MMUCC
Guideline

Model Minimum Uniform Crash Criteria

Third Edition (2008)

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EXECUTIVE SUMMARY

The purpose of the Model Minimum Uniform Crash Criteria (MMUCC) is to provide a dataset for describing crashes of motor vehicles in transport on a roadway that will generate the information necessary to improve highway safety within each State and nationally.

Statewide motor vehicle traffic crash data systems provide the basic information necessary for effective highway and traffic safety efforts at any level of government – local, State, or Federal. State crash data are used to perform problem identification, establish goals and performance measures, allocate resources, determine the progress of specific programs, and support the development and evaluation of highway and vehicle safety countermeasures. Unfortunately, the use of State crash data is often hindered by the lack of uniformity between and within States.

MMUCC represents a voluntary and collaborative effort to generate uniform crash data that are accurate, reliable and credible for data-driven highway safety decisions within a State, between States, and at the national level.

MMUCC was originally developed in response to requests by States interested in improving and standardizing their State crash data. Lack of uniform reporting made the sharing and comparison of State crash data difficult. Different elements and definitions resulted in incomplete data and misleading results.

MMUCC recommends voluntary implementation of a "minimum set" of standardized data elements to promote comparability of data within the highway safety community. It serves as a foundation for State crash data systems.

Efforts to standardize crash data have increased since MMUCC was originally recommended as a voluntary guideline in 1998. More and more States included MMUCC in their data review process as they sought to revise their crash report forms. The American National Standards Institute (ANSI) Standard D16.1-2007 ***Manual on Classification of Motor Vehicle Traffic Accidents,*** Seventh Edition, and the ANSI Standard D20.1, ***Data Element Dictionary for Traffic Records Systems*** were both used to develop and update MMUCC. These standards will be revised during their normal review processes to be consistent with the MMUCC Guideline, 3rd Edition (2008) wherever appropriate.

Congress has supported the improvement of crash data. In 2005, President Bush signed the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). In order to receive Traffic Safety Information System Improvement Grants, Section 408 of SAFETEA-LU, a State must certify that it has adopted and uses model data elements identified by the Secretary of Transportation or that it will use Section 408 grant funds toward adopting and using the maximum number of such model data elements as soon as practicable. The MMUCC elements were identified by US DOT as one set of model data elements that apply to Section 408 (the other sets being NEMSIS for EMS data and MMIRE for roadway inventory data).

Implementation of MMUCC is a collaborative effort involving the Governors Highway Safety Association (GHSA), the Federal Highway Administration (FHWA), the Federal Motor Carrier Safety Administration (FMCSA), and the National Highway Traffic Safety Administration (NHTSA). The review and update of the MMUCC Guideline, 2nd Edition (2003) was structured to obtain maximum input from all sectors of the highway safety community. Over a 12-month period during 2007-2008, feedback was obtained from meetings, via the Web, email, phone, mail, etc., before producing the MMUCC Guideline, 3rd Edition (2008).

The MMUCC data elements represent a core set of data elements, most of which were being collected by the States before the first edition of the MMUCC Guideline was published. The 111 data elements contained in the MMUCC Guideline, 2nd Edition

(2003) were revised in response to emerging issues and other highway safety needs. The third edition of the MMUCC Guideline contains 107 data elements.

Only one new data element, Bus Use, was added to the MMUCC Guideline. Fewer than half of the data elements needed to be revised to meet the needs of GHSA, FHWA, FMCSA, NHTSA and the highway safety community at the local, State, and national levels.

The MMUCC Guideline, 3rd Edition (2008) recommends that States implement all 107 data elements included in this document. To reduce the data collection burden, MMUCC recommends that law enforcement at the scene should collect 75 of the 107 data elements. From crash scene information, 10 data elements can be derived, while the remaining 22 data elements should be obtained after linkage to other State data files. States that are unable to link to other State data to obtain the MMUCC "linked" data elements should collect, at a minimum, those "linked" data elements that are feasible to collect on the crash report. At the same time, States should work to develop data linkage capabilities so they eventually are able to obtain, via linkage, all of the information to be generated by the MMUCC "linked" data elements.

Because State datasets and systems are difficult to implement or change, no changes will be made to the MMUCC Guideline, 3rd Edition (2008) for five years. During this period, each of the data elements and their attributes will be monitored to determine their usefulness and reliability. The next planned update of the MMUCC Guideline is scheduled for 2013.

INTRODUCTION

More than 42,000 people are killed and nearly 3 million are injured on the Nation's highways every year. Each of these events is described in a Police Accident Report (PAR) that law enforcement officials prepare every day.

Motor vehicle traffic crash reporting provides valuable data to many different groups of people: the traffic engineer planning to resurface a road; the city planner developing safe school routes; the high school driver education teacher planning a curriculum; the public works director applying for a State grant for reconstructing a hazardous intersection; the police sergeant targeting selective enforcement; the motor vehicle administrator; the highway safety planner; and countless others who need timely, complete, and accurate motor vehicle traffic crash information.

These stakeholders need high-quality data to develop policies and programs that will improve the safety and the operation of the Nation's roadway transportation network. Improving motor vehicle traffic crash data will help State and local agencies identify specific traffic safety problems, communicate safety issues to the public and media, make better programming and resource allocation decisions and enable better monitoring and program evaluation. Ultimately, better data will lead to safer roadways.

Although all States and localities collect crash data, there are many inconsistencies in the way they collect it. Data definitions vary, the number and type of data elements vary, and the threshold for collecting data varies from jurisdiction to jurisdiction. In order to bring greater uniformity to crash data collection and to provide national guidance to data collectors, the Model Minimum Uniform Crash Criteria (MMUCC) was first created in 1998 and then updated in 2003.

In both the First and Second Editions of MMUCC, an expert panel was formed to oversee the development and revision of the data elements. There were also ample opportunities for public comment both at meetings and online. For the Third Edition, a similar process has been followed. An expert panel met twice and also communicated via e-mail. A one-day session at the 2007 Traffic Records Forum was held to solicit comments on draft MMUCC data elements. Comments were also submitted on the MMUCC Web site, www.mmucc.us. (For a complete listing of the Third Edition MMUCC Expert Panel, see Appendix A.)

WHAT IS MMUCC?

MMUCC is a guideline that presents a model **minimum** set of uniform variables or data elements for describing a motor vehicle traffic crash. The use of MMUCC data elements will generate data that can be employed to make more informed decisions which will lead to improvements in safety and at the national, State and local levels. States are encouraged to adopt as many recommended MMUCC data elements as possible when they next update their PARs.

Data elements were developed and incorporated into MMUCC if they were deemed necessary (needed for highway safety decision-making purposes) and comprehensive (included all aspects of the issue or problem being described). The MMUCC Guideline is based on two other data standards, ANSI D16 (for classifying motor vehicle traffic crashes) and ANSI D20 (for promoting uniformity in the transmission of records between jurisdictions). MMUCC has also been developed in close association with the National Highway Traffic Safety Administration's Fatality Analysis Reporting System (FARS) and National Automotive Sampling System (NASS), as well as the data elements mandated by the Federal Motor Carrier Safety Administration (FMCSA).

The use of MMUCC is **voluntary**. However, any State wishing to apply for Section 408 State Traffic Information System Improvement Grants must certify that it has adopted and uses the Model Data Elements, or that Section 408 grant funds it receives will be used toward adopting

and using the maximum number of such Model Data Elements as soon as practicable. Since MMUCC is a minimum data set, states and localities may choose to collect additional motor vehicle crash-related data elements if they feel the data are necessary to enhance decision-making.

MMUCC does not attempt to organize the proposed data elements and their attribute values into a reporting format. MMUCC also does not present coding values for the element values. States have the option of designing the content and format of their crash report as well as the most appropriate data collection system and data coding conventions to meet their needs.

The MMUCC Guideline is updated every five years to address emerging highway safety issues, simplify the list of recommended data elements, and clarify data definitions and other components of each data element. The next update is anticipated to be in 2013.

A summary of the changes in the 3rd Edition to each data element is available in Appendix B.

Organization of MMUCC Data Elements

Each MMUCC data element includes a definition, a set of specific attributes and a rationale for why it is needed. Data elements are divided into four major groups that describe various aspects of a crash: crash-related, vehicle-related, person-related and roadway-related.

MMUCC consists of data elements that are recommended to be captured at the crash scene, together with linked and derived data. From the crash scene information, additional data elements can be derived, which lessens the burden on law enforcement. Additional data elements are recommended through linkage to driver history, hospital and other health/injury data, and roadway inventory data.

Each group of data elements has a unique identifier that describes what type of data element it is as well as whether it is derived or linked. Some data elements are marked with a double asterisk (**) to indicate that these elements are mandated by FMCSA for crashes involving commercial motor vehicles.

Reporting Threshold Recommended to Implement MMUCC

In addition to specifying the minimum set of uniform data elements that should be collected for motor vehicle traffic crashes, the MMUCC Guideline also indicates for which motor vehicle crashes MMUCC data should be collected. The MMUCC Guideline does so by setting the threshold for reporting the most significant traffic crashes.

Without collection of data on the most important crashes, a State's or locality's data will paint an incomplete picture of the motor vehicle crash problem in the State or locality. Analysis of the data will be skewed as a result, and the jurisdiction may end up allocating resources inappropriately.

MMUCC recommends the following threshold for all motor vehicle crashes, both traffic and non-traffic, as necessary to generate the cases needed to improve highway safety:

- All crashes statewide involving death, personal injury, or property damage of **$1,000** or more should be reported and entered into a statewide database.
- Crash data should be reported **for all persons** involved (including the injured and non-injured).
- Each State should adopt a reporting threshold that is **uniform and consistently implemented statewide.**

Planning is underway to identify a reduced set of MMUCC elements that would be recommended specifically for Property Damage Only (PDO) crashes. Considering that approximately two-thirds of all crashes reported are PDO crashes, for law enforcement this could mean: a) less time spent reporting motor vehicle crashes, b) an increase in reporting of PDO crashes, which often go unreported, and c) improvement in the accuracy and completeness of information collected in the field. Results from this effort are expected to be completed in 2009.

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DATA ELEMENT FORMAT

(Group + Type) No. **Data Element Name (IN BOLD)**

Definition: Definition of the data element.

Source: Data source entered only for "linked" data elements

Attributes: A bullet (•) highlights each attribute value.
When there is more than one value for the attribute, a square bullet (■) is used to highlight the name of the subfield or category.
(Definitions for all attributes and values, except for commonly used terms, have been included in the Glossary.)

Rationale: Justification for including the data element.

Note: "Not Reported" HAS NOT been listed as an attribute. However, **this attribute should be generated by the computer system on an analytic file**. "Not Reported" signifies that no value was reported for that data element, even though one may have been expected. It differs from the value "Unknown" which is recorded by the police officer when he/she is unable to ascertain the correct value for that data element.

Data Elements Collected at Scene

These data elements should be included on the State Police Accident Report (PAR) and collected at the scene of each crash.

Crash Data Elements

The crash level data elements describe the overall characteristics of the crash. See Glossary for the D16.1 definition of a motor vehicle crash.

C1. Case Identifier

Definition: The unique identifier within a given year that identifies a given crash within a State.

Attribute: • State Specific Identifier

Rationale: Used to document a specific crash. If this identifier is available at the scene, it can also be recorded on the EMS record for linkage purposes. Enables subfiles to be created for analyses and linked back to the crash data file.

C2. Crash Date and Time

Definition: The date (year, month, and day) and time (00:00-23:59) at which the crash occurred.

Attribute: • Date and Time (YYYYMMDDHHMM)

Absence of year should result in an edit check. In rare situations

MMDDHHMM can be unknown. Midnight is designated as 00:00 and is considered the start of a new day.

Rationale: Important for management/administration, evaluation, and linkage.

C3. Crash County

Definition: The county or equivalent entity in which the crash occurred.

Attribute:

- Name of the County

  Record the county or equivalent entity in which a crash occurred. If codes are used instead of name, use the GSA Geographic Locator Codes (GLC) that can be found at: www.gsa.gov. See Appendix G. If State-assigned codes are used, they should be convertible to the GSA/ FIPS format.

Rationale: Important for analyses of county area programs such as "Safe Communities." Critical for linkage of the crash file to other State data files (EMS, hospital, roadway, etc.). Important for intrastate comparisons.

C4. Crash City/Place (political jurisdiction)

Definition: The city/place (political jurisdiction) in which the crash occurred.

Attribute:

- Name of the Political Jurisdiction

  Record the name identifying the city/place in which the crash occurred. If codes are used instead of names, use the GSA Geographic Locator Codes (GLC) that can be found at www.gsa.gov. See Appendix D. If State-assigned codes are used, they should be convertible to the GSA/FIPS format.

Rationale: Important for analyses of local area programs such as "Safe Communities." Critical for linkage of the crash file to other state data files (EMS, hospital, roadway, etc.).

C5. Crash Location

Definition: The exact location on the roadway to document where the first harmful event of the crash occurred.

Attributes:

- Latitude/Longitude Coordinates

  The optimum definition of Crash Location is a route name and GPS (global positioning system)/GIS (geographic information system), if a highway agency has a linear referencing system that can relate geographic coordinates to specific locations in road inventory, traffic, driver, and other files. The location information in a crash file must have the capability to be linked to location information in these other important files required to study site-specific safety issues. GPS/GIS provides the latitude/longitude coordinates indicating where the crash occurred.

- Linear Referencing System (LRS)

  An LRS can create complex overlays of multiple events or occurrences along a route to support corridor planning, pavement rehabilitation, or other

complex analysis. An LRS permits users to share information maintained by different data providers across different data layers. An LRS is not created by the geographic information system (GIS), but is actually replicated to model what is in the field. All linear data (traffic volumes, pavement types, speed limit zones, etc.) and point data (crashes, signs, etc.) collection efforts need only specify the location or endpoint locations in terms of the LRS components.

- Link Node System (not recommended)

  Note: States with no system or a link node system should plan to develop or upgrade to a linear referencing system or one that documents latitude/longitude coordinates.

Rationale: Critical for problem identification, prevention programs, engineering evaluations, mapping, and linkage purposes.

C6. First Harmful Event

Definition: The first injury or damage-producing event that characterizes the crash type.

Attributes:

- Non-Collision:
  - Overturn/Rollover
  - Fire/Explosion
  - Immersion
  - Jackknife
  - Cargo/Equipment Loss or Shift
  - Fell/Jumped From Motor Vehicle
  - Thrown or Falling Object
  - Other Non-Collision
- Collision With Person, Motor Vehicle, or Non-Fixed Object:
  - Pedestrian
  - Pedalcycle
  - Railway Vehicle (train, engine)
  - Animal
  - Motor Vehicle in Transport
  - Parked Motor Vehicle
  - Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle
  - Work Zone / Maintenance Equipment
  - Other Non-Fixed Object
- Collision With Fixed Object:
  - Impact Attenuator/Crash Cushion

- Bridge Overhead Structure
- Bridge Pier or Support
- Bridge Rail
- Cable Barrier
- Culvert
- Curb
- Ditch
- Embankment
- Guardrail Face
- Guardrail End
- Concrete Traffic Barrier
- Other Traffic Barrier
- Tree (standing)
- Utility Pole/Light Support
- Traffic Sign Support
- Traffic Signal Support
- Fence
- Mailbox
- Other Post, Pole or Support
- Other Fixed Object (wall, building, tunnel, etc.)
- Unknown

Rationale: Needed for uniformity in reported motor vehicle crash statistics, understanding crash causation, and identifying possible crash avoidance countermeasures. For analytic purposes it may be desirable to collect and use information about subsequent events, some of which may be harmful. See **Sequence of Events (V20)**.

C7. Location of First Harmful Event Relative to the Trafficway

Definition: The location of the first harmful event as it relates to its position within or outside the trafficway. See Appendix E for a diagram of the trafficway.

Attributes:
- On Roadway
- Shoulder
- Median
- Roadside
- Gore
- Separator
- In Parking Lane or Zone

- Off Roadway, Location Unknown
- Outside Right-of-Way (trafficway)
- Unknown

Rationale: Important to identify highway geometric deficiencies.

C8. Manner of Crash/Collision Impact

Definition: The identification of the manner in which two motor vehicles in transport initially came together without regard to the direction of force. This data element refers only to crashes where the first harmful event involves a collision between two motor vehicles in transport. See Appendix F for a diagram of the manner of collision.

Attributes:
- Front to rear
- Front to front
- Angle
- Sideswipe, same direction
- Sideswipe, opposite direction
- Rear to side
- Rear to rear
- Other
- Unknown

Rationale: Important for evaluation of occupant injuries and structural defects. This data element can be used in conjunction with **Motor Vehicle Maneuver/Action (V18)** to describe the crash.

C9. Source of Information

Definition: Affiliation of the person completing the crash report.

Attributes:
- Source of Information:
  - Law Enforcement Agency Identifier
  - Motorist

Rationale: Important for quality control and identification purposes. The law enforcement reporting agency identifier is critical to report SAFETYNET crashes.

C10. Weather Conditions

Definition: The prevailing atmospheric conditions that existed at the time of the crash.

Attributes: **Subfield 1:**
- Weather Condition 1
  - Clear

- Cloudy
- Fog, Smog, Smoke
- Rain
- Sleet, Hail (freezing rain or drizzle)
- Snow
- Blowing Snow
- Severe Crosswinds
- Blowing Sand, Soil, Dirt
- Other
- Unknown

Subfield 2:

- Weather Condition 2
  See attributes in Subfield 1

Rationale: Important for management/administration and evaluation. Critical for prevention programs and engineering evaluations.

C11. Light Condition

Definition: The type/level of light that existed at the time of the motor vehicle crash.

Attributes:
- Daylight
- Dawn
- Dusk
- Dark-Lighted
- Dark-Not Lighted
- Dark-Unknown Lighting
- Other
- Unknown

Rationale: Important for management/administration and evaluation. Critical for prevention programs and engineering evaluations.

C12. Roadway Surface Condition

Definition: The roadway surface condition at the time and place of a crash.

Attributes:
- Dry
- Wet
- Snow
- Slush
- Ice/Frost

- Water (standing, moving)
- Sand
- Mud, Dirt, Gravel
- Oil
- Other
- Unknown

Rationale: Important to identify and correct high wet-surface crash locations and provide information for setting coefficient of pavement friction standards. Critical for prevention programs and engineering evaluations.

C13. Contributing Circumstances, Environment

Definition: Apparent environmental conditions which may have contributed to the crash.

Attributes: **Subfield 1:**

- Environmental Circumstances 1
  - None
  - Weather Conditions
  - Physical Obstruction(s)
  - Glare
  - Animal(s) in Roadway
  - Other
  - Unknown

Subfield 2:

- Environmental Circumstances 2
  See attributes for Subfield 1

Subfield 3:

- Environmental Circumstances 3
  See attributes for Subfield 1

Rationale: Important to determine existence of unusual conditions that could be useful in determining the need for additional traffic control devices or geometric improvements. (Pedestrians and pedalcyclists are covered in traffic units.)

C14. Contributing Circumstances, Road

Definition: Apparent condition of the road which may have contributed to the crash.

Attributes: **Subfield 1:**

- Road Circumstances 1
  - None
  - Road Surface Condition (wet, icy, snow, slush, etc.)

- Debris
- Rut, Holes, Bumps
- Work Zone (construction/maintenance/utility)
- Worn, Travel-Polished Surface
- Obstruction in Roadway
- Traffic Control Device Inoperative, Missing, or Obscured
- Shoulders (none, low, soft, high)
- Non-Highway Work
- Other
- Unknown

Subfield 2:

■ Road Circumstances 2
See attributes in Subfield 1

Subfield 3:

■ Road Circumstances 3
See attributes in Subfield 1

Rationale: Important to determine highway maintenance and possible engineering needs.

C15. Relation to Junction

Definition: The location of the first harmful event in relation to a junction. See Appendices G and H.

Attributes: **Subfield 1:**

■ Junction

- Non-Junction
- Intersection
- Intersection-Related
- Entrance/Exit Ramp
- Railway Grade Crossing
- Crossover-Related
- Driveway/Alley Access Related
- Shared-Use Path or Trail
- Acceleration/Deceleration Lane
- Through Roadway
- Other location not listed above within an interchange area (median, shoulder and roadside)
- Unknown

Subfield 2:

- Within Interchange Area
  - No
  - Yes
  - Unknown

Rationale: Important for site-specific safety studies to identify locations with actual or potential problems.

C16. Type of Intersection

Definition: An intersection consists of two or more roadways that intersect at the same level. See Appendix H for a diagram of the intersection.

Attributes:
- Not at Intersection
- Four-Way Intersection
- T-Intersection
- Y-Intersection
- Traffic Circle
- Roundabout
- Five-Point, or More

Rationale: Important for site-specific safety studies to identify actual or potential safety problem locations.

C17. School Bus-Related

Definition: Indicates whether a school bus or motor vehicle functioning as a school bus for a school-related purpose is involved in the crash. The "school bus," with or without a passenger on board, must be directly involved as a contact motor vehicle or indirectly involved as a non-contact motor vehicle (children struck when boarding or alighting from the school bus, two vehicles colliding as the result of the stopped school bus, etc.).

