

Variable Name: LANE_NOTES

Definition: Notes about the bike lanes.

Field Type: Text.

Length of Bike Lane

Variable Name: LENGT_MILE

Definition: Length of the bike lane (miles).

Field Type: Numeric.

Side of the Street

Variable Name: SIDEOFSTRE

Definition: Side of the street (e.g., one side).

Field Type: Text.

Street Name

Variable Name: WHOLESTNAM

Definition: Street name (e.g., North Davidson Street).

Field Type: Text.

Total Width

Variable Name: TOTALWIDTH

Definition: Total width of the bike lane (feet).

Field Type: Numeric.

Year Built

Variable Name: YEAR_BUILT

Definition: Year of construction.

Field Type: Numeric.

Sidewalk File

Sidewalk File

Asset ID

Variable Name: ASSETID

Definition: Unique ID (e.g., SW28119).

Field Type: Text.

Beginning of Sidewalk Description

Variable Name: BEG_DESC

Definition: Street name at one end of the sidewalk (e.g., Randolph Road).

Field Type: Text.

Comments on the Sidewalk

Variable Name: COMMENTS

Definition: Miscellaneous agency comments on the sidewalk (e.g., trees partially obscure sidewalk).

Field Type: Text.

End of Sidewalk Description

Variable Name: END_DESC

Definition: Street name at the opposite end of the sidewalk from BEG_DESC (e.g., Yorkdale Drive).

Field Type: Text.

Location Description

Variable Name: ASSETDESC

Definition: Combined description based on the street names at both ends of the sidewalk (e.g., South Alexander Street—East 4th Street Crossing Drive).

Field Type: Text.

Location of the Sidewalk

Variable Name: LOCATION

Definition: Textual description of the location of the sidewalk (Gretna Green Drive from Yorkdale Drive to Yorkdale Drive).

Field Type: Text.

Street

Variable Name: STREET

Definition: Name of the street that the sidewalk parallels (e.g., Yorkdale Drive).

Field Type: Text.

Width of Sidewalk

Variable Name: WIDTH

Definition: Width of sidewalk (feet).

Field Type: Numeric.

Greenway File

Greenway File

Date of Completion

Variable Name: COMPLETION

Definition: Date the trail was completed (MM/DD/YYYY).

Field Type: Date.

Length

Variable Name: MILES

Definition: Length of the greenway (miles).

Field Type: Numeric.

Location

Variable Name: MEMO

Definition: Description of the greenway location (e.g., Pineville-Matthews Road to Carmel Road).

Field Type: Text.

Trail Name

Variable Name: TRAIL_NAME

Definition: Name of the trail (e.g., McMullen Creek Greenway).

Field Type: Text.

Trail Surface

Variable Name: TRAIL_SURF

Definition: Surface material of the trail (e.g., wood).

Field Type: Text.

Type of Trail

Variable Name: TRAIL_TYPE

Definition: Categorical type of the trail (e.g., greenway).

Field Type: Text.

Bus Route File

Bus Route File

Route Name

Variable Name: ROUTE_NAME

Definition: Route name (e.g., Carowinds).

Field Type: Text.

Route Number

Variable Name: ROUTE_NUM

Definition: Route number.

Field Type: Numeric.

Route Type

Variable Name: ROUTE_TYPE

Definition: Type of bus route (e.g., express).

Field Type: Text.

Bus Stop File

Bus Stop File

Direction

Variable Name: DIRECTION

Definition: Direction of travel (e.g., inbound).

Field Type: Text.

Latitude

Variable Name: Y

Definition: Latitudinal location of the stop.

Field Type: Numeric.

Location of the Pole

Variable Name: POLE_LOCAT

Definition: Location of the stop pole (e.g., forward facing, in back of curb).

Field Type: Text.

Longitude

Variable Name: X

Definition: Longitudinal location of the stop.

Field Type: Numeric.

Nearest Intersection

Variable Name: NEAREST_IN

Definition: Nearest intersection (e.g., Southern Pine and Arrowpoint).

Field Type: Text.

Presence of Bench

Variable Name: BENCH

Definition: Presence of bench (e.g., bench).

Field Type: Text.

Presence of Shelter

Variable Name: SHELTER

Definition: Presence of shelter (e.g., shelter).

Field Type: Text.

Routes

Variable Name: ROUTES

Definition: Routes that use the stop (e.g., 24, 56).

Field Type: Text.

Sidewalk

Variable Name: SIDEWALK

Definition: Presence of sidewalk (e.g., sidewalk).

Field Type: Text.

Stop Description

Variable Name: STOPDESC

Definition: Description of where the bus stop is located (e.g., Tuckaseegee Road and Enderly Road).

Field Type: Text.

Stop ID

Variable Name: STOPID

Definition: Unique ID for each bus stop.

Field Type: Text.

Transfer Point

Variable Name: TRANS_P

Definition: Indicator of transfer point (e.g., transfer point).

Field Type: Text.

Trash Cans

Variable Name: TRASHCANS

Definition: Number of trash cans located at the stop.

Field Type: Numeric.

Light Rail Route File

Light Rail Route File

Length

Variable Name: LENGTH

Definition: Length (miles).

Field Type: Numeric.

Project Description

Variable Name: PROJECT_DE

Definition: Status or phase of the project/route (e.g., in service).

Field Type: Text.

Track Name

Variable Name: TRACKDESCR

Definition: Description of the track (e.g., BLE southbound—track 2).

Field Type: Text.

Light Rail Stop File

Light Rail Stop File

Address of the Light Rail Station

Variable Name: ADDRESS

Definition: Address of the light rail station (e.g., 218 East Carson Boulevard).

Field Type: Text.

Bike Locker Availability

Variable Name: BIKELOCKER

Definition: Presence of a bike locker (e.g., yes).

Field Type: Text.

Bike Rack Availability

Variable Name: BIKERACK

Definition: Presence of a bike rack (e.g., yes).

Field Type: Text.

Geographic Location *X* Coordinate

Variable Name: X

Definition: North Carolina State Plane *X* measurement of the station (e.g., 1447231.052106).

Field Type: Numeric.

Geographic Location *Y* Coordinate

Variable Name: Y

Definition: North Carolina State Plane *Y* measurement of the station (e.g., 539708.192731).

Field Type: Numeric.

Light Rail Line

Variable Name: STATIONTYP

Definition: Applicable light rail line.

Field Type: Text.

Location of the Platform

Variable Name: PLATFORM

Definition: Location of the platform (e.g., side).

Field Type: Text.

Name of the Light Rail Station

Variable Name: NAME

Definition: Name of the light rail station (e.g., Carson).

Field Type: Text.

Number of Parking Spaces

Variable Name: PARKSPACES

Definition: Number of parking spaces.

Field Type: Numeric.

Park and Ride Availability

Variable Name: PARKNRIDE

Definition: Presence of a park and ride facility (e.g., yes).

Field Type: Text.

ZIP Code of the Light Rail Station

Variable Name: ZIPCODE

Definition: ZIP code of the light rail station.

Field Type: Numeric.

Railroad File

Railroad File

Connection Type

Variable Name: CONNECTY

Definition: Connection status of railroad (e.g., connected).

Field Type: Text.

In Service

Variable Name: INSERVICE

Definition: Indicator that railroad line is in service at the time of the dataset.

Field Type: Coded:

    Y = yes.
    N = no.

Operating Organization

Variable Name: OPERATOR

Definition: Coded name of the operating organization.

Field Type: Coded:

- NS = Norfolk Southern.
- CSX = CSX Transportation.
- ACWR = Aberdeen Carolina and Western Railway.

Operating Organization–Full Name

Variable Name: NAME

Definition: Full name of the operating organization (e.g., Norfolk Southern).

Field Type: Text.

Out Service

Variable Name: OUTSERVICE

Definition: Out of service date (MM/DD/YYYY).

Field Type: Date.

Ownership Organization

Variable Name: OWNER

Definition: Coded name of the ownership organization.

Field Type: Coded:

- NS = Norfolk Southern.
- NCRL = North Carolina Railroad Company.
- CSX = CSX Transportation.
- ACWR = Aberdeen Carolina and Western Railway.
- CSX/NS = CSX Transportation and Norfolk Southern.
- DTNC = North Carolina Department of Transportation.