Attributes:
- No
- Yes, School Bus Directly Involved
- Yes, School Bus Indirectly Involved

Rationale: Important in determining where and how school children are at the greatest risk of injury when being transported by school bus and the extent to which school bus operations affect overall traffic safety.

C18. Work Zone-Related (Construction/Maintenance/Utility)

Definition: A crash that occurs in or related to a construction, maintenance, or utility work zone, whether or not workers were actually present at the time of the crash. "Work zone-related" crashes may also include those involving motor vehicles

slowed or stopped because of the work zone, even if the first harmful event occurred before the first warning sign. See Appendix I for a diagram of the work zone area.

Attributes: **Subfield 1:**

- Was the crash in or near a construction, maintenance, or utility work zone?
  - Yes (complete Subfields 2-5)
  - No
  - Unknown

Subfield 2:

- Location of the Crash:
  - Before the First Work Zone Warning Sign
  - Advance Warning Area
  - Transition Area
  - Activity Area
  - Termination Area

Subfield 3:

- Type of Work Zone:
  - Lane Closure
  - Lane Shift/Crossover
  - Work on Shoulder or Median
  - Intermittent or Moving Work
  - Other

Subfield 4:

- Workers Present:
  - No
  - Yes
  - Unknown

Subfield 5:

- Law Enforcement Present:
  - No
  - Officer Present
  - Law Enforcement Vehicle Only Present

Rationale: Important to assess the impact on traffic safety of various types of on-highway work activity, to evaluate Traffic Control Plans used at work zones, and to make adjustments to the Traffic Control Plans for the safety of workers and the traveling public. This data element needs to be collected at the scene because

work zones are relatively short-term or moving operations that are not recorded in permanent road inventory files.

Vehicle Data Elements

The motor vehicle data elements describe the characteristics, events, and consequences of the motor vehicle(s) involved in the crash.

V1. Motor Vehicle Identification Number (VIN)

Definition: A unique combination of alphanumeric characters assigned to a specific motor vehicle that is designated by the manufacturer.

Attribute:
- Manufacturer assigned number (permanently affixed to the motor vehicle)

Rationale: Important to identify specific motor vehicle design characteristics and occupant protection systems for effectiveness evaluations.

V2. Motor Vehicle Unit Type and Number

Definition: Motor vehicle unit type and number assigned to uniquely identify each motor vehicle involved in the crash. This number is not assigned to pedestrians or bicyclists. (See **Non-Motorist Number (P21)**.)

Attributes: **Subfield 1:**

- Type:
  - Motor Vehicle in Transport
  - Parked Motor Vehicle
  - Working Vehicle/Equipment

Subfield 2:

- Number
  - Sequential number

Rationale: Uniquely identifies each motor vehicle unit involved in the crash. Permits occupants to be assigned to the appropriate motor vehicle.

V3. Motor Vehicle Registration State and Year

Definition: The State, commonwealth, territory, Indian nation, U.S. Government, foreign country, etc., issuing the registration plate and the year of registration as indicated on the registration plate displayed on the motor vehicle. For foreign countries, MMUCC requires only the name of the country. Border States may want to collect the name of individual Canadian Provinces or Mexican states.

Attributes:
- State Identifier

  State, foreign country, U.S. government, Indian Nation, etc.
- Year of Motor Vehicle Registration (YYYY)

Rationale: This element is critical in providing linkage between the crash and motor vehicle registration files to access the motor vehicle identification number.

V4. Motor Vehicle License Plate Number

Definition: The alphanumeric identifier or other characters, exactly as displayed, on the registration plate or tag affixed to the motor vehicle. For combination trucks, motor vehicle plate number is obtained from the power unit or tractor.

Attribute:
- Alphanumeric Identifier

  Assigned by the State, foreign country, U.S. Government, or Indian Nation.

Rationale: Critical for linkage between the crash and motor vehicle registration files.

V5. Motor Vehicle Make

Definition: The distinctive (coded) name applied to a group of motor vehicles by a manufacturer.

Attribute:
- Name

  Assigned by motor vehicle manufacturer.

Rationale: Important for use in identifying motor vehicle make, for evaluation, research and crash comparison purposes.

V6. Motor Vehicle Model Year

Definition: The year which is assigned to a motor vehicle by the manufacturer.

Attribute:
- Model Year

  YYYY as assigned by motor vehicle manufacturer
  (obtain from the vehicle registration).

Rationale: Important for use in identifying motor vehicle model year for evaluation, research, and crash comparison purposes.

V7. Motor Vehicle Model

Definition: The manufacturer-assigned code denoting a family of motor vehicles (within a make) that have a degree of similarity in construction, such as body, chassis, etc.

Attribute:
- Code for model

  Assigned by motor vehicle manufacturer
  (obtain from the vehicle registration).

Rationale: Important for use in identifying the motor vehicle model for evaluation, research, and crash comparison purposes.

V8. Motor Vehicle Body Type Category

Definition: The category indicating the general configuration or shape of a motor vehicle

distinguished by characteristics such as number of doors, rows of seats, windows, or roof line. Personal conveyances – such as skateboards, motorized toy cars, and wheelchairs are not considered motor vehicles.

Attributes:
- Passenger Car
- (Sport) Utility Vehicle
- Passenger Van
- Cargo Van (10,000 lbs or less)
- Pickup
- Motor Home
- School Bus
- Transit Bus
- Motor Coach
- Other Bus
- Motorcycle
- Moped
- Low Speed Vehicle
- All Terrain Vehicle (ATV)
- Snowmobile
- Other Light Trucks (10,000 lbs or less)
- Medium/Heavy Trucks (more than 10,000 lbs)
- Other (e.g., farm equipment, heavy machinery)

Rationale: Important to identify the specific type of motor vehicle involved in the crash for evaluation and comparison purposes.

V9. Total Occupants in Motor Vehicle

Definition: The total number of injured and uninjured occupants in this motor vehicle involved in the crash, including persons in or on the motor vehicle at the time of the crash.

Attribute:
- Total number of injured and uninjured occupants including the driver.

Rationale: Important for the officer at the scene to indicate how many people (injured and uninjured) are involved for reporting purposes. Useful for evaluating the effectiveness of countermeasures that prevent or reduce injury and injury severity.

V10. Special Function of Motor Vehicle in Transport

Definition: The type of special function being served by this vehicle regardless of whether the function is marked on the vehicle.

Attributes:
- No Special Function
- Taxi
- Vehicle Used as School Bus
- Vehicle Used as Other Bus
- Military
- Police
- Ambulance
- Fire Truck
- Unknown

Rationale: Important to evaluate the outcome of vehicles used for special uses that are involved in crashes.

V11. Emergency Motor Vehicle Use

Definition: Indicates operation of any motor vehicle that is legally authorized by a government authority to respond to emergencies with or without the use of emergency warning equipment, such as a police vehicle, fire truck, or ambulance while actually engaged in such response.

Select "Yes" only if the motor vehicle involved in the crash was on an emergency response, regardless of whether the emergency warning equipment was in use.

Attributes:
- No
- Yes
- Unknown

Rationale: Driver behavior related to emergency vehicle response is an emerging national issue. This is true for both operators of emergency vehicles and operators of vehicles in the vicinity of an emergency vehicle engaged in a response. It is the intent of this element to gather information that will guide development of training or other countermeasures to reduce the number of crashes involving emergency vehicle response.

V12. Motor Vehicle Posted/Statutory Speed Limit

Definition: The posted/statutory speed limit for the motor vehicle at the time of the crash. The authorization may be indicated by the posted speed limit, blinking sign at construction zones, etc.

Attributes:
- Posted/Statutory Value (miles per hour)
- Not Applicable
- Unknown

Rationale: Important for evaluation purposes (even though the speed of the motor vehicle at the time of the crash may differ significantly from the authorized speed limit).

V13. Direction of Travel Before Crash

Definition: The direction of a motor vehicle's travel on the roadway before the crash. Notice that this is not a compass direction, but a direction consistent with the designated direction of the road. For example, the direction of a State-designated north-south highway must be either northbound or southbound even though a motor vehicle may have been traveling due east as a result of a short segment of the highway having an east-west orientation.

Attributes:
- Northbound
- Southbound
- Eastbound
- Westbound
- Not on Roadway
- Unknown

Rationale: Important to indicate direction the motor vehicle was traveling before the crash for evaluation purposes.

V14. Trafficway Description

Definition: Indication of whether or not the trafficway for this vehicle is divided and whether it serves one-way or two-way traffic. (A divided trafficway is one on which roadways for travel in opposite directions are physically separated by a median. See Appendix E for diagram of the trafficway.)

Attributes:
- Two-Way, Not Divided
- Two-Way, Not Divided, With a Continuous Left Turn Lane
- Two-Way, Divided, Unprotected (Painted >4 Feet) Median
- Two-Way, Divided, Positive Median Barrier
- One-Way Trafficway
- Unknown

Rationale: Used in classifying crashes as well as identifying the environment of a particular crash. Note that the data must be in a road inventory file or collected by the reporting officer at the scene. It is not readily derived from other road data such as classification or route. Important to guide future trafficway design and traffic control.

V15. Total Lanes in Roadway

Definition: Total number of lanes in the roadway on which this motor vehicle was traveling.

Attributes:
- For undivided highways:
  - Enter the total through lanes in both directions, excluding designated turn lanes.
- For divided highways:

- Enter the total through lanes for the roadway on which the motor vehicle under consideration was traveling. See Appendix E for diagram of the trafficway.

Rationale: Used in studying roadway safety issues as well as identifying the environment of a particular crash.

V16. Roadway Alignment and Grade

Definition: The geometric or layout and inclination characteristics of the roadway in the direction of travel for this vehicle.

Attributes: **Subfield 1:**

- Horizontal Alignment:
  - Straight
  - Curve Left
  - Curve Right

Subfield 2:

- Grade:
  - Level
  - Hillcrest
  - Uphill
  - Downhill
  - Sag (bottom)

Rationale: Important to document the horizontal alignment and grade of the roadway as it relates to this specific vehicle involved in the crash for the purpose of evaluating vehicles that run-off-road, rollover, or are runaways.

V17. Traffic Control Device Type

Definition: The type of traffic control device (TCD) applicable to this motor vehicle at the crash location.

Attributes: **Subfield 1:**

- Type TCD:
  - No Controls
  - Person (including flagger, law enforcement, crossing guard, etc.)
  - Traffic Control Signal
  - Flashing Traffic Control Signal
  - School Zone Sign/Device
  - Stop Sign
  - Yield Sign

- Warning Sign
- Railway Crossing Device
- Other
- Unknown

Subfield 2:

- Inoperative/Missing?
  - Yes
  - No
  - Unknown

Rationale: This element needs to be collected at the scene because the presence of specific devices is better verified at the time of the crash. It is also important for ascertaining the relationship between the use of various traffic control devices (TCD) and crashes and identifying the need for upgraded TCDs at specific crash locations.

V18. Motor Vehicle Maneuver/Action

Definition: The controlled maneuver for this motor vehicle prior to the beginning of the sequence of events.

Attributes:
- Movements Essentially Straight Ahead
- Backing
- Changing Lanes
- Overtaking/Passing
- Turning Right
- Turning Left
- Making U-Turn
- Leaving Traffic Lane
- Entering Traffic Lane
- Slowing
- Negotiating a Curve
- Parked
- Stopped in Traffic
- Other
- Unknown

Rationale: Important for evaluation purposes, particularly when combined with sequence of events.

V19. Area(s) of Impact

Definition: The area of the motor vehicle that received the initial impact and the area that was most damaged in a crash.

Attributes: **Subfield 1:**

- Area of Initial Impact:
  - Non-Collision
  - 12-point Clock Diagram (Appendix J)
  - Top (roof)
  - Undercarriage
  - Unknown

Subfield 2:

- Most Damaged Area:

  See attributes in Subfield 1

Rationale: Important for use in evaluating injury severity in relation to motor vehicle impact and crash severity.

V20. Sequence of Events

Definition: The events in sequence related to this motor vehicle, including both non-collision as well as collision events. For examples, refer to Appendix L.

Attributes: **Subfield 1:**

- First Event
- Non-Collision:
  - Overturn/Rollover
  - Fire/Explosion
  - Immersion
  - Jackknife
  - Cargo/Equipment Loss or Shift
  - Equipment Failure (blown tire, brake failure, etc.)
  - Separation of Units
  - Ran Off Roadway Right
  - Ran Off Roadway Left
  - Cross Median
  - Cross Centerline
  - Downhill Runaway
  - Fell/Jumped From Motor Vehicle
  - Reentering Roadway

- Thrown or Falling Object
- Other Non-Collision

- Collision With Person, Motor Vehicle, or Non-Fixed Object:
  - Pedestrian
  - Pedalcycle
  - Railway Vehicle (train, engine)
  - Animal
  - Motor Vehicle In Transport
  - Parked Motor Vehicle
  - Struck By Falling, Shifting Cargo or Anything Set in Motion By Motor Vehicle
  - Work Zone/Maintenance Equipment
  - Other Non-Fixed Object
- Collision With Fixed Object:
  - Impact Attenuator/Crash Cushion
  - Bridge Overhead Structure
  - Bridge Pier or Support
  - Bridge Rail
  - Cable Barrier
  - Culvert
  - Curb
  - Ditch
  - Embankment
  - Guardrail Face
  - Guardrail End
  - Concrete Traffic Barrier
  - Other Traffic Barrier
  - Tree (standing)
  - Utility Pole/Light Support
  - Traffic Sign Support
  - Traffic Signal Support
  - Other Post, Pole, or Support
  - Fence
  - Mailbox
  - Other Fixed Object (wall, building, tunnel, etc.)
  - Unknown

Subfield 2:

- Second Event
  See attributes in Subfield 1

Subfield 3:

- Third Event
  See attributes in Subfield 1

Subfield 4:

- Fourth Event
  See attributes in Subfield 1

Rationale: Important for use in conjunction with most harmful event and motor vehicle maneuver to generate complete information about the crash.

V21. Most Harmful Event for this Motor Vehicle

Definition: Event that resulted in the most severe injury or, if no injury, the greatest property damage involving this motor vehicle.

Attributes:

- Non-Collision:
  - Overturn/Rollover
  - Fire/Explosion
  - Immersion
  - Jackknife
  - Cargo/Equipment Loss or Shift
  - Fell/Jumped From Motor Vehicle
  - Thrown or Falling Object
  - Other Non-Collision
- Collision With Person, Motor Vehicle, or Non-Fixed Object:
  - Pedestrian
  - Pedalcycle
  - Railway Vehicle (train, engine)
  - Animal
  - Motor Vehicle in Transport
  - Parked Motor Vehicle
  - Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle
  - Work Zone / Maintenance Equipment
  - Other Non-Fixed Object

- Collision With Fixed Object:
  - Impact Attenuator/Crash Cushion
  - Bridge Overhead Structure
  - Bridge Pier or Support
  - Bridge Rail
  - Cable Barrier
  - Culvert
  - Curb
  - Ditch
  - Embankment
  - Guardrail Face
  - Guardrail End
  - Concrete Traffic Barrier
  - Other Traffic Barrier
  - Tree (standing)
  - Utility Pole/Light Support
  - Traffic Sign Support
  - Traffic Signal Support
  - Fence
  - Mailbox
  - Other Post, Pole, or Support
  - Other Fixed Object (wall, building, tunnel, etc.)
- Unknown

Rationale: Important for use in conjunction with the **Sequence of Events (V20)** to generate complete information about the crash.

V22. Bus Use

Definition: This element describes the common type of bus service this vehicle was being used as at the time of the crash. Buses are any motor vehicle with seats to transport nine (9) or more people, including the driver's seat. This element does not include vans which are owned and operated for personal use. Refer to the Glossary for attribute definitions.

Attributes:
- Not a Bus
- School
- Transit/Commuter
- Intercity
- Charter/Tour

- Shuttle

Rationale: This data element provides additional information to evaluate the outcome of motor vehicles used as buses that are involved in crashes.

V23. Hit and Run

Definition: Refers to cases where the vehicle, or the driver of the vehicle, in transport is a contact vehicle in the crash and departs the scene without stopping to render aid or report the crash.

Attributes:
- No, Did Not Leave Scene
- Yes, Driver or Car and Driver Left Scene

Rationale: Important for uniformity, quality control and identification purposes in reported motor vehicle crash statistics.

V24. Extent of Damage / Removal

Definition: Estimation of total damage to motor vehicle from crash. Disabling damage implies damage to the motor vehicle that is sufficient to require the motor vehicle to be towed or carried from the scene. **Towed Due to Disabling Damage** identifies whether a vehicle involved in a crash is removed from the scene. "Yes" is used for vehicles towed due to ***disabling*** damage in the crash. "No" is used for those that are driven from the scene or towed for other reasons (i.e., the driver is arrested or without required license, vehicle is placed out of service because it is unsafe to drive or impounded, etc.). Towing assistance without removal of the vehicle from the scene, such as pulling a vehicle out of a ditch, is not considered to be "towed" for the purposes of this element.

NOTE: For states requiring a more detailed set of damage description attributes on the crash report (e.g.; moderate/severe, severe, very severe), **Towed Due to Disabling Damage** is important to specifically identify if the vehicle was towed due to disabling vehicle damage.

Attributes: **Subfield 1:**

- Extent of Damage
  - No Damage
  - Minor Damage
  - Functional Damage
  - Disabling Damage
  - Unknown

Subfield 2:

- Towed Due to Disabling Damage
  - Yes
  - No

Rationale: Standardizing the extent of damage a motor vehicle sustains in a crash is essential to consistent collection of crash data. Towed Due to Disabling Damage is important to identifying non-injury, "tow-away" crashes involving any vehicle towed due to damage sustained in the crash. This information is vital to Federal Motor Carrier Safety Administration in their selection criteria for truck and bus crashes.

V25. Contributing Circumstances, Motor Vehicle

Definition: Pre-existing motor vehicle defects or maintenance conditions that may have contributed to the crash.

Attributes:
- None

Subfield 1:

- Motor Vehicle Circumstance 1:
  - Brakes
  - Exhaust System
  - Body, Doors
  - Steering
  - Power Train
  - Suspension
  - Tires
  - Wheels
  - Lights (head, signal, tail)
  - Windows/Windshield
  - Mirrors
  - Wipers
  - Truck Coupling / Trailer Hitch / Safety Chains
  - Other
  - Unknown

Subfield 2:

- Motor Vehicle Circumstance 2
  See attributes in Subfield 1

Rationale: Important for determining the significance of pre-existing problems, including equipment and operation, in motor vehicles involved in crashes that could be useful in determining the need for improvements in manufacturing and consumer alerts.

V26. Motor Carrier Identification **

Definition: The identification number, name and address of an individual, partnership or corporation responsible for the transportation of persons or property as indicated on the shipping manifest.

Attributes: **Subfield 1:**

- US DOT Number
  (7 digits, right justified)

Subfield 2:

- If no US DOT Number, State Issued Identification Number and State name

Subfield 3:

- Name

Subfield 4:

- Street Address
  - Street or P.O. Box
  - City
  - State (two-letter code)
  - Zip Code
  - Country

Subfield 5:

- Commercial/Non-Commercial
  - Interstate Carrier
  - Intrastate Carrier
  - Not in Commerce/Government
  - Not in Commerce/Other Truck

Rationale: (**Required by the Federal Motor Carrier Safety Administration CFR 350.201.) The Federal Motor Carrier Safety Administration (FMCSA) has the authority to fine and sanction unsafe interstate (and some intrastate) truck and bus companies. A key way to identify potentially unsafe motor carriers is to collect crash data by the identification number, name, and address of the company. The street address allows FMCSA to visit carriers to conduct review of compliance with Federal Motor Carrier Safety Regulations and provides a crosscheck for the correct identity of the carrier. The identification number (found on the power unit, and assigned by the U.S. DOT or by a State) is a key element for carrier identification in the FMCSA databases for crashes and other carrier information. This data element is collected at the scene to meet FMCSA 90 day reporting requirements.

V27. Gross Vehicle Weight Rating / Gross Combination Weight Rating**

Definition: The Gross Vehicle Weight Rating (GVWR) is the amount recommended by the manufacturer as the upper limit to the operational weight for a motor vehicle and any cargo (human or other) to be carried. The Gross Combination Weight Rating (GCWR) is the sum of all GVWRs for each unit in a combination unit motor vehicle. Thus for single-unit trucks there is no difference between the GVWR and the GCWR. For combination trucks (truck tractors pulling a single semi-trailer, truck tractors pulling double or triple trailers, trucks pulling trailers, and trucks pulling other motor vehicles) the GCWR is the total of the GVWRs of all units in the combination.

Attributes:
- Not Applicable
- 10,000 lbs or less
- 10,001-26,000 lbs
- More than 26,000 lbs

Rationale: (**Required by the Federal Motor Carrier Safety Administration CFR 350.201.) The Federal Motor Carrier Safety Administration (FMCSA) imposes certain regulations on all single or combination-unit trucks that have a Gross Combination Weight Rating (GCWR) of more than 10,000 lbs. Additional regulations are imposed on all motor vehicles with GCWRs of more than 26,000 lbs. This data element is collected at the scene because FMCSA requires reporting within 90 days.

V28. Vehicle Configuration **

Definition: Indicates the general configuration of this motor vehicle. (Refer to Appendix K for chart displaying types of truck configurations.)