Ownership Organization–Full Name

Variable Name: OWNERLONG

Definition: Full name of the ownership organization of the railroad line (e.g., Norfolk Southern).

Field Type: Text.

Presence of High-Speed Rail

Variable Name: HSR

Definition: Relevant high speed rail corridor (e.g., Southeast High Speed Rail Corridor).

Field Type: Text.

Presence of Passenger Service

Variable Name: PASSSERVIC

Definition: Passenger service indicator.

Field Type: Coded:

>   Y = yes.
>   N = no.

Type of Track

Variable Name: TRACKTYPE

Definition: Type of the track (e.g., industry).

Field Type: Text.

Appendix: History of Revisions

Appendix: History of Revisions

The appendix provides HSIS variables and the years in which changes were made. The changes are described for the relevant variables. Table 3 contains the history of the HSIS revisions.

Table 3. History of HSIS revisions.

File	Variable Name	Variable Description	Description of Change	Year of Change
Accident	ACC_DATE	Date time	Variable name changed to DATE_VAL	2018
Accident	ACCYR	Year	Variable name changed to DATE_VAL_Y	2018
Accident	ALIGN	Align	N/A	—
Accident	ALIGN_CD	Align code	N/A	—
Accident	CASENO	Case number	Variable name changed to CRSH_ID Variable name CASE_NUM added	2018 2019
Accident	CAUSE1	Primary cause	Variable name changed to PRIMARY	2018
Accident	CAUSE1_CD	Primary cause code	Variable discontinued	2018
Accident	CAUSE2	Secondary cause	Variable name changed to SECONDARY	2018
Accident	CAUSE2_CD	Secondary cause code	Variable discontinued	2018
Accident	CNST_ACT	Construction related	Variable added	2014
Accident	CNST_LANE_CLSD_IND	Lane closed	Variable added Variable discontinued	2014 2018
Accident	CNST_TYPE	Construction type	Variable added	2014
Accident	CNST_TYPE_CD	Construction type code	Variable added Variable discontinued	2014 2018
Accident	COUNTY	County	Variable discontinued	2018
Accident	COUNTY_CD	County code	Variable discontinued	2018
Accident	CREATE_TIMESTAMP	Create timestamp	Variable discontinued	2018
Accident	DAY	Date value day	Variable name changed to DATE_VAL_D	2018
Accident	INTR_SRET	Intersecting street	Variable discontinued	2018
Accident	LATITUDE	Latitude	N/A	—
Accident	LIGHT	Light condition	Variable name changed to LIT	2018
Accident	LIGHT_CD	Light condition code	Variable name changed to LIT_CD	2018
Accident	LONGITUDE	Longitude	N/A	—
Accident	MHARM_AC	Crash type	Variable name changed to CRASH_TYPE	2018
Accident	MHARM_AC_CD	Crash type code	Variable discontinued	2018
Accident	MILT_TIME	Military time	N/A	—
Accident	MONTH	Date value month	Variable name changed to DATE_VAL_M	2018
Accident	MONTH_DESC	Date value description	Variable added	2013