Attributes:
- Vehicle 10,000 pounds or less placarded for hazardous materials
- Single-Unit Truck (2-axle and GVWR more than10,000 lbs)
- Single-Unit Truck (3 or more axles)
- Truck Pulling Trailer(s)
- Truck Tractor (bobtail)
- Truck Tractor/Semi-Trailer
- Truck Tractor/Double
- Truck Tractor/Triple
- Truck More Than 10,000 lbs, Cannot Classify
- Bus/Large Van (seats for 9-15 occupants, including driver)
- Bus (seats for more than 15 occupants, including driver)
- Unknown

Rationale: (**Required by the Federal Motor Carrier Safety Administration CFR 350.201.) This data element provides information about the general configuration of the motor vehicle that is important to evaluate the types of

motor vehicles that have the most crashes and the effectiveness of various safety countermeasures. This data element is collected at the scene because FMCSA requires reporting within 90 days.

V29. Cargo Body Type**

Definition: The type of body for buses and trucks more than 10,000 lbs GVWR.

Attributes:
- No Cargo Body – (bobtail, light motor vehicle with hazardous materials [HM] placard, etc.)
- Bus
- Van/Enclosed Box
- Grain/chips/gravel
- Pole-Trailer
- Cargo Tank
- Log
- Intermodal Container Chassis
- Vehicle Towing Another Vehicle
- Flatbed
- Dump
- Concrete Mixer
- Auto Transporter
- Garbage/Refuse
- Other
- Not Applicable – (motor vehicle 10,000 lbs or less not displaying HM placard)
- Unknown

Rationale: (**Required by the Federal Motor Carrier Safety Administration CFR 350.201.) This data element provides additional information about the motor vehicle, including all major cargo body types. The information it provides can be important in helping FMCSA make decisions on regulatory strategies for different types of motor vehicles. This data element is collected at the scene because FMCSA requires reporting within 90 days.

V30. Hazardous Materials (Cargo Only)**

Definition: Indication of whether or not the motor vehicle had a hazardous materials placard as required by Federal/State regulations, and whether or not harzardous materials were released.

Attributes: **Subfield 1:**

- Did this motor vehicle display a hazardous materials (HM) placard?
  - Yes (go to Subfield 2)

- No
- Not Applicable

Subfield 2:

- If Subfield 1 answer is "Yes," record from the hazardous materials placard:
  - (1) • 4-digit Hazardous Materials ID number or name taken from the middle of the diamond or from the rectangular box; and
  - (2) • 1-digit Class number from bottom of diamond

Subfield 3:

- Release of hazardous materials from the package (cargo compartment):

  Hazardous materials that were released from the **package (cargo compartment)** should be documented whether or not the motor vehicle displayed a placard.

  - Yes
  - No
  - Not Applicable

Rationale: (**currently required by the Federal Motor Carrier Safety Administration CFR 350.201.) FMCSA devotes special attention to motor carriers that transport hazardous materials (HM), including calculating risk assessments, determining response methods, imposing tighter regulations and conducting compliance reviews on a higher percentage of HM carriers. Getting good data on crashes involving trucks carrying HM and whether HM are spilled during the crashes helps FMCSA focus law enforcement efforts. This data element is collected at the scene because FMCSA requires reporting within 90 days.

Person Data Elements

The person data elements describe the characteristics, actions, and consequences to the persons involved in the crash.

Level 1: All Persons Involved

P1. Date of Birth

Definition: The year, month, and day of birth, (or age to be used only when date of birth cannot be obtained), of the person involved in a crash.

Attributes: **Subfield 1:**

- Date of Birth
  - YYYYMMDD
  - Unknown

Subfield 2:

- Age
  - AAA

Rationale: Accurate reporting of date of birth is used to assess the effectiveness of occupant protection systems for specific age groups, and to identify the need for safety programs directed toward them. This element is also critical in providing linkage between the crash, EMS, and hospital records.

P2. Sex

Definition: The sex of the person involved in the crash.

Attributes:
- Male
- Female
- Unknown

Rationale: Necessary, for example, to evaluate the effect of sex of the person involved on occupant protection systems and motor vehicle design characteristics.

P3. Person Type

Definition: Type of person involved in a crash.

Attributes:
- Motorist
  - Driver
  - Passenger
- Non-Motorist (nonoccupant of vehicle in transport):
  - Pedestrian
  - Other Pedestrian (wheelchair, person in a building, skater, personal conveyance, etc.)
  - Bicyclist
  - Other Cyclist
  - Occupant of Motor Vehicle Not in Transport (parked, etc.)
  - Occupant of a Non-Motor Vehicle Transportation Device
  - Unknown Type of Non-Motorist
- Unknown

Rationale: Need to know person type for classification purposes to evaluate specific countermeasure designed for specific people.

P4. Injury Status

Definition: The injury severity level for a person involved in crash.

Attributes:
- Fatal Injury (K)

- Nonfatal Injury
  - Incapacitating (A)
  - Non-incapacitating (B)
  - Possible (C)
- No injury (O)
- Unknown

Rationale: Necessary for injury outcome analysis and evaluation. This element is also critical in providing linkage between the crash, EMS, and hospital records.

Level 2: All Occupants

P5. Occupant's Motor Vehicle Unit Number

Definition: The unique number assigned for this crash to the motor vehicle in which this person was an occupant.

Attribute: • Number to indicate in which motor vehicle the occupant was located.

Rationale: Important to link occupants back to motor vehicles in which they were riding. Necessary, for example, to evaluate the effect motor vehicle type and specific make/model have on occupant protection effectiveness and injury status.

P6. Seating Position

Definition: The location for this occupant in, on, or outside of the motor vehicle prior to the first event in the sequence of events. See Appendix N.

Attributes: **Subfield 1:**

- Row:
  - Front
  - Second
  - Third
  - Fourth
  - Other Row (bus, 15 passenger van, etc.)
  - Unknown

Subfield 2:

- Seat:
  - Left (usually the motor vehicle or motorcycle driver except for postal vehicles and some foreign vehicles)
  - Middle
  - Right
  - Other
  - Unknown

Subfield 3:

- Other Location:
  - Not Applicable
  - Sleeper Section of Cab (truck)
  - Other Enclosed Cargo Area
  - Unenclosed Cargo Area
  - Trailing Unit
  - Riding on Motor Vehicle Exterior (non-trailing unit)
  - Unknown

Rationale: Without known seating position for each person in the motor vehicle, it is not possible to fully evaluate, for example, the effect of occupant protection programs.

P7. Restraint Systems / Helmet Use

Definition: The restraint equipment in use by the occupant, or the helmet use by a motorcyclist, at the time of the crash.

Attributes: **Subfield 1:**

- Restraint Systems
  - Not Applicable
  - None Used—Motor Vehicle Occupant
  - Shoulder and Lap Belt Used
  - Shoulder Belt Only Used
  - Lap Belt Only Used
  - Restraint Used—Type Unknown
  - Child Restraint System—Forward Facing
  - Child Restraint System—Rear Facing
  - Booster Seat
  - Child Restraint Type Unknown
  - Other
  - Unknown

Subfield 2:

- Helmet Use
  - DOT-Compliant Motorcycle Helmet
  - Other Helmet
  - No Helmet

Rationale: Proper classification of the use of available occupant restraint systems and helmet use is vital to evaluating the effectiveness of such equipment.

P8. Air Bag Deployed

Definition: Deployment status of an air bag relative to the position in the vehicle for this occupant. Refer to Appendix M for a diagram of air bag types.

Attributes:
- Not Applicable
- Not Deployed
- Deployed-Front
- Deployed-Side
- Deployed-Other (knee, air belt, etc.)
- Deployed-Combination
- Deployed-Curtain
- Deployment Unknown

Rationale: Necessary to evaluate the effectiveness of air bags and other occupant protection equipment, especially at a time when air bags are becoming standard equipment.

P9. Ejection

Definition: Occupant completely or partially thrown from the interior of the motor vehicle, excluding motorcycles, as a result of a crash.

Attributes:
- Not Ejected
- Ejected, Partially
- Ejected, Totally
- Not Applicable
- Unknown

Rationale: Occupant protection systems prevent or mitigate ejections to various degrees. Analyses of the effectiveness of safety belts depend on information from this data element.

Level 3: All Drivers

P10. Driver License Jurisdiction

Definition: The geographic or political entity issuing a driver license. Includes the States of the United States (including the District of Columbia and outlying areas), Indian Nations, U.S. Government, Canadian Provinces, and Mexican States (including the Distrito Federal), as well as other jurisdictions.

Attributes:
- Not Applicable

- Not Licensed
- State
- Indian Nation
- U.S. Government
- Canadian Province
- Mexican State
- International License (other than Mexico, Canada)
- Unknown

Rationale: Necessary to evaluate the effectiveness of various licensing laws. This element is also critical in providing linkage between the crash and driver license files at the State level.

P11. Driver License Number, Class, CDL and Endorsements **

Definition: A unique set of alphanumeric characters assigned by the authorizing agent issuing a driver license to the individual.

Attributes: **Subfield 1:**

- License Number – Alphanumeric identifier assigned by the authorizing jurisdiction (State, foreign country, U.S. government, Indian Nation, etc.).

Subfield 2:

- Class
  This indicates the type of driver's license issued by the State and the type of motor vehicle the driver is qualified to drive.
  - None
  - Not Applicable
  - Class A

    Any combination of vehicles with a gross combination weight rating (GCWR) of 26,001 pounds or more provided the GVWR of the vehicle(s) being towed is in excess of 10,000 pounds.
  - Class B

    Any single vehicle with a GVWR of 26,001 or more pounds, or any such vehicle towing a vehicle not in excess of 10,000 pounds GVWR.
  - Class C

    Any single vehicle, or combination of vehicles, that does not meet the definition of Class A or Class B, but is either designed to transport 16 or more passengers, including the driver, or is used in the transportation of materials found to be hazardous which require the motor vehicle to be placarded.
  - Regular Driver's License Class

    Any regular or standard driver's license issued for the operation of automobiles and light trucks by States that separate these vehicles from

Class "C". Other class designation codes such as "D", "R" and others may be used by States to indicate a regular driver's license class.

- Class M

  Motorcycles, Mopeds, Motor-Driven Cycles

Subfield 3:

- Commercial Driver License (CDL)

  This indicates whether the driver's license is a commercial driver license (CDL). Also, this information is important to separate the non-commercial licenses included by some States in Class C with the commercial licenses.

  - No
  - Yes

Subfield 4:

- Endorsements

  This indicates any endorsements to the driver's license, both commercial and non-commercial.

  - None/Not Applicable
  - T - Double/Triple Trailers
  - P - Passenger
  - N - Tank Vehicle
  - H - Hazardous Materials
  - X - Combination of Tank Vehicle and Hazardous Materials
  - S - School
  - Other non-commercial license endorsements (*e.g.;* motorcycle, etc.)

P12. Driver Name

Definition: The full name of the individual driver.

Attributes: • Name

Rationale: This data element should be collected to corroborate the driver license number and to facilitate linkage when names are available in the health and insurance files. When possible, obtain this information from the driver license (via a bar code or "smart" license or via online linkage).

P13. Driver Actions at Time of Crash

Definition: The actions by the driver that may have contributed to the crash. This data element is based on the judgment of the law enforcement officer investigating the crash and need not match **Violation Codes (P14)**.

Attributes: **Subfield 1:**

- Driver Action 1

- No Contributing Action
- Ran Off Roadway
- Failed to Yield Right-of-Way
- Ran Red Light
- Ran Stop Sign
- Disregarded Other Traffic Sign
- Disregarded Other Road Markings
- Exceeded Posted Speed Limit
- Drove Too Fast For Conditions
- Improper Turn
- Improper Backing
- Improper Passing
- Wrong Side or Wrong Way
- Followed Too Closely
- Failed to Keep in Proper Lane
- Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner
- Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway, etc.
- Over-Correcting/Over-Steering
- Other Contributing Action
- Unknown

Subfield 2:

- Driver Action 2
  See attributes in Subfield 1

Subfield 3:

- Driver Action 3
  See attributes in Subfield 1

Subfield 4:

- Driver Action 4
  See attributes in Subfield 1

Rationale: Important for evaluating the effect that dangerous driver behavior has on crashes.

P14. Violation Codes

Definition: All motor vehicle-related violations codes, if any, which apply to this driver.

Attributes: **Subfield 1:**

- Violation Code 1
  - No Violation
  - (Violation Code)
  - Unknown

Subfield 2:

- Violation Code 2
  See codes in Subfield 1

Rationale: Important for evaluation of safety laws and enforcement practices. This information is not available from the driver license file.

P15. Driver Distracted By

Definition: Distractions which may have influenced the driver performance. The distractions can be inside the motor vehicle (internal) or outside the motor vehicle (external).

Attributes:
- Not Distracted
- Electronic Communication Device
- Other Electronic Device (navigation device, DVD player, etc.)
- Other Inside the Vehicle
- External Distraction (outside the vehicle)
- Unknown

Rationale: Important for evaluating the effect that driver behavior has on crashes.

Level 4: All Drivers and Non-motorists

P16. Condition at Time of the Crash

Definition: Any relevant condition of the individual (motorist or non-motorist) that is directly related to the crash.

Attributes:
- Apparently Normal
- Physically Impaired
- Emotional (depressed, angry, disturbed, etc.)
- Ill (sick), Fainted
- Asleep or Fatigued
- Under the Influence of Medications/Drugs/Alcohol
- Other
- Unknown

Rationale: Important for evaluating the effect that fatigue, medications/alcohol/drugs, or other conditions have on the crash.

P17. Law Enforcement Suspects Alcohol Use

Definition: Driver or non-motorist involved in the crash suspected by law enforcement to have used alcohol.

Attributes:
- No
- Yes
- Unknown

Rationale: Alcohol-related crashes remain a serious traffic safety problem. Identifying crashes in which alcohol may have been involved will help evaluate the effectiveness of programs to decrease the incidence of drunk driving or to identify problem areas.

P18. Alcohol Test

Definition: Indication of the presence of alcohol by test, type, and result.

Attributes: **Subfield 1:**

- Test Status:
  - Test Not Given
  - Test Refused
  - Test Given
  - Unknown if Tested

Subfield 2:

- Type of Test:
  - Blood
  - Breath
  - Urine
  - Other

Subfield 3:

- BAC Test Result:
  - Value
  - Pending
  - Unknown

Rationale: Alcohol remains the most prevalent drug involved in motor vehicle crashes. Capturing alcohol concentration whenever a driver or non-motorist is tested will provide an accurate assessment of the role of alcohol involvement. The type of test used to obtain the alcohol concentration also is important information to collect.

P19. Law Enforcement Suspects Drug Use

Definition: Driver or non-motorist involved in the crash suspected by law enforcement to have used drugs.

Attributes:
- No
- Yes
- Unknown

Rationale: Drug-related crashes remain a serious traffic safety problem. Identifying crashes in which drugs may have been involved will help evaluate the effectiveness of programs to decrease the incidence of driving while under the influence of drugs.

P20. Drug Test

Definition: Indication of the presence of drug test, type, and result. Excludes drugs administered post-crash. See **Drug Test Result (PL3**) to document drug name and value.

Attributes: **Subfield 1:**

- Test Status:
  - Test Not Given
  - Test Refused
  - Test Given
  - Unknown if Tested

Subfield 2:

- Type of Test:
  - Blood
  - Urine
  - Other

Subfield 3:

- Drug Test Result:
  - Positive
  - Negative
  - Unknown

Rationale: Identifying drug-related crashes help develop and evaluate programs directed at reducing their involvement. Whenever evidence of other drug use is available, it should be captured.

Level 5: Non-Motorists (includes occupants of motor vehicles not in transport and occupants of non-motor vehicle transportation devices)

P21. Non-Motorist Number

Definition: The unique number assigned to the non-motorist involved in the crash.

Attribute:
- Sequential Number (uniquely identifying the non-motorist involved in the crash)

Rationale: Important for management/administration and evaluation. Needed to determine number and type of non-motorists involved in crash. Needed to track non-motorist action before the crash as well as injuries sustained.

P22. Non-Motorist Action/Circumstance Prior to Crash

Definition: The action of the non-motorist immediately prior to the crash and an indication of whether the non-motorist was walking/cycling to/from school.

Attributes:
- Crossing Roadway
- Waiting to Cross Roadway
- Walking/Cycling Along Roadway with Traffic (In or Adjacent to Travel Lane)
- Walking/Cycling Along Roadway Against Traffic (In or Adjacent to Travel Lane)
- Walking/Cycling on Sidewalk
- In Roadway – Other (Working, Playing, Etc.)
- Adjacent to Roadway (e.g., Shoulder, Median)
- Going to or from School (K-12)
- Working in Trafficway (Incident Response)
- Other
- None
- Unknown

Rationale: The development of effective roadway design and operation, education, and enforcement measures to accommodate pedestrians and bicyclists and prevent crashes with motor vehicles is enhanced by the collection of the actions and circumstances prior to the crash.

P23. Non-Motorist Actions/Circumstances at Time of Crash

Definition: The actions/circumstances of the non-motorist that may have contributed to the crash. This data element is based on the judgment of the law enforcement officer investigating the crash.

Attributes: **Subfield 1:**

- Non-Motorist Contributing Action/Circumstance 1
  - No Improper Action
  - Dart/Dash
  - Failure to Yield Right-Of-Way
  - Failure to Obey Traffic Signs, Signals, or Officer
  - In Roadway Improperly (Standing, Lying, Working, Playing)
  - Disabled Vehicle Related (Working on, Pushing, Leaving/Approaching)
  - Entering/Exiting Parked/Standing Vehicle
  - Inattentive (Talking, Eating, Etc.)
  - Not Visible (Dark Clothing, No Lighting, Etc.)
  - Improper Turn/Merge
  - Improper Passing
  - Wrong-Way Riding or Walking
  - Other
  - Unknown

Subfield 2:

- Non-Motorist Contributing Action/Circumstance 2
  See attributes in Subfield 1

Rationale: The development of effective roadway design and operation, education, and enforcement measures to accommodate pedestrians and cyclists and prevent crashes with motor vehicles is enhanced by the collection of the actions and circumstances at the time of the crash.

P24. Non-Motorist Location at Time of Crash

Definition: The location of the non-motorist with respect to the roadway at the time of crash.

Attributes:
- Intersection – Marked Crosswalk
- Intersection – Unmarked Crosswalk
- Intersection – Other
- Midblock – Marked Crosswalk
- Travel Lane – Other Location
- Bicycle Lane
- Shoulder/Roadside
- Sidewalk
- Median/Crossing Island

- Driveway Access
- Shared-Use Path or Trail
- Non-Trafficway Area
- Other
- Unknown

Rationale: The development of effective roadway design and operation, education, and enforcement measures to accommodate pedestrians and cyclists and prevent crashes with motor vehicles is enhanced by the collection of the location of the non-motorist at the time of crash.

P25. Non-Motorist Safety Equipment

Definition: The safety equipment(s) used by the non-motorist.

Attributes: **Subfield 1:**

- Safety Equipment Used by Non-Motorist
  - None
  - Helmet
  - Protective Pads Used (elbows, knees, shins, etc.)
  - Reflective Clothing (jacket, backpack, etc.)
  - Lighting
  - Other
  - Not Applicable
  - Unknown

Subfield 2:

- Safety Equipment Used by Non-Motorist
  See attributes in Subfield 1

Rationale: Used to evaluate effectiveness of non-motorist safety equipment. Important to calculate usage statistics for the development and evaluation of the effectiveness of educational countermeasures. The use of two sub-fields allows for the recording of two types of safety equipment, such as a helmet and reflective clothing.

P26. Unit Number of Motor Vehicle Striking Non-Motorist

Definition: Number assigned to identify the motor vehicle that struck the non-motorist in the crash.

Attribute:
- Unit number of motor vehicle that was the first motor vehicle to strike the non-motorist

Rationale: Used for tracking. Important when multiple motor vehicles are involved in the crash.

Level 6: All Injured

P27. Transported to Medical Facility By

Definition: Type and identity of unit providing transport to the medical facility receiving the patient.

Attributes: **Subfield 1:**

- Source of Transport
  - Not Transported
  - EMS Air
  - EMS Ground
  - Law Enforcement
  - Other
  - Unknown

Subfield 2:

- EMS Response Agency Identifier
  ID for EMS agency that responds

Subfield 3:

- EMS Response Run Number

Subfield 4:

- Name or Number of Medical Facility Receiving Patient

Rationale: Important to trace victim from the scene of crash through the health care system. Facilitates linkage of injured crash victims with Emergency Medical Services data files.

Derived and Linked Data Elements

These data elements should be derived from the data elements collected at scene or extracted from other databases linked to the crash database.

Crash Data Elements Derived From Collected Data

Crash-derived data elements are derived from the computerized crash scene information. Depending on the system used, they could be derived automatically by electronic data collection systems or they could be generated when the data are computerized and merged at the local, regional or State level. These derived data elements are generally not collected by law enforcement at the scene.

CD1. Crash Severity

Definition: The severity of a crash based on the most severe injury to any person involved in the crash.

Source: Derived from **Injury Status (P4)** for each person involved in the crash.

Attributes:
- Fatal Injury (K)
- Incapacitating Injury (A)
- Non-incapacitating Injury (B)
- Possible Injury (C)
- Property-Damage-Only (O)
- Unknown

Rationale: Provides a classification of the severity of the crash for the user without having to search through the person level records. This simplifies the use of the crash data file for producing reports by crash severity.

CD2. Number of Motor Vehicles Involved

Definition: The total number of motor vehicles (automobiles, single-unit trucks, truck combinations, motorcycles, etc.) that are involved in the crash.

Source: Derived by counting the number of motor vehicles involved in a crash as indicated in **Motor Vehicle Unit Type and Number (V2).**

Attribute:
- Number of motor vehicles involved

Rationale: Provides for the user a count of the number of motor vehicles involved in the crash without having to count the number of motor vehicle records. This simplifies the use of the crash data file for producing reports in which the number of involved motor vehicles is needed.

CD3. Number of Motorists

Definition: The total number of motorists refers to the count of occupants of motor vehicles in transport involved in the crash.

Source: Derived by counting the number of motorists involved in the crash as indicated in **Occupant's Motor Vehicle Unit Number (P5), Seating Position (P6)** and excluding the occupants of motor vehicles not in transport listed in **Person Type (P3).**

Attribute:
- Number of Motorists

Rationale: Provides for the user a count of the number of occupants of motor vehicles involved in the crash without having to count the number of person level records. This simplifies the use of the crash data file for producing reports or carrying out analyses in which the number of motorists is needed or in identifying crashes involving motorists.

CD4. Number of Non-Motorists

Definition: The total number of non-motorists refers to the count of non-occupants (pedestrians, pedalcyclists, etc.) or occupants of motor vehicles not in transport involved in a crash.

Source: Derived by counting the number of non-motorists involved in the crash as indicated in **Non-Motorist Number (P21).**

Attribute: • Number of Non-Motorists

Rationale: Provides for the user a count of the number of non-motorists involved in the crash without having to count the number of non-motorist records. This simplifies the use of the crash data file for producing reports in which the number of non-motorists is needed or in identifying crashes involving non-motorists.

CD5. Number of Non-Fatally Injured Persons

Definition: The total number of persons injured, excluding fatalities within 30 days, in the crash

Source: Derived by counting the number of persons with incapacitating, non-incapacitating or possible injuries resulting from the crash as indicated in **Injury Status (P4).**

Attribute: • Number of Non-Fatally Injured Persons

Rationale: Provides for the user a count of the number of persons injured in the crash without having to search through the person level records. This simplifies the use of the crash data file for producing reports in which the number of injured persons is needed.

CD6. Number of Fatalities

Definition: The total number of fatalities (motorists and non-motorists) that resulted from injuries sustained as the result of a specific motor vehicle crash. In reporting fatality statistics, a 30-day counting rule is generally used for highway safety statistics. This rule provides that only deaths that occur within 30 24-hour periods of a crash will be counted for statistical purposes.

Source: Derived by counting number of persons fatally injured in the crash from Fatal Injury (K) listed in **Injury Status (P4).**

Attribute: • Number of Fatalities (persons killed within 30 24-hour periods of a crash).

Rationale: Provides for the user a count of the number of persons fatally injured in the crash without having to search through the person level records. This simplifies the use of the crash data file for producing reports in which the number of fatalities is needed or in identifying crashes involving a fatality.

CD7. Alcohol Involvement

Definition: Law enforcement suspected or documented that at least one driver or non-motorist involved in the crash had used alcohol. Includes both alcohol use under the legal limit and at or over the legal limit.

Source: Derived from the driver and non-motorist **Law Enforcement Suspects Alcohol Use (P17), Alcohol Test (P18).**

Attributes:
- No
- Yes
- Unknown

Rationale: Provides a way for the user to easily identify alcohol-related crashes without having to search through the person level records.

CD8. Drug Involvement

Definition: Law enforcement suspected or documented that at least one driver or non-motorist involved in the crash had used drugs.

Source: Derived from the driver and non-motorist **Law Enforcement Suspects Drug Use (P19), Drug Test (P20).**

Attributes:
- No
- Yes
- Unknown

Rationale: Provides a way for the user to easily identify drug-related crashes without having to search through the person level records.

CD9. Day of Week

Definition: The day of the week on which the crash occurred.

Source: Derived from the **Crash Date and Time (C2).**

Attributes:
- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Rationale: Permits the user to quickly obtain this information for crash analyses without having to translate the date.

Person Data Elements Derived From Collected Data

This data element is easily generated after the crash data are collected at the scene and computerized. Depending on the system used, it could be derived automatically by electronic data collection systems, or it could be generated when data are merged at the local, regional and/or State level.

PD1. Age

Definition: The age in years of the person involved in the crash

Source: This data element is derived from **Date of Birth (P1)** and **Crash Date and Time (C2).**

Attribute: • Age in years

Rationale: Age is necessary to determine the effectiveness of safety countermeasures appropriate for various age groups.

Person Data Elements Obtained After Linkage to Other Data

Person "linked" data elements are obtained after linkage to crash, driver history, injury and/or other State data. When a State does not have the capability to link to other State data, as many of the person "linked" data elements as possible should be collected at the scene.

Level 3: All Drivers

PL1. Driver License Restrictions

Definition: Restrictions assigned to an individual's driver license by the license examiner.

Source: Obtained by linking **Driver License Number, Class, CDL and Endorsement (P11)** for in-State drivers to the driver license number in the driver history data system.

Attributes: **Subfield 1:**

- Driver Restrictions 1
  - None
  - Corrective Lenses
  - Mechanical Devices (special brakes, hand controls, or other adaptive devices)
  - Prosthetic Aid
  - Automatic Transmission
  - Outside Mirror
  - Limited to Daylight Only
  - Limited to Employment
  - Learner's Permit Restrictions
  - Intermediate License Restrictions
  - Limited-Other
  - CDL Intrastate Only
  - Motor Vehicles Without Air Brakes
  - Military Vehicles Only

- Except Class A Bus
- Except Class A and Class B Bus
- Except Tractor-Trailer
- Farm Waiver
- Other

Subfield 2:

- Driver Restriction 2
  See attributes for Subfield 1

Subfield 3:

- Driver Restriction 3
  See attributes for Subfield 1

Rationale: Used to identify drivers with limitations on their operators' licenses who were involved in crashes.

PL2. Driver License Status

Definition: The current status of an individual's driver license at the time of the crash.

Source: Obtained by linking **Driver License Number, Class, CDL and Endorsement (P11)** with the Driver History data file.

Attributes: **Subfield 1:**

- Type Applicable for This Person
  - Non-CDL Driver's License
  - Non-CDL Restricted Driver's License (Learner's permit, Temporary/ Limited, Graduated Driver's License, etc.)
  - Commercial Driver License (CDL)

Subfield 2:

- Status
  - Not Licensed
  - Valid License
  - Suspended
  - Revoked
  - Expired
  - Canceled or Denied
  - Disqualified (CDL)
  - Unknown

Rationale: Used to identify drivers involved in crashes who are not in compliance with the limitations of their operator's licenses.

PL3. Drug Test Result

Definition: Results of tests performed to determine presence of drugs.

Source: Obtained by linking **Driver Driver License Number, Class, CDL and Endorsement (P11), Driver Name (P12),** and **Drug Test (P20)** to the information in the data system containing test results.

Attributes: **Subfield 1:**

- Drug 1
  - Marijuana
  - Cocaine
  - Opiate
  - Amphetamine
  - PCP
  - Other Controlled Substance
  - Other Drug (excludes post-crash drugs and nicotine, Aspirin, etc.)

Subfield 2:

- Drug 2
  See attributes in Subfield 1

Subfield 3:

- Drug 3
  See attributes in Subfield 1

Subfield 4:

- Drug 4
  See attributes in Subfield 1

Rationale: Drug test results are needed to verify drug use to help develop and evaluate programs directed at reducing their involvement. Whenever evidence of "other drug" use is available, it should be captured.

Level 6: All Injured Persons

PL4. Injury Area

Definition: The primary or most obvious area of the person's body injured during the crash.

Source: Obtained by linking current identifiers for the person, such as **Date of Birth (P1), Sex (P2), Transported to Medical Facility By (P27),** and crash location information including **Crash Date and Time (C2), Crash County (C3), Crash City/Place (C4), Crash Location (C5), Source of Information (C9)**, etc., to pre-hospital EMS, emergency department, and/or hospital discharge data files.

Attributes: Area of injury as indicated in a matrix or narrative in the EMS records or as a hospital discharge code (ICD-9-CM, or ICD-10, if implemented) in

the emergency department, hospital or insurance records. The following list represents the major areas of the body subject to injury.

- Head
- Face
- Neck
- Thorax (chest)
- Abdomen and Pelvis
- Spine
- Upper Extremity
- Lower Extremity
- Unspecified

Rationale: This type of information will help to distinguish between multiple injuries in the same crash and help evaluate motor vehicle design, restraint, and safety equipment.

PL5. Injury Description

Definition: Type of injury inflicted to primary **Injury Area (PL4).**

Source: Obtained from linked crash and injury data systems (EMS, emergency department, and/or hospital discharge).

Attribute:
- Description of the injury according to data elements included in the files being linked such as the body areas and types of injuries listed on the crash and EMS records and/or the ICD-9 (or ICD-10, if implemented) codes listed on the hospital discharge records.

Rationale: Important to distinguish between multiple injuries in the same crash and help evaluate motor vehicle design, restraint and safety equipment.

Roadway Data Elements Obtained After Linkage to Other Data

Roadway data elements are generated by linking crash to roadway inventory and hardware data. The data elements used for linkage include **Crash Location (C5)** and others as necessary depending upon the type of roadway inventory system implemented by the State. When a State does not have a roadway inventory, as many of the data elements as possible should be collected at the scene.

In 2009, the **Model Minimum Inventory of Roadway Elements (MMIRE) Guideline** is expected to be published. MMIRE will complement MMUCC and will greatly expand on the number of MMUCC Roadway Data Elements.

RL1. Bridge/Structure Identification Number

Definition: A unique federal inspection/inventory identifier assigned to a bridge, underpass, overpass, or tunnel bridge/structure that is also linkable to the national bridge inventory.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attribute:
- Number as described in ***Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges,*** December 1988, Federal Highway Administration, item 8 and HPMS/90, item 77.

Rationale: Important to link specific geometric data describing the bridge for problem identification analysis and for determining the relationship between bridge structure characteristics and crashes.

RL2. Roadway Curvature

Definition: The measurement of the curvature in the roadway expressed in terms of its radius, length, and superelevation. The unit of measurement is feet.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data. See **Roadway Alignment and Grade (V16).**

Attributes:
- Not Applicable

Subfield 1:

- Curve:
  - Radius

Subfield 2:

- Length

Subfield 3:

- Superelevation

Rationale: Curve data is used in searching for and diagnosing high-crash locations. Important for determining relationship between horizontal alignment-related crashes to guide future highway design, speed limits, and driver skill training (motorcycle curve entering speed, etc.).

RL3. Grade

Definition: The inclination of the roadway, expressed in the rate of rise or fall in feet per 100 feet of horizontal distance.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data. See **Roadway Alignment and Grade (V16).**

Attributes: **Subfield 1:**

- Direction of Slope:
  - Up (+) or Down (-)

Subfield 2:

- Percent of Slope:
  - Nearest Percent of Slope

Rationale: Used to identify possible causes and countermeasures for a high crash site.

RL4. Part of National Highway System

Definition: Designation as part of the National Highway System.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes:
- Yes
- No
- Unknown

Rationale: Important to monitor highway safety on the National Highway System.

RL5. Roadway Functional Class

Definition: The character of service or function of streets or highways. The classification of rural and urban is determined by State and local officials in cooperation with each other and approved by the Federal Highway Administration, U.S. Department of Transportation.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes:
- Rural:
  - Principal Arterial-Interstate
  - Principal Arterial-Other
  - Minor Arterial
  - Major Collector
  - Minor Collector
  - Local
  - Unknown Rural
- Urban:
  - Principal Arterial-Interstate
  - Principal Arterial-Other Freeway or Expressway
  - Principal Arterial-Other
  - Minor Arterial
  - Collector
  - Local
  - Unknown Urban
- Unknown

Rationale: Important for comparing crash rates/safety experience of highways of similar design characteristics so as to identify those highways or highway sections that have abnormal rates/experience for future improvements as well as generalized

study of the highways in a region or State. Knowledge of the land use is needed in analyzing crashes as part of a network analysis.

RL6. Annual Average Daily Traffic

Definition: The average number of motor vehicles passing a point on a trafficway in a day, for all days of the year, during a specified calendar year.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes: **Subfield 1:**

- AADT Year

Subfield 2:

- AADT

Subfield 3:

- Truck (over 10,000 lbs.) Percentage

Subfield 4:

- Motorcycle Percentage

Rationale: Important to normalize crash data to account for exposure.

RL7. Widths of Lane(s) and Shoulder(s)

Definition: Widths (in feet) of the lane(s) and of the shoulder(s) where crash occurred.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes: **Subfield 1:**

- Lane Width

Subfield 2:

- Right Shoulder Width

Subfield 3:

- Left Shoulder Width

Rationale: Important to monitor the association of lane/shoulder widths and the frequency of crashes.

RL8. Width of Median

Definition: Width from travel lane edge to travel lane edge of the portion of divided highway separating the road for traffic in opposing directions where the crash occurred. If a crash occurs at a mid-block section, the median width is based on the mid-block section. If the crash occurs at an intersection, the median width is based on the median widths at the intersection.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attribute: • Width of Median

Rationale: Important to monitor the need for medians to protect motorists from oncoming traffic.

RL9. Access Control

Definition: The degree that access to abutting land is fully, partially, or not controlled by a public authority. Full access control provides access only at interchanges (interstate, etc.). Partial access control provides no private access. No access control permits private access (driveway, etc.).

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes:
- Full Access Control
- Partial access Control
- No Access Control

Rationale: Highly correlated with crash rates and, therefore, useful in identifying high hazard locations. Important to guide future highway design and traffic control.

RL10. Railway Crossing ID

Definition: A unique US DOT/AAR number assigned for identification purposes to a railroad crossing by a state highway agency in cooperation with the Federal Railroad Administration.

Source: Obtained by linking **Crash Location (C5)** to State or Federal Railway Administration data.

Attribute:
- State specific number assigned by a State in cooperation with the American Association of Railroads.

Rationale: The data are used in high crash locations as well as high-risk corridors. Important for determining the need for additional controls and evaluating the efficacy of various types of controls.

RL11. Roadway Lighting

Definition: Type of roadway illumination.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes:
- No Lighting
- Spot Illumination on One Side
- Spot Illumination on Both Sides
- Continuous Lighting on One Side
- Continuous Lighting on Both Sides

Rationale: Recognized as having a benefit to safe highway operations. Information about the presence of lighting is an important element in analysis of a spot location, a section of highway, or a network analysis. Important for determining the affects of highway illumination on nighttime crashes to guide future installations.

RL12. Pavement Markings, Longitudinal

Definition: The longitudinal markings (paint, plastic, or other) used on the roadway surface to guide or control the path followed by drivers.

Attributes: **Subfield 1:**

- Edgeline Presence/Type
  - No Marked Edgeline
  - Standard Width Edgeline
  - Wide Edgeline
  - Other

Subfield 2:

- Centerline Presence/Type
  - No Marked Centerline
  - Standard Centerline Markings
  - Centerline With Centerline Rumble Strip

Subfield 3:

- Lane Line Markings
  - No Lane Markings
  - Standard Lane Line
  - Wide Lane Line

Rationale: Important to know about the existence of pavement markings for the analysis of crash data. Useful for determining the effects of various types of longitudinal markings on various types of crashes to guide future applications.

RL13. Presence/Type of Bicycle Facility

Definition: Any road, path, or way which is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes: **Subfield 1:**

- Facility
  - None
  - Wide Curb Lane
  - Marked Bicycle Lane
  - Unmarked Paved Shoulder
  - Separate Bicycle Path/Trail
  - Unknown

Subfield 2:

- Signed Bicycle Route
  - Yes
  - No
  - Unknown
  - Not Applicable

Rationale: Needed to determine usage and safety of bicycle facilities. Needed to determine the location of bicycle crashes in relation to a bicycle facility. Important for ascertaining the relative safety performance of various types/classes of bike paths to guide future design/operation decisions.

RL14. Traffic Control Type at Intersection

Definition: Type of traffic control device at intersection where crash occurred.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes:
- No Control
- Stop Signs on Cross Street Only
- All-Way Stop Signs
- All-Way Flasher (red on cross street)
- All-Way Flasher (red on all legs)
- Yield Signs on Cross Street Only
- Signals Pre-Timed (2 Phase)
- Signals Pre-Timed (multi-phase)
- Signals Semi-Actuated (2 Phase)
- Signals Semi-Actuated (multi-phase)
- Signals Fully Actuated (2 Phase)
- Signals Fully Actuated (multi-phase)
- Other
- Unknown

Rationale: Important to understand the relationship between crashes at intersections and the type of traffic control device present.

RL15. Mainline Number of Lanes at Intersection

Definition: Number of through lanes on the mainline approaches of an intersection, including all lanes with through movement (through and left-turn, or through and right-turn) but not exclusive turn lanes.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes:
- One Lane

- Two Lanes
- Three Lanes
- Four to Six Lanes
- Seven or More Lanes
- Unknown

Rationale: Important to describe the intersection.

RL16. Side-Road Number of Lanes at Intersection

Definition: Number of through lanes on the side-road approaches at intersection including all lanes with through movement (through and left-turn, or through and right-turn) but not exclusive turn lanes.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes:
- One Lane
- Two Lanes
- Three Lanes
- Four to Six Lanes
- Seven or More Lanes
- Unknown

Rationale: Important to describe the intersection.

RL17. Total Volume of Entering Vehicles

Definition: Total entering vehicles for all approaches of an intersection.

Source: Obtained by linking **Crash Location (C5)** to the Roadway Inventory data.

Attributes: **Subfield 1:**

- AADT Year

Subfield 2:

- AADT

Rationale: Important to understand volume of crashes as a measure of exposure for the mainline approaches.

Acronyms and MMUCC Terminology
MMUCC Guideline, 3rd Edition (2008)

Acronyms

AAMVA	American Association of Motor Vehicle Administrators
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ANSI	American National Standards Institute
ASCE	Association of State and Community Engineers
ATSIP	Association of Traffic Safety Information Professionals
FARS	Fatality Analysis Reporting System
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
GHSA	Governors Highway Safety Association
HSIS	Highway Safety Information System
IACP	International Association of Chiefs of Police
IPTM	Institute of Police Technology and Management
ITE	Institute of Transportation Engineers
MMUCC	Model Minimum Uniform Crash Criteria
NASS-CDS	National Automotive Sampling System Crashworthiness Data System
NASS-GES	National Automotive Sampling System General Estimates System
NCIC	National Crime Information Center
NCSA	National Center for Statistics and Analysis
NHTSA	National Highway Traffic Safety Administration
PDO	Property Damage Only
SAE	Society of Automotive Engineers
TEA21	Transportation Equity Act for the 21st Century
TRCC	Traffic Records Coordinating Committee
US DOT	United States Department of Transportation

MMUCC TERMINOLOGY

Data Term	Element	Definition
Access Control	RL9	The degree that access to abutting land in connection with a highway is fully, partially, or not controlled by public authority.
Activity Area	C18	Located adjacent to actual work area, whether workers and equipment were present or not.
Advance Warning Area	C18	Located after the first warning sign but before the work area.
Age	PD1	Years of age for the person involved in a crash.
Air Bag Deployed	P8	Deployment status of an air bag relative to position of the occupant.
Alcohol/ Involvement	CD7	A flag to indicate that at least one driver or non-motorist involved in the crash is suspected by law enforcement to have used alcohol.
Alcohol Test	P18	Indication of presence of alcohol test, type, and result.
Alignment	V16 RL2	The geometric characteristics or layout of a roadway. Alignment is usually subdivided into horizontal and vertical alignment. Includes straight, curve left, curve right.
Alphanumeric Identifier	V1, V4 P11	Consisting of alphabetic and numerical symbols.
Angle	C8	A crash where two motor vehicles impact at an angle. For example, the front of one motor vehicle impacts the side of another motor vehicle.
Annual Average Daily Traffic	RL6	The average number of motor vehicles passing a point on a roadway in a day, for all days of the year, during a specified calendar year.
Areas of Impact	V19	The areas of damage to the motor vehicle caused by the crash. These areas should include the area of the motor vehicle that received the initial impact and the area that was most damaged.
Asleep or Fatigued	P16	Driver experienced a temporary loss of consciousness or was operating in a reduced physical and mental capacity due to weariness, medication, or other drugs.
At Intersection but No Crosswalk	P24	Person at an area that contains a crossing or connection of two or more roadways not classified as a driveway access but without the street crossing distinctly indicated for pedestrian crossing by lines or other markings on the surface of the roadway.
ATV	V8	All Terrain Vehicle
Auto Transporter	V29	Describes a cargo body type that is specifically designed to transport multiple, fully assembled automobiles. Single-unit flatbed tow-trucks hauling cars DO NOT qualify. Auto transporters are typically configured as truck-trailers.
BAC Test Result	P18	BAC – Blood Alcohol Concentration
Backing	V18	A start from a parked or stopped position in the direction of the rear of the motor vehicle.