File	Variable Name	Variable Description	Description of Change	Year of Change
			Variable discontinued	2018
Accident	NARRATIVE	Narrative	Variable not present	2015
Accident	NO_LANES	Number of lanes	Variable name changed to NUM_LANES	2018
Accident	NUM _A	Number of A injuries	Variable name changed to NUM_INJY_A	2018
Accident	NUM_ B	Number of B injuries	Variable name changed to NUM_INJY_B	2018
Accident	NUM_ C	Number of C injuries	Variable name changed to NUM_INJY_C	2018
Accident	NUM_KILL	Number of fatalities	Variable name changed to NUM_FATL	2018
Accident	NUMINJ	Number of injuries	Variable name changed to NUM_INJY	2018
Accident	ONRDSEG_ID	Unique identifier	Variable discontinued	2018
Accident	ORIG_DRTN_CD	Original direction code	Variable discontinued	2018
Accident	RD_COND	Road condition	N/A	—
Accident	RD_COND_CD	Road condition code	Variable discontinued	2018
Accident	RD_RLTN	Road relation	Variable added	2014
Accident	RD_SURF	Road surface	N/A	—
Accident	RD_SURF_CD	Road surface code	Variable discontinued	2018
Accident	RDWY_AREA	Roadway area	Variable added	2014
Accident	RDWY_AREA_CD	Roadway area code	Variable added / Variable discontinued	2014 / 2018
Accident	RUR_URB	Urban rural	Variable added / Variable discontinued	2014 / 2018
Accident	RUR_URB_DESC	Urban rural description	Variable added / Variable name changed to URBAN_RU	2014 / 2018
Accident	SEVERITY	Crash level	Variable name changed to CRSH_LEVL	—
Accident	STUDY_LOCATION_ID	Study location id	Variable added / Variable not present / Variable discontinued	2014 / 2015 / 2018
Accident	TRF_CNTL	Traffic control	Variable name changed to TRFC_CTRL	2018
Accident	TRF_CNTL_CD	Traffic control code	Variable name changed to TRFC_CTRL_CD	2018
Accident	WEATHER	Weather	Variable name changed to WTHR	2018
Accident	WEATHER_CD	Weather code	Variable discontinued	2018
Accident	WEEKDAY	Day of week	Variable discontinued	2018
Accident	WEEKDAY_DESC	Day of week description	Variable name changed to DATE_VAL_W	2018
Roadway	AADT	Average annual daily traffic	N/A	—
Roadway	BARRIER	Barrier	N/A	—
Roadway	DIVIDED	Divided	N/A	—

File	Variable Name	Variable Description	Description of Change	Year of Change
Roadway	HOVLANE	High-occupancy vehicle lane	N/A	—
Roadway	LENGTH	Segment length	N/A	—
Roadway	LL_ADD	Lower left address	N/A	—
Roadway	LR_ADD	Lower right address	N/A	—
Roadway	MEDIAN	Median	N/A	—
Roadway	NO_LANES	Number of lanes	Variable name changed to NUMBEROFLA	2011
			Variable name changed back to NO_LANES	2012
			Variable name changed to NUMBEROFLA	2018
Roadway	ONEWAY	One way	N/A	—
Roadway	ONRDSEG_ID	Unique identifier	Variable discontinued	2018
Roadway	PREFIXDIRE	Prefix direction	N/A	—
Roadway	ROAD_ID	Road id	Variable name changed to ROAD_ID_1	2010
			Variable name changed back to ROAD_ID	2011
			Variable discontinued	2018
Roadway	ROADTYPE	Road type (road or driveway)	N/A	—
Roadway	SEGMENT_ID	Segment id	Variable discontinued	2018
Roadway	SPD_LIMT	Speed limit	Variable name changed to SPEEDLIMIT	2011, 2013, 2018, onwards
Roadway	SPEEDHUMP	Speed hump	N/A	—
Roadway	STANDTYPE	Stand type	N/A	—
Roadway	STREETCLAS	Street classification	N/A	—
Roadway	STREETNAME	Street name	N/A	—
Roadway	STREETTYPE	Street type	Variable added	2018
Roadway	SUFFIX	Suffix direction	N/A	—
Roadway	SURF_WID	Pavement width	Variable name changed to PAVEMENTWI	2018
Roadway	SURFACETYP	Surface type	N/A	—
Roadway	THOROUGHFA	Thorough fare	Variable not present	2007
Roadway	UL_ADD	Upper left address	N/A	—
Roadway	UR_ADD	Upper right address	N/A	—
Roadway	WHOLESTNAM	Street name plus street type	N/A	—
Occupant	AGE	Occupant age	Variable name changed to PRTY_AGE	2018
Occupant	CASENO	Crash ID	Variable name changed to CRSH_ID	2018
Occupant	CONTRIB	Hazardous action	Variable name changed to HZRD_ACTN	2018