Data Term	Element	Definition
Bicycle Violation	P14	The disregard intentionally or unintentionally of the rules or laws governing the operation of a bicycle as a transport device in the location where the violation occurred.
Presence/Type of Bicycle Facility	RL13	Any road, path, or way which is specifically designated as being open to bicycle travel regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.
Booster Seat	P7	A "belt-positioning seat" that positions a child on a vehicle seat to improve the fit of the child in a lap and shoulder seat belt system.
Bridge	C6 V20, V21	A structure, including supports, carrying a roadway, railroad etc. over an obstruction such as water, a railway, or another roadway, having an opening of 20 feet or more measured along the center of the structure.
Bridge Overhead Structure	C6 V20, V21	Any part of a bridge that is over the reference or subject roadway. In crash reporting, this typically refers to the beams or other structural elements supporting a bridge deck.
Bridge - Pier or Support	C6 V20, V21	Support for a bridge structure including the ends (abutments).
Bridge/Structure Identification Number	RL1	A unique federal inspection/inventory identifier assigned to a bridge, underpass, overpass, or tunnel that is also linkable to the national bridge inventory.
Bridge Rail	C6 V20, V21	A barrier attached to a bridge deck or a bridge parapet to restrain motor vehicles, pedestrians or other users.
Bus	C17, V8 V22, V28 V29, PL1	A motor vehicle with seating for transporting nine or more persons, including the driver.
Cable Barrier	C6, V20, V21	Refers to a flexible barrier system which uses several cables typically supported by steel posts. These can be used on the roadside or as a median barrier. These barriers are designed to help lessen impact or keep vehicles within the confines of the road.
Cargo Body Type	V29	A description of the vehicle's primary cargo carrying capability.
Cargo/Equipment Loss or Shift,	C6 V20, V21	As a non-collision event in First Harmful Event or Most Harmful Event, the loss or shift would have to cause damage to the motor vehicle or occupants that is transporting the cargo/equipment or the cargo or equipment itself. If cargo/equipment is lost and strikes another vehicle that is a collision event. As a non-collision event in the Sequence of Events, a cargo/equipment loss or shift is not necessarily harmful. For example, the loss or release of the goods being transported from the cargo compartment of the truck, or the shifting off position of the load affecting its balance.
Cargo Tank	V29	A single-unit truck, truck/trailer, or tractor semi-trailer having a cargo body designed to transport dry bulk (fly, ash, etc.), liquid bulk (gasoline, milk, etc.) or gas bulk (propane, etc.).

Data Term	Element	Definition
Cargo Van	V8	A cargo van is any van where the area behind the driver or cab is designed for transporting cargo or operated for general commercial use.
Changing Lanes	V18	Shift from one traffic lane to another traffic lane moving in the same direction.
Charter/Tour	V22	A company providing transportation on a for-hire basis and demand-response basis, usually round-trip service for a tour group or outing.
Child Safety Seat Used	P7	Child passenger seated in a forward or rear facing child safety seat. This does not imply correct use or placement of the seat.
Collision Event	C8	Harmful events that involve the collision of a motor vehicle in transport with another motor vehicle, other property, animal or pedestrian.
Collision With Fixed Object	C6 V20, V21	A motor vehicle in transport strikes a an impact attenuator/crash cushion, bridge overhead structure, bridge pier or support, bridge rail, culvert, curb, ditch, embankment, guardrail face or end, concrete traffic barrier, standing tree, utility pole/light support, traffic sign or signal support, fence, mailbox, or other fixed object.
Collision With Object Not Fixed	C6 V20, V21	A motor vehicle in transport strikes a pedestrian, pedal cycle, railway vehicle, animal, motor vehicle in transport, parked motor vehicle, struck by falling, shifting cargo or anything set in motion by motor vehicle, work zone/maintenance equipment, or other moveable object.
Commercial Driver License Class (CDLC)	P11	The type of commercial motor vehicle that a licensed driver has been examined on and/or approved to operate. This information is obtained by linkage to the driver license file.
Commercial Motor Vehicle	V28 PL2	A commercial motor vehicle is any motor vehicle used for the transportation of goods, property or people in interstate or intrastate commerce.
Concrete Traffic Barrier	C6 V20, V21	Refers to the longitudinal traffic barriers constructed of concrete and located on the outside of the road surface, in a median, or in gore areas. This includes all temporary concrete barriers regardless of location (i.e., temporary barrier on a bridge being used to control traffic during bridge repair/construction).
Condition at Time of the Crash	P16	The physical and/or emotional condition of the driver or non-motorist at the time of the crash.
Construction Zone	C18	See Work Zone.
Contributing Circumstances, Environment	C13	Apparent environmental conditions which may have contributed to the crash.
Contributing Circumstances, Motor Vehicle	V25	Preexisting motor vehicle defects or maintenance conditions that may have contributed to the crash.
Contributing Circumstances, Road	C14	Apparent condition of the road which may have contributed to the crash.
Case Identifier	C1	Unique identifier within a given year that identifies a given crash within a state.

Data Term	Element	Definition
Crash City/Place	C4	The city/place (police jurisdiction) in which the crash occurred. Name codes should be standardized or compatible with the GSA Geographic Locator Codes (GLC), which can be found on the Internet at www.gsa.gov.
Crash County	C3	The county, or equivalent entity, in which the crash occurred. Name codes should be standardized or compatible with the GSA Geographic Locator Codes (GLC), which can be found on the Internet at www.gsa.gov.
Crash Cushion	C6, V20, V21	See Impact Attenuator.
Crash Date and Time	C2	The date (year, month, and day) and time (00:00-23:59) at which a crash occurred.
Crash Location	C5	Exact location on the roadway, using GPS/GIS or linear referencing technology, to document where the first harmful event of the crash occurred.
Crash Severity	CD1	The severity of a crash based on the most severe injury to any person involved in the crash.
Crossover	C15	Area in the median of a divided trafficway where motor vehicles are permitted to travel cross the opposing lanes of traffic or do a U-turn.
Crossover-Related	C15	A crash on approach to or exit from a crossover related to the movement of traffic units through the crossover.
Culvert	C6, V20, V21	An enclosed structure providing free passage of water under a roadway with a clear opening of less than twenty feet measured along the center of the roadway.
Curb	C6, V20, V21	A raised edge or border to a roadway. Curbs may be constructed of concrete, asphalt or wood and typically have a face height of less than 9 inches.
Deployed Air Bag-Combination	P8	More than one air bag deploys, including front driver and front passenger, front and side, or front, side and other, etc. Refer to Appendix M.
Deployed Air Bag-Front	P8	Driver or front seat passenger air bag is out of its cover and protruding into driver compartment. Bag is fully or partially deflated or inflated. Refer to Appendix M.
Deployed—Curtain	P8	Curtain air bag is out of its cover and protruding into driver or passenger compartment. Bag is fully or partially deflated or inflated. Refer to Appendix M.
Deployed Side Air Bag	P8	Air bag on side of motor vehicle is out of its cover and protruding into occupant compartment. Bag is fully or partially deflated or inflated. Refer to Appendix M.
Deployment of Air Bag-Other	P8	A knee air bag, air belt, or other new air bag technology is deployed. Refer to Appendix M.
Deployment of Air Bag-Unk	P8	Not known if air bag is out of its cover and protruding into occupant compartment. Refer to Appendix M.
Derived Data Elements	CD1-CD9 PD1	Derived data elements are obtained by counting or recoding information contained in existing data elements that have already been collected and computerized.

Data Term	Element	Definition
Direction of Travel Before Crash	V13	Usually the general direction of the motor vehicle on the roadway prior to the crash. However, on state and federal roads which have a designated direction it is this designated direction. For example, the direction of a state designated north-south highway must be either northbound or southbound even though a motor vehicle may have been traveling due east as a result of a short segment of the highway having an east-west orientation.
Disabling Damage	V24	Damage that precludes departure of the motor vehicle from the scene of the crash in its usual daylight-operating manner after simple repairs. As a result, the motor vehicle had to be towed, or carried from crash scene, or assisted by an emergency motor vehicle.
Divided Trafficway	V14	Roadway travel in opposite directions that is physically separated by a median that is painted, raised, suppressed, etc. Excludes 2-way continuous left turn lanes.
DOT-compliant Motorcycle Helmet	P7	Motorcycle helmets that are compliant with Federal Motor Vehicle Safety Standards typically weigh approximately 3 pounds, have an inner liner at least one-inch thick of firm polystyrene foam, have an inside label that states the manufacturer, model, and date of manufacture, and have a DOT sticker on the back of the helmet. A DOT sticker alone is not sufficient evidence to indicate that the helmet is DOT-compliant, as counterfeit stickers have been found affixed to non-compliant helmets.
Driver	P3	An occupant who is in actual physical control of a motor vehicle or, for an out-of-control motor vehicle, an occupant who was in control until control was lost.
Driver Actions at Time of Crash	P13	The actions by the driver at the time of the crash.
Driver Distracted By	P15	Distractions that may have influenced driver performance. The distractions can occur inside the motor vehicle (internal) or outside the motor vehicle (external).
Driver License Class	P11	The type of commercial or noncommercial motor vehicle that a licensed driver has been examined on and/or approved to operate. Includes 4 classes: A, B, C, and M. See P11 for description of each class.
Driver License Jurisdiction	P10	The geographic or political entity issuing a driver license.
Driver License Number	P11	A unique number assigned by the authorizing agent issuing a driver license to the individual.
Driver License Restrictions	PL1	Restrictions assigned to an individual's driver license by the license examiner, e.g., daytime driving only.
Driver License Status	PL2	The current status of an individual's driver license.
Driver Name	P12	The full name of the driver.

Data Term	Element	Definition
Driveway	C15	A driveway is a private way which provides vehicular access to the public from a trafficway to property, parking, or loading areas outside the boundaries of the trafficway, but is considered to be not open to the public for transportation purposes as a trafficway. A driveway is outside the trafficway and is typically not provided an official identification name or number.
Driveway Access Related	C15	A traffic accident that (1) occurs adjacent to a driveway, (2) is not a driveway access accident, and (3) results from an activity, behavior, or control related to the movement of traffic units onto or out of a driveway.
Drove Too Fast for Conditions	P13	Traveling at a speed that was unsafe for the road, weather, traffic or other environmental conditions at the time.
Drug Involvement	CD8	A flag indicating that at least one driver or non-motorist involved in the crash was suspected by law enforcement to have used drugs.
Drug Test	P20	Indication of the presence of drug test, type and result. Excludes drugs administered post-crash.
Drug Test Result	PL3	Results of tests performed to determine presence of drugs.
Dump	V29	A cargo body type that can be tilted or otherwise manipulated to discharge its load by gravity.
Ejection	P9	Occupant completely or partially thrown from the interior of the motor vehicle, except motorcycles, as a result of a crash.
Electronic Communication Device	P15	Includes cell phone, pager, 2-way radio and other devices enabling the driver and/or occupants of the vehicle to communicate with others not located in the vehicle.
Emergency ambulance	V11	Any public or private ambulance service under contract to a jurisdiction to provide emergency response for medical emergencies.
Emergency Motor Vehicle Use	V11	Indicates official motor vehicles, such as military, law enforcement, ambulance, fire, etc., that are involved in a crash while on an emergency response. Emergency refers to an official motor vehicle that is usually traveling with physical emergency signals in use, typically red light blinking, siren sounding, etc.
EMS Response Agency Identifier	P27	Identifier for EMS agency that responds.
EMS Response Run Number	P27	Usually documented on EMS run report.
Endorsements	P11	Issued to drivers after successfully completing a specialized test that qualifies them to operate that specific type of vehicle.
Entrance/exit Ramp	C15	Crash is located on either the entrance or exit ramp.
Extent of Damage	V24	Estimation of total damage to the motor vehicle caused by the crash. Disabling damage implies damage to the motor vehicle that is sufficient to require the motor vehicle to be towed or carried from the scene.

Data Term	Element	Definition
External Distraction	P15	Other distractions which occur outside of the vehicle, such as a crash in the next lane or on the other side of the median, automated highway signs, interesting objects in the sky, fire off the roadway, etc.
Failure to Keep In Proper Lane	P13	Driver did not maintain position in appropriate travel lane.
Failed to Yield Right-of-Way	P13	Driver failed to yield right-of-way to another motor vehicle or non-occupant as required.
Farm Waiver	PL1	Waiver granted for the operation of farm motor vehicles.
Fatal Injury	CD1 P4	Any injury that results in death within a 30-day period after the crash occurred.
FIPS Code	C3, C4	Federal Information Processing Standards for coding states, counties, and cities, which can be accessed on the Internet at www.gsa.gov.
Fire/Explosion	C6 V20, V21	Fire/explosion that was the cause or result of the crash. A fire/explosion is a non-collision harmful event.
First Harmful Event	C6 V20, V21	The first injury or damage-producing event that characterizes the crash.
Five-Point, or More-Intersection	C16	An intersection where more than two roadways cross or connect.
Flagger	V17	Traffic control person controlling traffic with a flag applicable to the motor vehicle at the crash location.
Flashing Traffic Control Signal	V17	Traffic control signal that is flashing or a single light flashing red or yellow.
Flatbed	V29	A single-unit truck, truck/trailer, or tractor/semi-trailer whose body is without sides or roof, with or without readily removeable stakes which may be tied together with chains, slats, or panels. This includes trucks transporting containerized loads.
Followed Too Closely	P13	Driver was positioned at a distance behind another motor vehicle or non-occupant that was too close to permit safe response to any change in movement or behavior by the other motor vehicle or non-occupant.
Four-Way Intersection	C16	Where two roadways cross or connect.
Front Seat - Left Side	P6	Driver seat for motor vehicle or motorcycle.
Front Seat - Right Side	P6	Passenger seat to right of driver and next to the door.
Front Seat – Middle	P6	Passenger seat between driver and right seat passenger.
Front to Front	C8	The front end of one vehicle collides with the front end of another vehicle, while the two vehicles are traveling in opposite directions.

Data Term	Element	Definition
Front to Rear	C8	The front end of one vehicle collides with the back of another vehicle, while the two vehicles are traveling in the same direction.
Full Access Control	RL9	Authority to control access is exercised to give preference to through traffic by providing access connections with selected public roads only, by prohibiting crossings at grade or direct private driveway connections.
Functional Damage	V24	Damage that is not disabling, but affects operation of the motor vehicle or its parts.
Geographic Information System (GIS)	C5	Computerized system that associates information with specific geographic locations, for example roadway characteristics by latitude/longitude.
Global Positioning System (GPS)	C5	System of satellites that transmit geographic locations in terms of latitude and longitude.
Gore	C7	An area of land where two roadways diverge or converge. The area is bounded on two sides by the edges of the roadways, which join at the point of divergence or convergence. The direction of traffic must be the same on both sides of these roadways. The area includes shoulders or marked pavement, if any, between the roadways.
Grade	V16	The inclination of a roadway, expressed in the rate of rise or fall in feet (meters) per 100 feet (meters) of horizontal distance. Includes level, hillcrest, up hill, down hill, sag (bottom)
Grain/Chips/ Gravel Truck	V29	Describes a cargo body type used for hauling these or other similar bulk commodities. They may be referred to as "open hoppers" or "belly dumps."
Gross Combination Weight Rating (GCWR)	V27	The value specified by the manufacturer(s) as the recommended maximum loaded weight of a combination (articulated) motor vehicle. This is for truck tractors and single-unit trucks pulling a trailer(s). GCWR is the sum of the gross vehicle weight ratings (GVWR) of all units, power unit and its trailer(s).
Gross Vehicle Weight Rating (GVWR)	V27	The value specified by the manufacturer as the recommended maximum loaded weight of a single motor vehicle. This rating includes the maximum rated capacity of a vehicle, including the base vehicle, mounted equipment and any cargo and passengers. Most of the time, the GVWR is the sum of the maximum rated capacity of the axles of the vehicle.
Guardrail (Guiderail)	C6 V20, V21	A longitudinal barrier consisting of posts and rails.
Guardrail End	C6 V20, V21	The end of the guardrail.
Guardrail Face	C6 V20, V21	Other than the end of the guardrail.
Harmful Event	C6-C7 V21	Occurrence of injury or damage.

Data Term	Element	Definition
Hazardous Materials	V30	Any substance or material which has been determined by the U.S. Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designed under regulations of the US DOT.
Hazardous Materials (Cargo Only)	V30	A Hazardous Materials Placard is a sign required to be affixed to any motor vehicle transporting quantities of hazardous materials in quantities above the thresholds established by the U.S. Department of Transportation, or other authorized entity. This placard identifies the hazard class division number, 4-digit hazardous material identification number or name of the hazardous material being transported.
Hazardous Materials Released (Cargo Only)	V30	Indication whether hazardous materials were released from the cargo compartment. Leakage of fuel or oil carried by the vehicle for its own use DOES NOT qualify.
Head-on - Manner of Impact	C8	A crash where the front ends of two motor vehicles impact together. This also is referred to as front-to-front.
Helmet Used	P25	Safety helmet worn by non-motorist (bicyclist) or driver (motorcyclist).
Highway Traffic Sign	C6 V20, V21	A sign intended to guide, regulate, or inform highway users.
Highway Traffic Sign Post	C6 V20, V21	A pole, post, or structure constructed to support a highway sign intended to guide, regulate, or inform highway users.
Hillcrest	V16	Top of the hill.
Hit and Run	V23	Crashes where the vehicle, or the driver of the vehicle in transport, is a contact vehicle in the crash, and departs the scene without stopping to render aid.
Horizontal Alignment	RL2	The change in horizontal direction of a roadway determined at the point of curvature (pc) and expressed in terms of direction, degree of curve and length.
ICD-9, ICD-10	PL4, PL5	International Classification of Diseases, 9th edition, and 10th edition in process, developed by the World Health Organization and maintained in the U.S. by the Centers of Disease Control, DHHS. This system codes the type of disease/injury and body area affected for all hospital inpatients who are discharged and to document the cause of death.
Identification Number	V1,V 3, V4 V26, RL1	Unique number that identifies a person, crash, motor vehicle, bridge/structure, etc.
Immersion	C6 V20, V21	A non-collision harmful event where an Object or person becomes covered completely by liquid.

Data Term	Element	Definition
Impact Attenuator/Crash Cushion	C6 V20, V21	A barrier at a spot location, less than 25 ft. (7.6 m) away, designed to prevent an errant motor vehicle from impacting a fixed object hazard by gradually decelerating the motor vehicle to a safe stop or by redirecting the motor vehicle away from the hazard.
In Parking Lane or Zone	C7	Crash location outside the roadway.
In Roadway – Other	P22	Non-motorist, such as a child playing or mechanic working/ touching a motor vehicle.
In Transport	C6, C8 CD3-4 V2, V10, V20-23 P3	The term "in-transport" denotes the state or condition of a transport vehicle which is in motion or within the portion of a transport way ordinarily used by similar transport vehicles. When applied to motor vehicles, "in-transport" means on a roadway or in motion within or outside the trafficway. A transport vehicle which is also a working motor vehicle at the time of the unstabilized situation is not "in-transport." In roadway lanes used for travel during some periods and for parking during other periods, a parked motor vehicle should be considered to be in-transport during periods when parking is forbidden.
Incapacitating Injury	CD1 P4	Any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred. Often defined as "needing help from the scene."
Indian Nation	P10	A federally recognized Indian tribe with sovereign authority to interact on a government-to-government basis directly with federal agencies.
Injury Area	PL4	The primary or most obvious area of the person's body injured during the crash.
Injury Description	PL5	Type of injury inflicted to injury area.
Injury Status	P4	The level of injury severity for a person involved in the crash.
Interchange	C15	A system of interconnecting roadways in conjunction with one or more grade separations, providing for the movement of traffic between two or more roadways on different levels.
Intercity	V22	A company providing for-hire, long-distance passenger transportation between cities over fixed routes with regular schedules (for example; Greyhound bus service between major cities).
Intermediate License Restrictions	PL1	The Intermediate License is the second stage of obtaining a full license privilege under most Graduated Drivers License (GDL) programs. It is typically for drivers between the ages of 16 and 17, and does not require total supervision during daylight hours (e.g., adult supervision during the hours of midnight to 5 am). An Intermediate Driver License may be suspended or revoked under certain violations. Other conditions may include conviction-free performance, seat-belt use for occupants, and some age restrictions for passengers. If any restriction is violated, this GDL restriction period can be extended.

Data Term	Element	Definition
Intermittent or Moving Work	C18	Type of work zone.
International License (other than Mexico, Canada)	P10	Driver license issued by country other than Canada, Mexico or U.S.
Intersection	C15, C16	An area which 1) contains a crossing or connection of two or more roadways not classified as driveway access and 2) is embraced within the prolongation of the lateral curb lines, or, if none, the lateral boundary lines of the roadways. Where the distance along a roadway between two areas meeting these criteria is less than 33 feet, the two areas and the roadway connecting them are considered to be parts of a single intersection.
Intersection as Part of Interchange	C16	Refer to Appendices G and H.
Intersection Related	C15	A traffic accident in which the first harmful event (1) occurs on an approach to or exit from an intersection and (2) results from an activity, behavior or control related to the movement of traffic units through the intersection.
Intersection Type	C16	The type of intersection at which two or more roadways intersect at the same level.
Interstate Carrier	V26	A commercial vehicle in the United States where the transit between the points of origin and termination does not occur entirely with the borders of the state of origin. A motor carrier that has authority to operate across state lines. Interstate operators are required to have a USDOT Number by the Federal Motor Carrier Administration.
Intrastate Carrier	V26	A motor carrier that operates entirely within the state and does not have the authority to engage in interstate commerce. Intrastate operators are not required to have a USDOT Number by the Federal Motor Carrier Safety Administration however; some states do reguire that certain intrastate operators secure a USDOT Number.
Island	P24	Cement or grassy area in the middle of a trafficway.
Jackknife	C6 V20, V21	An uncontrolled articulation between a tractor and trailer(s) that occurs at any time during the crash sequence.
KABCO	P4	A functional measure of the injury severity for any person involved as determined by law enforcement at the scene of the crash. K-fatality, A-incapacitating injury, B-non-incapacitating injury, C-possible injury, 0-no injury.
Lane	V14	A strip of roadway used for a single line of motor vehicles.
Lane Closure	C18	Type of work zone.

Data Term	Element	Definition
Lane Line	V14	A pavement marking used to separate traffic traveling in the same direction. Lane lines are normally 4 to 6 in wide.
Lane Shift/ Crossover	C18	Type of work zone.
Lap Belt Only Used	P7	Use of a lap safety belt either because the motor vehicle is equipped only with lap belt or because the shoulder belt is not in use.
Latitude and Longitude	C5	Geographical coordinates that indicate the location of the crash.
Law Enforcement Reporting Agency Identifier	C9	A unique identifier for the law enforcement agency that provided information on the crash report.
Law Enforcement Suspected Alcohol Use	P17	Investigating law enforcement's assessment of whether alcohol was used by the motor vehicle driver or non-motorist.
Law Enforcement Suspected Drug Use	P19	Driver or non-motorist involved in the crash suspected by law enforcement to have used drugs.
Learners Permit Restrictions	PL1	The Learner's Permit is the first stage of obtaining a full license privilege under most Graduated Drivers License (GDL) programs. It is typically for drivers between 14 and 16 years of age, and typically requires total adult supervision, seat-belt use for occupants, and conviction-free performance. If any restriction is violated, this GDL restriction period can be extended.
Leaving Travel Lane	V18	A motor vehicle or person moving outside the travel lane.
Light Condition	C11	The type/level of light that exists at the time of a motor vehicle crash.
Light Support	C6 V20, V21	A pole or post constructed to support lighting of the highway.
Light Truck	V8, V28	Trucks (van, mini-van, panel, pickup, sport utility) of 10,000 lbs GVWR or less.
Lighting	P25	Non-motorist use of lights on his/her person or on a motor vehicle not in transport or transport vehicles other than motor vehicle as safety equipment.
Linear Referencing System (LRS)	C5	A standardized data format that provides the ability to create complex overlays of multiple events or occurrences along a route to support corridor planning, pavement rehabilitation, or other complex analysis.
Link Node System	C5	A system that assigns an identifier to each segment of roadway and to specific points or nodes that are useful to reference the location of a crash.

Data Term	Element	Definition
Location of the First Harmful Event	C7	The location of the first harmful event as it relates to its position within or outside the trafficway.
Low Speed Vehicle	V8	A low speed vehicle (LSV) is a motor vehicle with four or more wheels whose top speed is greater than 20 miles per hour, but not greater than 25 miles per hour. LSVs are required to be equipped with basic items of safety equipment: headlamps, stop lamps, turn signal lamps, tail lamps, reflex reflectors, parking brake, windshields of either type AS-1 or type AS-5 glazing, rearview mirrors, seat belts and vehicle identification numbers (VINs).
Mainline Number of Lanes at Intersection	RL15	Number of "thru" lanes on the mainline approaches at intersection including all lanes with "thru" movement ("thru" and left-turn, or "thru" and right-turn) but not exclusive turn lanes.
Maintenance Zone	C18	See Work Zone.
Manner of Crash/Collision Impact	C8	The identification in a crash of the manner in which two motor vehicles in transport initially came together without regard to direction of force.
Marked Crosswalk	P24	That portion of the roadway that is distinctly indicated for pedestrian crossing by lines or other markings on the surface of the roadway.
Median	C7	An area of trafficway between parallel roads separating travel in opposite directions. A median should be four or more feet wide.
Medical Facility	P27	The hospital, clinic, or trauma center that received patient for treatment.
Medium/Heavy Trucks	V8	Greater than 10,000 pounds GVWR.
Minor Damage	V24	Damage which does not affect the operation of or disable the motor vehicle in transport.
Most Harmful Event for this Vehicle	V21	Event that resulted in the most severe injury or greatest property damage for this motor vehicle.
Motor Carrier	V26	The legal business entity, individual, partnership, corporation, or organization that directs, controls, and is responsible for the transportation of goods, property or people.
Motor Carrier Identification	V26	The identification number, name and address of an individual partnership or corporation responsible for the transportation of persons or property as indicated on the shipping manifest.
Motor Coach	V8	Bus designed to travel long distances between cities.
Motor Home	V8	A van where a frame-mounted recreational unit is added behind the driver or cab area or mounted on a bus/truck chassis that is suitable to live in and drive across the country.

Data Term	Element	Definition
Motor Vehicle Body Type Category	V8	The general configuration or shape of a motor vehicle distinguished by characteristics such as number of doors, seats, windows, roof line, hard top or convertible.
Motor Vehicle In Transport	C6 V20, V21	A motor vehicle is any motorized (mechanically or electrically powered) road vehicle not operated on rails. When applied to motor vehicles, "in-transport" refers to being in motion or on a roadway. Inclusions: motor vehicle in traffic on a highway, driverless motor vehicle in motion, motionless motor vehicle abandoned on a roadway, disabled motor vehicle on a roadway, etc.
Motor Vehicle License Plate Number	V4	Alphanumeric identifier or other characters, exactly as displayed, on the registration plate or tag affixed to the motor vehicle. For combination trucks, motor vehicle plate number is obtained from the power unit or tractor.
Motor Vehicle Make	V5	The distinctive (coded) name applied to a group of motor vehicles by a manufacturer. This information also can be obtained separately from the Vehicle Registration File.
Motor Vehicle Maneuver/Action	V18	The controlled maneuver for this motor vehicle prior to the beginning of the sequence of events.
Motor Vehicle Model	V7	The manufacturer-assigned code denoting a family of motor vehicles (within a make) that has a degree of similarity in construction, such as body, chassis, etc. This information also can be obtained separately from the Vehicle Registration File.
Motor Vehicle Model Year	V6	The year that is assigned to a motor vehicle by the manufacturer. Usually it is the year in which the model change occurs. This information also can be obtained separately from the Vehicle Registration File.
Motor Vehicle Registration State and Year	V3	The state, commonwealth, territory, foreign country, Indian Nation, U.S. Government, etc. issuing the registration plate and the year of registration as indicated on the registration plate displayed on the vehicle.
Motor Vehicle Unit Number	V2	Motor vehicle number assigned to uniquely identify each motor vehicle involved in the crash. This number is not assigned to pedestrians or bicyclists.
Motorcycle	V8	A two- or three-wheeled motor vehicle designed to transport one or two people. Included are motor scooters, mini-bikes, and mopeds.
Motorist	C9	Any occupant of a motor vehicle in transport.
National Highway System	RL4	Includes 160,000 miles of major highways that link most of the U.S. These highways include interstates, principal arterials, strategic highway networks, major strategic highway network connectors, and intermodal connectors.
No Access Control	RL9	Includes all sections that do not meet the criteria for full or partial access control.
Non-Collision Event	C6, C8 V20, V21	Any motor vehicle crash event not involving a collision. Includes overturn/rollover, fire/explosion, immersion, jackknife, cargo/equipment loss or shift, equipment failure, separation of units, ran off road right or left, cross median, cross centerline, downhill runaway, fell/jumped from motor vehicle, thrown or falling object.
Non-Fatal Injury	P4	Bodily harm to a person that does not result in death.

Data Term	Element	Definition
Non-Highway Work	C14	Maintenance or other types of work occurring near or in the trafficway but not related to the trafficway.
Non-Incapacitating Injury	CD1 P4	Any injury, other than a fatal injury or an incapacitating injury, which is evident to observers at the scene of the crash in which the injury occurred. Examples: contusions (bruises), laceration, bloody nose.
Non-Junction	C15	Roadway that is not an intersection or a connection between a driveway access and a roadway other than a driveway access.
Non-Motorist	P3	Any person other than an occupant of a motor vehicle in transport. This includes pedestrians, bicyclists, other cyclists, occupants of other motor vehicles not in transport and occupants of transport vehicles other than motor vehicles.
Non-Motorist Number	P21	The unique, sequential number assigned to the non-motorist involved in a crash.
Non-Motorist Safety Equipment	P25	Safety equipment(s) used by the non-motorist, including retro-reflective clothing, lighting, protective pads, helmet, etc.
Non-Motorist Type	P3	Type of non-motorist involved in a crash (pedestrian, pedalcyclist, skater, etc.)
Not a Bus	V22	Vehicles that do not have a bus body type AND are not being used as a bus in the accident. This should be used for vehicles with less than 9 seats (including the driver) and personal-use vans with 9 or more seats (including the driver).
Not in Commerce/ Government	V26	Any government vehicle whether it is operated by the local, state, or federal government. In most circumstances, the government-owned vehicle will not have a USDOT Number.
Not in Commerce/Other Truck	V26	Personal rental vehicles (e.g., Uhaul, Ryder, Penske) that qualify by size (Over 10,000 lbs. GVWR/ GCWR) that are operated by a private individual. In these situations the rental company is NOT the carrier and should not be recorded.
Number of Fatalities	CD6	The count of fatalities (motorists and non-motorists) that resulted within 30 24-hour periods from injuries sustained as the result of a specific motor vehicle crash.
Number of Motor Vehicles Involved	CD2	The count of motor vehicles (e.g. automobiles, single-unit trucks, truck combinations) that are in motion or parked on a roadway and involved in the crash.
Number of Motorists	CD3	The count of occupants in the motor vehicles in transport involved in the crash.
Number of Non-Fatally Injured Persons	CD5	The total number of persons injured, excluding fatalities within 30 24-hour periods, in a specific traffic crash.
Number of Non-Motorists	CD4	The count of non-occupants (pedestrians, pedalcyclists, etc.) or occupants of motor vehicles not in transport involved in a crash.
Obstruction in Roadway	C14	A blockage in the roadway.

Data Term	Element	Definition
Occupant Motor Vehicle Unit Number	P5	The unique number assigned for this crash to the motor vehicle in which this person was an occupant.
Off-Roadway, Location Unknown	C7	First harmful event is off the roadway but location of the actual property line is unknown.
Operating Defective Equipment (Driver)	V25	Vehicle in transport or any part or component of motor vehicle in transport with defects or maintenance conditions which affect the operation of the vehicle.
Originating Agency Identifier (ORI Codes)	C9	A unique identifier for each law enforcement agency that is assigned by the Department of Justice.
Other Distractions Inside the Vehicle	P15	Other distractions inside the vehicle include eating, drinking, smoking and reading.
Other Electronic Device	P15	Includes devices which are part of the vehicle such as a navigation device, radio, DVD player, etc.
Other Fixed Object	C6 V20, V21	Other fixed object includes a wall, building, tunnel, etc.
Other Non-Collision	C6 V20, V21	1) driving off a cliff where damage is not the result of an overturn or a collision with a fixed object, (2) an unbelted passenger hits his or her head on the roof of a vehicle and is injured, when the vehicle travels over a sharp dip in the road, (3) situations where a passenger is sickened or dies due to carbon monoxide fumes leaking from a motor vehicle in transport. (4) This also includes when an occupant of a vehicle is run over by his/her own vehicle after falling from the vehicle.
Other Non-Fixed Object	C6 V20, V21	Includes fallen trees.
Other Non-Fixed Object - Collision With	C6 V20, V21	A collision with an object other than a motor vehicle in-transport, a pedestrian, an other road vehicle in transit, a parked motor vehicle, a railway vehicle, a pedalcycle, an animal, or a fixed object.
Other Post, Pole, or Support	C6 V20, V21	Post, pole or support that does not include a highway safety sign.
Other Traffic Barrier	C6 V20, V21	Longitudinal barriers other than guardrails, concrete traffic barriers, or cable barriers. They may be composed of material such as wood or rock.
Outside Trafficway	C7	Not physically located on any land way open to the public as a matter of right or custom for moving persons or property from one place to another.
Overtaking/ Passing	V18	A motor vehicle that moves from behind a motor vehicle to in front of the same motor vehicle.

Data Term	Element	Definition
Overturn/ Rollover	C6 V20, V21	A motor vehicle that has overturned at least 90 degrees to its side.
Parked Motor Vehicle	C6 V20, V21	A parked motor vehicle is a motor vehicle not in-transport, other than a working motor vehicle, that is not in motion and not located on the roadway. In roadway lanes used for travel during some periods and for parking during other periods, a parked motor vehicle should be considered to be in-transport during periods when parking is forbidden. Any stopped motor vehicle where the entirety of the vehicle's primary outline as defined by the four sides of the vehicle (e.g., tires, bumpers, fenders) and load, if any, is not within the roadway is parked.
Parking Lane	C7	An auxiliary lane primarily for the parking of motor vehicles.
Partial Access Control	RL9	Authority to control access is exercised to give preference to through traffic to a degree that, in addition to access connections with selected public roads, there may be some crossings at grade and some private driveway connections. However, these direct private driveway connections have been minimized through the use of frontage roads or other local access restrictions.
Partially Ejected	P9	The occupant's body was not completely thrown from the motor vehicle as a result of the impact.
Passenger	P3	Occupant of motor vehicle other than the driver of the motor vehicle.
Passenger Car/ Vehicle	V8	Motor vehicles used primarily for carrying passengers.
Pedalcycle	C6 V20, V21	Includes bicycle, tricycle, unicycle, pedal car, etc.
Pedalcyclist	P3	Any occupant of a pedalcycle.
Pedestrian	C6 V20, V21 P3	A person who is not an occupant of a motor vehicle in transport. Includes a person who is adjacent to the motor vehicle regardless of their actions.
Personal Conveyance	P3	A personal conveyance is a device, other than a transport device, used by a pedestrian for personal mobility assistance or recreation. These devices can be motorized or human powered, but not propelled by pedaling.
Person Traffic Control Device	V17	Includes flagger, law enforcement personnel, crossing guard, etc.
Person Type	P3	Type of person involved in a crash.
Physical Obstruction	C13	An object that blocked sight and contributed to the crash. (For example, bush, tree, etc.)
Physically Impairment	P16	A condition that results in some decrease in a physical ability.
Placard Number	V30	A number included on the hazardous material placard displayed on trucks that are carrying hazardous materials. Many placards have two numbers, a four-digit number in the middle, and a one-digit number at the bottom. See Appendix K.

Data Term	Element	Definition
Pole Trailer	V29	A trailer designed to be attached to the towing vehicle by means of a reach or pole, or by being boomed or otherwise secured to the towing motor vehicle, and ordinarily used for carrying property of a long or irregular shape.
Police	V10	A vehicle equipped with police emergency devices (lights and siren) that is owned or subsidized by any local, county, State or Federal government entity. The police vehicle is presumed to be in special use at all times, although not necessarily in "emergency use." Vehicles not owned by a government entity that are used by law enforcement officers (e.g., undercover) are excluded.
Possible Injury	P4	Complaint of pain without visible injury.
Posted/Statutory Speed Limit	V12	The posted or statutory speed limit for the motor vehicle at the time of the crash.
Property Damage Only	CD1	Crash which results in damage to the motor vehicle or other property but without injury to any occupants or non-motorists.
Protective Pads Used	P25	Padded, shaped attachments to protect specific areas of the body (elbows, knees, shins, etc.) from injury.
Railway Crossing Device	V17	Any sign, signal, or gate that warns of on-coming trains or train tracks crossing the roadway.
Railway Crossing ID	RL10	A unique number assigned to a railroad crossing by a state highway agency in cooperation with the American Association of Railroads for identification purposes. (US DOT/AAR number)
Railway Grade Crossing	C15	An intersection between a roadway and train tracks which cross each other at the same level (Grade).
Railway Vehicle	C6 V20, V21	Any land vehicle (train, engine) that is (1) designed primarily for moving persons or property from one place to another on rails and (2) not in use on a land way other than a railway.
Railway Vehicle - Collision With	C6 V20, V21	A collision in which a vehicle in transport collides with a railway vehicle (e.g., train, engine).
Ran Off Roadway	C6 V20, V21 P13	Failure of the driver to keep the motor vehicle on the roadway.
Ran Red Light	P13	Driver continues through yellow caution light shortly before or after it turns red. This driver action is not included in the list of violation codes.
Rear to rear	C8	The "rear" of a vehicle makes contact with the "rear" of another. This can happen when two vehicles are backing up.
Rear to side	C8	The "rear" of a vehicle, and not the front, makes contact with the side of another. This can happen when a vehicle backs up into the side of another vehicle.
Reflective Clothing	P25	Clothing which reflects light and also returns most of that reflection back along the path of the incoming light.
Relative to Trafficway	C7	The location of the first harmful event as it relates to its position within or outside the trafficway.

Data Term	Element	Definition
Restraint Systems / Helmet Use	P7	The restraint equipment in use by the occupant, or the helmet used by the occupant of a motored cycle at the time of the crash.
Riding on Vehicle Exterior	P6	Person outside of motor vehicle (on hood, running board, trunk, non-trailing unit, etc.) while riding.
Right of Way	P13	Area within the Trafficway.
Road	Multiple	That part of a trafficway that includes both the roadway and any shoulder alongside the roadway. Includes designated parking areas on a roadway or between the roadway and curb.
Roadside	C7	The outermost part of the trafficway from the property line to other boundary in to the edge of the first road. Refer to Appendix E.
Roadway	V14	That part of a trafficway designed, improved, and ordinarily used for motor vehicle travel or, where various classes of motor vehicle are segregated, that part of a trafficway used by a particular class. Separate roadways may be provided for northbound and southbound traffic (as well as eastbound and westbound) or for trucks and automobiles. Bridle paths and bicycle paths are not included in this definition. Refer to Appendix E.
Roadway Alignment and Grade	V16	The geometric or layout and inclination characteristics of the roadway in the direction of travel for this vehicle.
Roadway Functional Classification	RL5	The character of service or function of streets or highways. The classification of rural and urban is determined by state and local officials in cooperation with each other and approved by the Federal Highway Administration, U. S. Department of Transportation.
Roadway Lighting	RL11	The type of roadway illumination on the roadway.
Roundabout	C15	Circular traffic patterns in which yield control is used on all entries, circulating vehicles have the right of way, pedestrian access is allowed only across the legs of the roundabout behind the yield line and circulation is counter-clockwise and passes to the right of the central island.
Sag	V16	Bottom of the hill.
School Bus	C16	A motor vehicle used for the transportation of any school pupil at or below the 12th-grade level to or from a public or private school or school-related activity. It is externally identifiable by the color yellow, the words "school bus", flashing red lights located on the front and rear, and lettering on both sides identifying the school or school district served, or the company operating the bus.
School Bus (used as)	V22	Any public or private school or district, or contracted carrier operation on behalf of the entity, providing transportation for K-12 pupils.

Data Term	Element	Definition
School Bus-Related Crash	C16	Indicates if a school bus or motor vehicle functioning as a school bus for a school-related purpose is related to the crash. The "school bus," with or without a passenger on board, must be directly involved as a contact motor vehicle or indirectly involved as a non-contact motor vehicle (e.g., children struck when boarding or alighting from the school bus, two vehicles colliding as the result of the stopped school bus).
School Zone Sign/Device	V17	Signs or devices which change the speed limit on road adjacent to schools on school days, signs which give advance warning of school and signs which warn of children crossing the road.
Seating Position	P6	Location for this occupant in, on, or outside of the motor vehicle prior to the crash.
Second Row - Left Side	P6	Passenger behind driver of motor vehicle or motorcycle. Refer to Appendix N.
Second Row - Middle	P6	Passenger in middle of back seat. Refer to Appendix N.
Second Row - Right Side	P6	Passenger behind right front seat passenger. Refer to Appendix N.
Segway	V8	Low speed vehicle that serves as a personal motorized conveyance.
Separation of Units	C6 V20, V21	When the truck or truck tractor becomes separated from the semi-trailer and/or trailer(s) they are pulling.
Separator	C7	A separator is the area of a trafficway between parallel roads separating travel in the same direction or separating a frontage road from other roads.
Sequence of Events	V20	The events in sequence related to this motor vehicle, including both non-collision as well as collision events regardless of injury and/or property damage.
Shared-Use Path or Trail	P24	A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right of way or an independent right of way. Shared use paths will also be used by pedestrians, skaters, wheelchairs, joggers and other non-motorized users.
Shoulder	C7	That part of a trafficway contiguous with the roadway for emergency use, for accommodation of stopped motor vehicles, and for lateral support of the roadway structure.
Shoulder and Lap Belt Used	P7	Occupant restraint system where both the shoulder belt and lap belt portions are connected to a buckle.
Shoulder Belt Only Used	P7	In a two-part occupant restraint system, only the shoulder belt portion is connected to a buckle.
Shuttle	V22	Private companies providing transportation services for their own employees, non-governmental organizations (such as churches and non-profit groups), and non-educational units of government (such as departments of corrections). (Examples include transporting people from airports,hotels, rental car companies, and business facility to facility.)