File	Variable Name	Variable Description	Description of Change	Year of Change
Occupant	CONTRIB_CD	Hazardous action code	Variable name changed to HZRD_ACTN_CD	2018
Occupant	DRV_INJ	Injury severity	Variable name changed to INJY_SVTY	2018
Occupant	DRV_INJ_CD	Injury severity code	Variable name changed to INJY_SVTY_CD	2018
Occupant	PRSN_TYP	Party type	Variable discontinued	2018
Occupant	PRSN_TYP_DESC	Party type description	Variable name changed to PRTY_TYPE_DESC	2018
Occupant	POS	Position	Variable added Variable not present	2014 2016
Occupant	POS_CD	Position code	Variable added Variable not present Variable discontinued	2014 2016 2018
Occupant	PRTY_EJCT	Ejection indicator	Variable added	2018
Occupant	REST1	Driver/occupant restraint	Variable name changed to RSTR_USE	2018
Occupant	REST1_CD	Driver/occupant restraint code	Variable discontinued	2018
Occupant	SEX	Driver/occupant sex	Variable name changed to GNDR_DESC	2018
Occupant	VEHNO	Vehicle number	Variable name changed to UNIT_NUM	2018
Vehicle	CASENO	Crash ID	Variable name changed to CRSH_ID	2018
Vehicle	CONTRIB1	Driver contributing circumstance 1	Variable added Variable name changed to CONTRIB_FACTOR1	2014 2018
Vehicle	CONTRIB2	Driver contributing circumstance 2	Variable added Variable name changed to CONTRIB_FACTOR2	2014 2018
Vehicle	CONTRIB3	Driver contributing circumstance 3	Variable added Variable name changed to CONTRIB_FACTOR3	2014 2018
Vehicle	CONTRIB1_CD	Driver contributing circumstance CD 1	Variable added Variable discontinued	2014 2018
Vehicle	CONTRIB2_CD	Driver contributing circumstance CD 2	Variable added Variable discontinued	2014 2018
Vehicle	CONTRIB3_CD	Driver contributing circumstance CD 3	Variable added Variable discontinued	2014 2018
Vehicle	DIR_TRVL	Direction	Variable discontinued	2018
Vehicle	DIR_TRVL_CD	Direction code	Variable discontinued	2018
Vehicle	EVENT1	Harmful event 1	Variable name changed to HARM_EVNT1	2018
Vehicle	EVENT2	Harmful event 2	Variable name changed to HARM_EVNT2	2018
Vehicle	EVENT3	Harmful event 3	Variable name changed to HARM_EVNT3	2018

File	Variable Name	Variable Description	Description of Change	Year of Change
Vehicle	EVENT4	Harmful event 4	Variable name changed to HARM_EVNT4	2018
Vehicle	EVENT5	Harmful event 5	Variable name changed to HARM_EVNT5	2018
Vehicle	MANEUVER	Primary action	Variable name changed to PRR_ACTN	2018
Vehicle	MANEUVER_CD	Primary action code	Variable discontinued	2018
Vehicle	PRMY_VEHC_USE	Primary vehicle use	N/A	—
Vehicle	PRMY_VEHC_USE_CD	Primary vehicle use code	Variable discontinued	2018
Vehicle	SPD_LIMT	Speed limit	N/A	—
Vehicle	TRFC_CTRL	Type of traffic control	N/A	—
Vehicle	UNIT_TYPE	Unit type	N/A	—
Vehicle	UNIT_TYPE_CD	Unit type code	Variable discontinued	2018
Vehicle	VEH_DEF	Vehicle defect	Variable name changed to VEHC_DFCT	2018
Vehicle	VEH_DEF_CD	Vehicle defect code	Variable discontinued	2018
Vehicle	VEHNO	Unit number	Variable name changed to UNIT_NUM	2018
Vehicle	VEHTYPE	Vehicle type	Variable name changed to VEHC_TYPE	2018
Vehicle	VEHTYPE_CD	Vehicle type code	Variable discontinued	2018
Vehicle	VEHYR	Vehicle year	Variable name changed to VEHC_YR	2018

—No data.
N/A = not applicable.

References

References

1. FHWA. n.d. "Highway Safety Information System" (website). https://highways.dot.gov/research/safety/hsis, last accessed May 25, 2023.

2. FHWA. n.d. "HSIS Laboratory" (web page). https://highways.dot.gov/research/safety/hsis/laboratory, last accessed May 25, 2023.

3. SAS Institute, Inc. 2013. *SAS* (software). Version 9.4.