Data Term	Element	Definition
Side-Road Number of Lanes	RL16	Number of "through" lanes on the side-road approaches at intersection including all lanes with "through" movement ("through" and left-turn, or "through" and right-turn) but not exclusive turn lanes. Refer to Appendix E.
Sideswipe opposite	C8	Two vehicles traveling in the opposite direction impact one another where the initial engagement does not overlap the corner of either vehicle so that there is no significant involvement of the front or rear surface areas. The impact then swipes along the surface of the vehicle parallel to the direction of travel.
Sideswipe same	C8	Two vehicles traveling in the same direction impact one another where the initial engagement does not overlap the corner of either vehicle so that there is no significant involvement of the front or rear surface areas. The impact then swipes along the surface of the vehicle parallel to the direction of travel.
Single-Unit Truck (3 or more axles)	V28	A power unit that includes a permanently mounted cargo body (also called a straight truck) that has three or more axles.
Single-Unit Truck (2-axle, and GVWR over 10,000 pounds)	V28	A power unit that includes a permanently mounted cargo body (also called a straight truck) that has only two axles and a GVWR of over 10,000 pounds.
Skater	P3	A person wearing in-line roller skates, roller or bladed skates or using a skateboard.
Sleeper Section of Cab (Truck)	P6	Section in back of truck cab where occupants can sleep.
Slope	RL3	The change in the elevation of an element of the roadway per unit of horizontal length may be expressed as a percent or a ratio.
Source of Information	C9	Affiliation of the person documenting the crash information on the crash report.
Sport Utility Vehicle	V8	A motor vehicle other than a motorcycle or bus consisting primarily of a transport device designed for carrying ten or fewer persons, and generally considered a multi-purpose vehicle that is designed to have off-road capabilities. These vehicles are generally four-wheel-drive (4x4) and have increased ground clearance. A utility vehicle has a gross vehicle weight rating (GVWR) of 10,000 pounds or less. Utility vehicles with wheelbases greater than 88 inches are classified by overall width. The wheelbase and overall width should be rounded to the nearest inch. Sizes range from mini, small, midsize, full-size and large. Four-wheel automobiles are not considered utility vehicles.
State-Specific Identifier	V3	An identifier that uniquely identifies a given crash in a state for a specific year.
Stop Sign	V17	A six-sided red sign with "STOP" on it, requiring motor vehicles to come to a full stop and look for on-coming traffic before proceeding with caution.

Data Term	Element	Definition
Stopped in Traffic	V18	Applies to a vehicle which is stopped on the trafficway in an area normally used for vehicle travel (i.e. outside a parking lane). It includes but is not limited to motor vehicles legally stopped for a stop sign or signal, motor vehicles stopped to turn PRIOR to initiating a turn, motor vehicles stopped in traffic due to a slow down in traffic ahead, and motor vehicles illegally stopped in a traffic lane. A vehicle stopped in traffic may or may NOT have a driver and the vehicle engine may or may NOT be running. Most "double parked" vehicles are actually stopped in traffic rather than parked.
Striking	P26	Motor vehicle hitting an object, person or other vehicle at time of the crash.
Struck	V20, P26	Motor vehicle being hit by an object, person or other motor vehicle at time of the crash.
Superelevation	RL2	The degree to which the outside edge of a roadway is higher than the inside edge at a specified point on a curve; the change in elevation per unit distance across the roadway from inside to outside edge.
Swerved or Avoided (due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.)	P13	Defensive driver action to defend against an apparent danger in, on, or due to the condition of the roadway or the presence of a motor vehicle or object or non-motorist in the roadway in order to avoid a crash.
T-Intersection	C16	An intersection where two roadways connect and one roadway does not continue across the other roadway. The roadways form a "T".
Termination Area	C18	Located after the activity area but before traffic resumes normal conditions.
Third Row - Left Side	P6	Passenger seat on left side of third row of motor vehicle or second passenger (excluding driver) on motorcycle. Refer to Appendix N.
Third Row - Middle	P6	Passenger seat in middle of third row of motor vehicle. Refer to Appendix N.
Third Row - Right Side	P6	Passenger seat on right side of third row of motor vehicle. Refer to Appendix N.
Through Lane	V15	Lane that routes traffic straight ahead away from the local or exit lanes. Includes dual-purpose lanes where you can go through or turn.
Through Roadway	C15	A crash would have this code when it is in an Interchange area and it does NOT occur: 1) On an Entrance/Exit ramp 2) In an Intersection or related to an intersection or other junction.
Thrown or Falling Object	C6 V20, V21	A non-collision event where an Object is thrown or falls on or near a motor vehicle in transport at the time of the crash.
Total Lanes in Roadway	V15	Total number of through lanes in the roadway on which this motor vehicle was traveling.

Data Term	Element	Definition
Total Occupants In Motor Vehicle in Transport	V9	Includes injured and uninjured occupants in this motor vehicle involved in the crash, including persons in or on the motor vehicle at the time of the crash.
Total Volume of Entering Vehicles	RL17	Vehicles entering all approaches of an intersection.
Totally Ejected	P9	Occupant's body completely thrown from the motor vehicle as a result of the crash.
Towed Due to Disabling Damage	V24	Damage to the vehicle required it to be removed from the scene of the crash by tow truck or other vehicle.
Towed Due to Reasons Other than Vehicle Damage	V24	The vehicle did not sustain disabling damage, but the vehicle had be removed from the scene of the crash by tow truck or other vehicle for other reasons (e.g., arrest)
Traffic Barrier	C6 V20, V21	A device that provides a physical limitation through which a motor vehicle would not normally pass and is designed to contain or redirect an errant motor vehicle.
Traffic Circle	C16	An intersection of roads where motor vehicles must travel around a circle to continue on the same road or leave on any intersecting road.
Traffic Control Device (TCD) Type	V17	Flashing, school zone, stop, yield, warning, railway crossing signs/signals, etc. which apply to this vehicle.
Traffic Control Signal	V17	Controls traffic movements by illuminating systematically, a green, yellow, or red light or by flashing a single color light.
Traffic Sign Support	C6 V20, V21	A pole, post or other type of support for a traffic sign.
Traffic Signal Support	C6 V20, V21	A pole, post or other type of support for a traffic signal.
Trafficway	C7 V14-V15 P24 RL6	Any land way open to the public as a matter of right or custom for moving persons or property from one place to another. Refer to Appendix E.
Trafficway Description	V14	An indication of whether or not a trafficway is divided and whether it serves one-way or two-way traffic.
Trailing Unit	V28	Occupant of motorcycle caboose or attached trailer of motor vehicle.
Transit/Commuter	V22	A government entity or private company providing passenger transportation over fixed, scheduled routes, within primarily urban geographical areas. (For example; inner-city mass transit bus service.)
Transition Area	C18	Where lanes are shifted or tapered for lane closure.
Transported to Medical Facility By	P27	Type and identity of unit providing transport to medical facility receiving patient.

Data Term	Element	Definition
Tree, Standing	C6 V20, V21	Tree is upright and in the ground. A standing tree is a fixed object as opposed to a fallen tree that is a moveable object.
Truck Tractor (Bobtail)	V28	A motor vehicle consisting of a single motorized transport device designed primarily for pulling semi-trailers.
Truck Tractor/ Doubles	V28	A truck tractor that is pulling a single semi-trailer and one full- trailer.
Truck Tractor/ Semi-Trailer	V28	A truck tractor that is pulling a semi-trailer.
Truck Tractor/ Triples	V28	A truck tractor that is pulling a single semi-trailer and two full- trailers.
Truck/Trailer	V28	A motor vehicle combination consisting of a single-unit truck and a trailer.
Turn Lane	V14-V15 RL12 RL15- RL16	Lane designated for vehicles turning from one trafficway to another. This can include regular left turn or continuous left turn lanes. This excludes through travel lanes.
Two-way Continuous Left Turn Lane	V14	Undivided center lane that facilitates left turns by traffic from both directions.
Unit Number of Motor Vehicle Striking Non-motorist	P26	Identifies the motor vehicle that struck the non-motorist in the crash.
Utility Pole/Light Support	C6 V20, V21	Constructed for the primary function of supporting an electric line, telephone line or other electrical-electronic transmission line or cable. This includes the support poles for roadway lighting.
Utility Zone	C18	See Work Zone.
Van/Enclosed Box	V29	A single-unit truck, truck/trailer, or tractor/semi-trailer having an enclosed body integral to the frame of the motor vehicle.
Vehicle Configuration	V28	Indicates the general configuration of this motor vehicle, e.g. truck, bus, or passenger vehicle carrying hazardous materials.
Vehicle Identification Number (VIN)	V1	A unique combination of alphanumeric characters assigned to a specific motor vehicle and formulated by the manufacturer. When the technology is available, this number can be obtained by using a bar code reader while the motor vehicle is at the scene.
Violation Codes	P14	All motor vehicle related violation codes, if any, that apply to this driver.
Warning Sign	C18 V17	Warn traffic of existing or potentially hazardous conditions on or adjacent to a road.
Width of Median	RL8	Portion of divided highway separating the traveled way for traffic in opposing directions where the crash occurred. If a crash occurs at a mid-block section, the median width is based on the mid-block section. If the crash occurs at an intersection, the median width is based on the median widths at the intersection.

Data Term	Element	Definition
Widths of the Lane(s) and Shoulder(s)	RL7	The width of the lane(s) and of the shoulder(s) at the location of the crash.
Work on Shoulder or median	C18	Type of work zone.
Work Zone	C6, C14 V20, V21	A work zone is an area of a trafficway where construction, maintenance, or utility work activities are identified by warning signs/signals/indicators, including those on transport devices (e.g., signs, flashing lights, channelizing devices, barriers, pavement markings, flagmen, warning signs and arrow boards mounted on the vehicles in a mobile maintenance activity) that mark the beginning and end of a construction, maintenance or utility work activity. It extends from the first warning sign, signal or flashing lights to the END ROAD WORK sign or the last traffic control device pertinent for that work activity. Work zones also include roadway sections where there is ongoing, moving (mobile) work activity such as lane line painting or roadside mowing only if the beginning of the ongoing, moving (mobile) work activity is designated by warning signs or signals.
Work Zone Crash	C18	A Work Zone Crash is a traffic crash in which the first harmful event occurs within the boundaries of a work zone or on an approach to or exit from a work zone, resulting from an activity, behavior or control related to the movement of the traffic units through the work zone. Includes collision and non-collision crashes occurring within the signs or markings indicating a work zone or occurring on approach to, exiting from or adjacent to work zones that are related to the work zone. For example: 1) An automobile on the roadway loses control within a work zone due to a shift or reduction in the travel lanes and crashes into another vehicle in the work zone; 2) A van in an open travel lane strikes a highway worker in the work zone; 3) A highway construction vehicle working on the edge of the roadway is struck by a motor vehicle in transport in a construction zone; 4) a rear-end collision crash occurs before the signs or markings indicating a work zone due to vehicles slowing or stopped on the roadway because of the work zone activity; 5) A pickup in transport loses control in an open travel lane within a work zone due to a shift or reduction in the travel lanes and crashes into another vehicle which exited the work zone; 6) A tractor-trailer approaching an intersection where the other roadway has a work zone strikes a pedestrian outside the work zone because of lack of visibility caused by the work zone equipment. Excludes single-vehicle crashes involving working vehicles not located in trafficway. For example: 1) A highway maintenance truck strikes a highway worker inside the work site; 2) A utility worker repairing the electrical lines over the trafficway falls from the bucket of a cherry picker.
Work Zone/ Maintenance Equipment	C6 V20, V21	A motor vehicle in the act of performing construction, maintenance, or utility work related to the trafficway. This "work" may be located within open or closed portions of the trafficway and motor vehicles performing these activities can be within or outside of the trafficway boundaries.

Data Term	Element	Definition
Work Zone-Related	C18	A crash that occurs in or related to a construction, maintenance, or utility work zone, whether workers were actually present at the time of the crash or not. Work zone-related crashes may also include those involving motor vehicles slowed or stopped because of the work zone, even if the first harmful event was before the first warning sign.
Worn, Travel-Polished Surface	C14	A road surface which is well used and shinny.
Y-Intersection	C16	An intersection where three roadways connect and none of the roadways continue across the other roadways. The roadways form a "Y".
Yield Sign	V17	Three-sided signs that require motor vehicles to give way to other vehicles.

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SUMMARY OF CHANGES TO THE MMUCC GUIDELINE, 2ND EDITION (2003)

The MMUCC Guideline 3rd Edition (2008) includes 107 data elements, 75 of which are intended to be collected at scene. This reflects a net reduction of 4 elements (2 fewer collected at scene) from the MMUCC Guideline 2nd Edition. Only one data element is completely new: Bus Use. This new element is considered essential to the Federal Motor Carrier Safety Administration's mission of analyzing truck- and bus-involved crashes. Two Person elements, Driver Condition at Time of Crash and Non-Motorist Condition at Time of Crash, were combined to form one new element, Condition at Time of Crash. Many data elements were edited for clarification or simplification.

MMUCC GUIDELINE, 2ND EDITION (2003) COMPARED TO MMUCC GUIDELINE, 3RD EDITION (2008)

SUMMARY OF TOTAL DATA ELEMENTS

			Action Taken			
		Original	Delete	Add	Change	Final Total
Crash:	Collected	19	-1	0	-1	18
	Derived	9	0	0	0	9
	Linked	0	0	0	0	0
Vehicle:	Collected	30	-1	+1	0	30
	Derived	0	0	0	0	0
	Linked	0	0	0	0	0
Person:	Collected	28	-2	+1	-1	27
	Derived	1	0	0	0	1
	Linked	6	-1	0	-1	5
Roadway:	Linked	18	-1	0	-1	17
Total		111	-6	+2	-4	107

A summary of the actions taken for each data element is presented below in separate charts for the crash, vehicle, person, and roadway data elements.

CRASH DATA ELEMENTS
Changes Made to the MMUCC GUIDELINE, 2nd Edition (2003)

Crash Collected Data Elements

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
C1	C1	Case Identifier			Name changed from Crash Case Identifier.
C2	C2	Crash Date and Time			No change.
C3	C3	Crash County			No change.
C4	C4	Crash City/Place			No change.
C5	C5	Crash Location			No change.
C6	C6	First Harmful Event		X	Added attributes: 1) **Struck by Falling/Shifting Cargo** under "Collision with Person, Motor Vehicle, or Non-Fixed Object." 2) **Cable Barrier** under "Collision with Fixed Object."
C7	C7	Location of First Harmful Event Relative to the Trafficway			Changed name from "Location of First Harmful Event."
C8	C8	Manner of Crash/ Collision Impact		X	New set of attributes: **Front to Rear** **Front to Front** **Angle** **Sideswipe, Same Direction** **Sideswipe, Opposite Direction** **Rear to Side** **Rear to Rear** **Other** **Unknown**
C9	C9	Source of Information		X	Eliminated second subfield (Law Enforcement Agency Identifier) and added "Identifier" to end of attribute Law Enforcement Agency.
C10		Date and Time Crash Reported to Law Enforcement Agency			Deleted data element.
C11	C10	Weather Conditions			No change.
C12	C11	Light Condition			No change.
C13	C12	Roadway Surface Condition			No change.
C14	C13	Contributing Circumstances, Environment			No change.

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
C15	C14	Contributing Circumstances, Road			No change.
C16	C15	Relation to Junction		X	New set of attributes under new subfield **Junction**: **Non-Junction** **Intersection** **Intersection-Related** **Entrance/Exit Ramp** **Railway Grade Crossing** **Crossover-Related** **Driveway/Alley Access Related** **Shared-Use Path or Trail** **Acceleration/Deceleration Lane** **Through Roadway** **Other location not listed above within an interchange area (median, shoulder and roadside)** **Unknown** Under new subfield **Within Interchange Area**: **Yes** **No** **Unknown**
C17	C16	Type of Intersection			Deleted attributes "Intersection as Part of Interchange" and "Unknown."
C18	C17	School Bus Related			Deleted attribute "Unknown."
C19	C18	Work Zone Related		X	Added fifth subfield **Law Enforcement Present** with attributes: **No** **Officer Present** **Law Enforcement Vehicle Only Present**
Crash Derived Data Elements					
CD1	CD1	Crash Severity			No change.
CD2	CD2	Number of Motor Vehicles Involved			No change.
CD3	CD3	Number of Motorists			No change.
CD4	CD4	Number of Non-Motorists			No change.
CD5	CD5	Number of Non-Fatally Injured Persons			No change.

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
CD6	CD6	Number of Fatalities	X		Changed definition to specify that the "30-day rule" for fatalities means thirty 24-hour periods.
CD7	CD7	Alcohol Involvement	X		First sentence of definition now reads: "Law enforcement suspected or documented that at least one driver or non-motorist involved in the crash had used alcohol."
CD8	CD8	Drug Involvement	X		First sentence of definition now reads: "Law enforcement suspected or documented that at least one driver or non-motorist involved in the crash had used drugs."
CD9	CD9	Day of Week			No change.

VEHICLE DATA ELEMENTS
Changes Made to the MMUCC GUIDELINE, 2nd Edition (2003)

Vehicle Collected Data Elements

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
V1	V1	Motor Vehicle Identification Number			No change.
V2	V2	Motor Vehicle Unit Type and Number			No change.
V3	V3	Motor Vehicle Registration State and Year			No change.
V4	V4	Motor Vehicle License Plate Number			No change.
V5	V5	Motor Vehicle Make			No change.
V6	V6	Motor Vehicle Model Year			No change.
V7	V7	Motor Vehicle Model			No change.
V8	V8	Motor Vehicle Body Type Category		X	Added two new attributes: **All Terrain Vehicle (ATV)** **Snowmobile** Added parenthetical example after attribute "Other" **(e.g., farm equipment, heavy machinery).**
V9	V9	Total Occupants in Motor Vehicle			No change.

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
V10	V10	Special Function of Motor Vehicle in Transport	X		New definition for attribute "Police" added to Glossary.
V11	V11	Emergency Motor Vehicle Use	X		New element definition and new element rationale.
V12	V12	Motor Vehicle Posted/Statutory Speed Limit	X		Changed element name, replacing "Authorized" with "Posted/Statutory." Also replaced "authorized" with "posted/statutory" in the element definition and attribute list.
V13	V13	Direction of Travel Before Crash			No change.
V14	V14	Trafficway Description			Inserted a comma after "Not Divided" in the attribute "Two-Way, Not Divided, with a Continuous Left Turn Lane."
V15	V15	Total Lanes in Roadway			Replaced "Thru" with "Through."
V16	V16	Roadway Alignment and Grade			No change.
V17	V17	Traffic Control Device Type			Modified four attributes to become: **School Zone Sign/Device** ("/Device" inserted in place of plural "s") **Stop Sign** (plural "s" deleted) **Yield Sign** (plural "s" deleted) **Warning Sign** (plural "s" deleted)
V18	V18	Motor Vehicle Maneuver/Action			No change.
V19	V19	Areas of Impact			No change.
V20	V20	Sequence of Events		X	Added attributes: **Cable Barrier** under Collision with Fixed Object. **Reentering Roadway** under Non-Collision Split "Cross Median/Centerline" to become separate attributes **Cross Median** and **Cross Centerline** Changed "Ran Off Road, Right" and "Ran Off Road, Left" to **Ran Off Roadway, Right** and **Ran Off Roadway, Left**

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
V21	V21	Most Harmful Event for this Motor Vehicle		X	Added attributes: 1) **Struck by Falling/Shifting Cargo** under Collision with Person, Motor Vehicle, or Non-Fixed Object. 2) **Cable Barrier** under Collision with Fixed Object.
V22		Underride/Override			Deleted element.
	V22	Bus Use	X	X	New data element with attributes: **Not a Bus** **School** **Transit/Commuter** **Intercity** **Charter/Tour** **Shuttle**
V23	V23	Hit and Run			No change.
V24	V24	Extent of Damage/ Removal	X	X	Changed the element name from "Extent of Damage." Added **Towed Due to Disabling Damage** subfield with attributes: **Yes** **No**
V25	V25	Contributing Circumstances, Motor Vehicle		X	New attributes: **Exhaust System** **Body, Doors**
V26	V26	Motor Carrier Identification		X	New fifth subfield: **Commercial/Non-Commercial** with attributes: **Interstate Carrier** **Intrastate Carrier** **Not in Commerce/Government** **Not in Commerce/Other Truck** Changed the FMCSA reporting requirement in the element rationale to 90 days.
V27	V27	Gross Vehicle Weight Rating / Gross Combination Weight Rating		X	Changed the element name from "Gross Vehicle Weight Rating," eliminated the second subfield, and added the attribute **Not Applicable**. Changed the FMCSA reporting requirement in the element rationale to 90 days.

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
V28	V28	Vehicle Configuration		X	Changed name (deleted "Commercial Motor"). Changed first attribute to: Vehicle 10,000 pounds or less placarded for hazardous materials. Changed the FMCSA reporting requirement in the element rationale to 90 days.
V29	V29	Cargo Body Type		X	Changed name (deleted "Commercial"). Added three new attributes: **Log** **Intermodal Container Chassis** **Vehicle Towing Another Vehicle.** Changed attribute "Pole" to **Pole-Trailer**. Changed the FMCSA reporting requirement in the element rationale to 90 days.
V30	V30	Hazardous Materials (Cargo Only)	X		Data element name changed from "Hazardous Materials Placard (Cargo Only)." Changed the FMCSA reporting requirement in the element rationale to 90 days.

PERSON DATA ELEMENTS
CHANGES MADE TO THE MMUCC GUIDELINE, 2ND EDITION (2003)

PERSON COLLECTED DATA ELEMENTS

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
P1	P1	Date of Birth			No change.
P2	P2	Sex			No change.
P3	P3	Person Type			No change.
P4	P4	Injury Status			No change.
P5	P5	Occupant's Motor Vehicle Unit Number			No change.
P6	P6	Seating Position			No change.

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
P7	P7	Restraint Systems/ Helmet Use	X	X	Data element name changed from "Occupant Protection System Use." First subfield is now **Restraint Systems** with attribute "Helmet Used" removed and new second subfield is **Helmet Use** with attributes: **DOT-Compliant Motorcycle Helmet** **Other Helmet** **No Helmet**
P8	P8	Air Bag Deployed		X	Attributes new attribute: Deployed—Curtain and added new reference **Appendix M. Airbags Diagram**
P9	P9	Ejection			No change.
P10	P10	Driver License Jurisdiction			No change.
P11 and PL2	P11	Driver License Number, Class, CDL and Endorsements		X	Changed data element name from "Driver License Number and Class." Four subfields: **License Number** **Class** **Commercial Driver License (CDL)** **Endorsements** (similar to 2nd Edition data element "PL2. Commercial Motor Vehicle Endorsements")
P12	P12	Driver Name			No change.
P13	P13	Driver Actions at Time of Crash		X	Added attribute: **Ran Stop Sign** Removed "(not included in violation codes)" after **Ran Red Light**. Changed "Disregard Traffic Sign to **Disregard Other Traffic Sign**. Attributes "No Improper Action" and "Other Improper Action" changed to **No Contributing Action** and **Other Contributing Action**, respectively.
P14		Driver Condition at Time of Crash			Data element deleted. See new data element **P16 Condition at Time of Crash**
P15	P14	Violation Codes			Reduced from four to two subfields.

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
P16	P15	Driver Distracted By		X	Revised attributes: **Not Distracted** **Electronic Communication Devices** **Other Electronic Device (navigation device, DVD player, etc.)** **Other Inside the Vehicle** **External Distraction (outside the vehicle)** **Unknown**
	P16	Condition at Time of Crash	X	X	New data element intended to replace two 2nd Edition elements "Driver Condition at Time of Crash" and "Non-Motorist Condition at Time of Crash" Attributes: **Apparently Normal** **Physically Impaired** **Emotional (depression, angry, disturbed, etc.)** **Ill (sick) or Fainted** **Asleep or Fatigued** **Under the Influence of Medications/ Drugs/Alcohol** **Other** **Unknown**
P17	P17	Law Enforcement Suspected Alcohol Use			No change.
P18	P18	Alcohol Test		X	Added attribute **Unknown if Tested** to subfield 1. Changed attribute "None Given" to **Test not Given** in subfield 1. Deleted attribute "Serum" from subfield 2.
P19	P19	Law Enforcement Suspected Drug Use			No change.
P20	P20	Drug Test			Deleted attribute "Serum" from subfield 2.
P21	P21	Non-Motorist Number			No change.

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
P22	P22	Non-Motorist Action / Circumstance Prior to Crash	X	X	Changed element name from "Non-Motorist Action Prior to Crash." New set of attributes: **Crossing roadway** **Waiting to cross roadway** **Walking/Cycling along roadway with traffic (in or adjacent to travel lane)** **Walking/Cycling along roadway against traffic (in or adjacent to travel lane)** **Walking/Cycling on sidewalk** **In roadway – other (working, playing, etc.)** **Adjacent to roadway (e.g., shoulder, median)** **Going to or from school (K-12)** **Working in trafficway (incident response)** **Other** **None** **Unknown**
P23	P23	Non-Motorist Actions / Circumstances at Time of Crash	X	X	Changed element name from "Non-Motorist Actions at Time of Crash." New set of attributes: **No improper action** **Dart/dash** **Failure to yield right-of-way** **Failure to obey traffic signs, signals, or officer** **In roadway improperly (standing, lying, working, playing)** **Disabled vehicle related (working on, pushing, leaving/approaching)** **Entering/exiting parked/standing vehicle** **Inattentive (talking, eating, etc.)** **Not visible (dark clothing, no lighting, etc.)** **Improper turn/merge** **Improper passing** **Wrong-way riding or walking** **Other** **Unknown**
P24		Non-Motorist Condition at Time of Crash			Data element deleted. See new data element **P16 Condition at Time of Crash**

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
P25	P24	Non-Motorist Location at Time of Crash	X	X	New set of attributes: **Intersection – marked crosswalk** **Intersection – unmarked crosswalk** **Intersection – other** **Midblock – marked crosswalk** **Travel lane – other location** **Bicycle lane** **Shoulder/roadside** **Sidewalk** **Median/crossing island** **Driveway access** **Shared-use path or trail** **Non-trafficway area** **Other** **Unknown**
P26	P25	Non-Motorist Safety Equipment			No change.
P27	P26	Unit Number of Motor Vehicle Striking Non-Motorist			No change.
P28	P27	Transported to Medical Facility By		X	Split attribute "EMS" in the first subfield into two new attributes: **EMS Air** **EMS Ground** Changed name of fourth subfield to: **Name or number of medical facility receiving patient.**

Person Derived Data Elements

PD1	PD1	Age			No change.

Person Linked Data Elements

PL1	PL1			X	Added attributes: **Learners Permit Restrictions** **Intermediate License Restrictions** Deleted attribute: "Must be accompanied by an adult."
PL2		Commercial Motor Vehicle Endorsements			Deleted data element. Endorsements are now a subfield of **P11 Driver License Number, Class, CDL and Endorsements.**
PL3	PL2	Driver License Status			No change.
PL4	PL3	Drug Test Result			No change.

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
PL5	PL4	Injury Area			No change.
PL6	PL5	Injury Description			No change.

ROADWAY DATA ELEMENTS
Changes Made to the MMUCC GUIDELINE, 2nd Edition (2003)

Roadway Linked Data Elements

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
RL1	RL1	Bridge/Structure Identification Number			No change.
RL2	RL2	Roadway Curvature	X		Deleted "Unit of Measure" subfield and added sentence to definition specifying that the unit of measure should be feet.
RL3	RL3	Grade			No change.
RL4	RL4	Part of National Highway System			No change.
RL5	RL5	Roadway Functional Class			No change.
RL6	RL6	Annual Average Daily Traffic		X	Change name of **subfield 1 to AADT Year** and **subfield 2 to AADT**. Added **subfield 3 Truck (over 10,000 lbs) Percentage** and **subfield 4 Motorcycle Percentage**.
RL7	RL7	Widths of the Lane(s) and Shoulder(s)	X	X	Subfield 2 was split into **Right Shoulder Width** and **Left Shoulder Width**.
RL8	RL8	Width of Median	X		Added clarification to definition.
RL9	RL9	Access Control			No change.
RL10	RL10	Railway Crossing ID			No change.
RL11	RL11	Roadway Lighting		X	Attributes "Spot Illumination" and "Continuous Lighting" were split into: **Spot Illumination, One Side** **Spot Illumination, Both Sides** **Continuous Lighting One Side** **Continuous Lighting Both Sides**.

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
RL12	RL12	Pavement Markings, Longitudinal		X	Redesigned to conform with MMIRE. Attributes for new **subfield 1 Edgeline Presence/Type:** **No marked edgeline** **Standard width edgeline** **Wide edgeline** **Other** Attributes for new **subfield 2 Centerline Presence/Type:** **No marked centerline** **Standard centerline markings** **Centerline with centerline rumble strip** Attributes for new **subfield 3 Lane Line Markings:** **No lane markings** **Standard lane line** **Wide lane line**
RL13	RL13	Presence/Type of Bicycle Facility		X	Name changed (from "Bikeway") and two new subfields to conform with MMIRE. New **subfield 1 Facility** attributes: **None** **Wide Curb Lane** **Marked Bicycle Lane** **Unmarked Paved Shoulder** **Separate Parallel Path/Trail** **Unknown** New **subfield 2 Signed Bicycle Route** attributes: **Yes** **No** **Unknown** **Not Applicable**
RL14		Delineator Presence			Deleted data element.
RL15	RL14	Traffic Control Type at Intersection			Three attributes deleted: "Stop Signs on Mainline Only" "Four-Way Flasher (red on mainline)" "Yield Signs on Mainline Only" References to "Four-Way" replaced with "All-Way" (e.g., **All-Way Stop Signs**)
RL16	RL15	Mainline Number of Lanes at Intersection			No change.

Element (2003)	Element (2008)	Element Name	New Def.	New Attrib.	Comments
RL17	RL16	Side-Road Number of Lanes at Intersection			No change.
RL18	RL17	Total Volume of Entering Vehicles		X	Added two subfields: **AADT Year** **AADT**

DATE AND TIME FORMATS

DATE

Numbers are always right justified. Use leading zeroes when necessary.

Subfield 1: Year

nnnn	Year
7777	Permanent
8888	Indefinite
9999	Unknown

Subfield 2: Month

01	January
02	February
03	March
04	April
05	May
06	June
07	July
08	August
09	September
10	October
11	November
12	December
77	Permanent
88	Indefinite
99	Unknown

Subfield 3: Day

nn	Day of Month
77	Permanent
88	Indefinite
99	Unknown

EXAMPLES: The fifth of March, nineteen ninety-two is coded 19920305

TIME

Subfield 1: Hour

nn	0-23, representing the time on a 24-hour clock
99	Unknown

Subfield 2: Minute

nn	Minute
99	Unknown

EXAMPLES: 11:55 p.m. would be coded 2355, Midnight is coded 0000 and is the beginning of a new day, not the end of the preceding day.

Source: ANSI D20.1 Data Element dictionary for Traffic Records Systems

Appendix D

State and Province Codes[1]

Source: Numeric State and province codes based on FIPS PUB 10-3. Alphabetic national codes from FIPS PUB 10-3. Alphabetic and numeric codes for the states and outlying areas of the United States from FIPS PUB 5-2 (ANSI X3, 38-R1994), except for Provinces of Quebec (abbreviated QC) and Saskatchewan (abbreviated SK) source for province information came from provinces.

United States (US)

AL	01	Alabama
AK	02	Alaska
AZ	04	Arizona
AR	05	Arkansas
CA	06	California
CO	08	Colorado
CT	09	Connecticut
DE	10	Delaware
DC	11	District of Columbia
FL	12	Florida
GA	13	Georgia
HI	15	Hawaii
ID	16	Idaho
IL	17	Illinois
IN	18	Indiana
IA	19	Iowa
KS	20	Kansas
KY	21	Kentucky
LA	22	Louisiana
ME	23	Maine
MD	24	Maryland
MA	25	Massachusetts
MI	26	Michigan
MN	27	Minnesota
MS	28	Mississippi
MO	29	Missouri
MT	30	Montana
NE	31	Nebraska
NV	32	Nevada
NH	33	New Hampshire
NJ	34	New Jersey
NM	35	New Mexico
NY	36	New York
NC	37	North Carolina
ND	38	North Dakota
OH	39	Ohio
OK	40	Oklahoma
OR	41	Oregon
PA	42	Pennsylvania
RI	44	Rhode Island
SC	45	South Carolina
SD	46	South Dakota
TN	47	Tennessee
TX	48	Texas
UT	49	Utah
VT	50	Vermont
VA	51	Virginia
WA	53	Washington
WV	54	West Virginia
WI	55	Wisconsin
WY	56	Wyoming
DS	57	The U.S. Department of State

AS	60	American Samoa
PZ	61	Panama Canal Zone
FM	64	Federated States of Micronesia
GU	66	Guam
MP	69	Northern Mariana Islands
PW	70	Palau
PR	72	Puerto Rico
UM	74	U.S. Minor Outlying Islands
MH	75	Marshall Islands
VI	78	Virgin Islands of the U.S.
WK	79	Wake Island

[1] Source: GSA Geographic Locator Codes (GLC) located at www.gsa.gov

Canada (CN)

AB	01	Alberta	ON	08	Ontario
BC	02	British Columbia	PE	09	Prince Edward Island
MB	03	Manitoba	QC	10	Quebec
NB	04	New Brunswick	SK	11	Saskatchewan
NF	05	Newfoundland	YT	12	Yukon Territory
NT	06	Northwest Territory	NU	13	Nunavut
NS	07	Nova Scotia			

Mexico (MX)

AG	01	Aguascalientes	MR	17	Moreios
BA	02	Baja California Norte	NA	18	Nayarit
BJ	03	Baja California Sur	NL	19	Nuevo Leon
CM	04	Campeche	OA	20	Oaxaca
CI	05	Chiapas	PB	21	Puebla
CH	06	Chihuahua	QU	22	Queretero de Arteaga
CU	07	Coahuila de Zaragoza	QR	23	Quintana Roo
CL	08	Colima	SL	24	San Luis Potosi
DF	09	Distrito Federal	SI	25	Sinaloa
DO	10	Durango	SO	26	Sonora
GT	11	Guanajuato	TB	27	Tabasco
GR	12	Guerrero	TA	28	Tamaulipas
HL	13	Hidalgo	TL	29	Tlaxcala
JL	14	Jalisco	VC	30	Veracruz-Llava
MX	15	Mexico	YU	31	Yucatan
MC	16	Michoacan de Ocampo	ZA	32	Zacatecas

Other Jurisdictions (OT)

OT	99	Jurisdictions other than States or provinces of the United States, Canada, and Mexico (includes Indian Reservations)

Note: Code with country and State or province. Where there is no chance of ambiguity, State or province codes may be used without the country code. (Note that State and province codes are unique within each country but may be duplicated in other countries.)

EXAMPLE: Alabama may be coded as USAL or US01. Chihuahua may be coded as MSCH or MX06.

Federal Information Processing Standards (FIPS) Codes for Locations

Standardized codes for States, counties, cities/towns are published by the National Bureau of Standards in the Federal Information Processing Standards (FIPS) Register.

FIPS Publication 5-2 (May 1987)
Codes for States, District of Columbia, and outlying areas

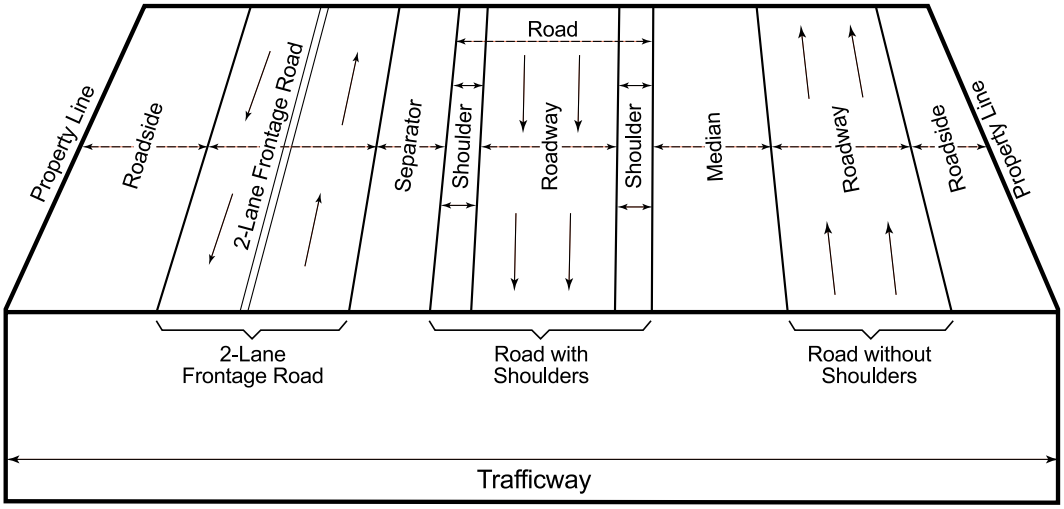
FIPS Publication 6-4 (August 31, 1990)
Codes for Counties, County Equivalents of the States of United States, District of Columbia

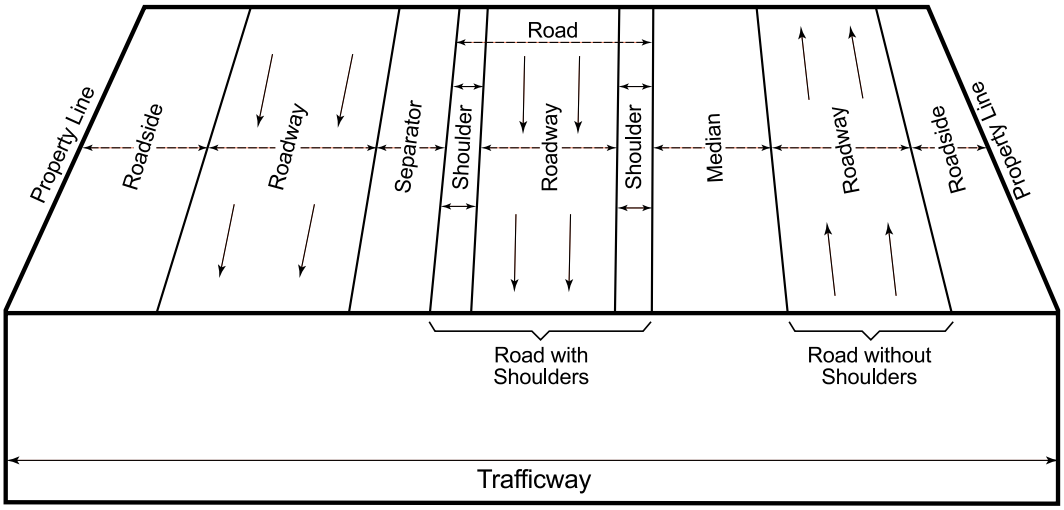
FIPS Publication 8-6 (March 1995)
Codes for:
- Metropolitan Statistical Areas (MSAs)
- Consolidated Metropolitan Statistical Areas (CMSAs)
- Primary Metropolitan Statistical Areas (PMASs)
- New England County Metropolitan Areas (NeCMAs)

FIPS Publication 10-4 (April 1995)
Codes for Countries, Dependencies, Areas of Special Sovereignty, and Their Principal Administrative Divisions
(Note: For change notices to FIPS 10-4, refer to http://earth-info.nga.mil/gns/html/fips _ files.htm)

Appendix E

Diagram of the Trafficway[2]



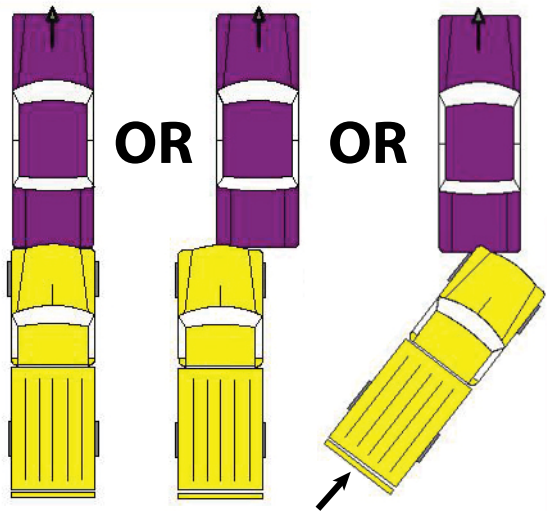


[2] Source: ANSI D16.1-2007 Manual on Classification of Motor Vehicle Traffic Accidents, Seventh Edition

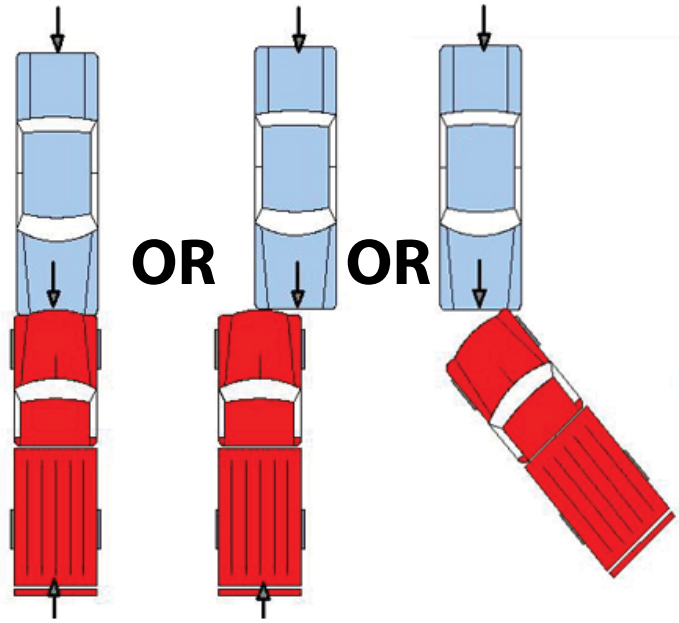
MANNER OF COLLISION

- Front to rear
- Front to front
- Angle
- Sideswipe, same direction
- Sideswipe, opposite direction
- Rear to side
- Rear to rear
- Other
- Unknown

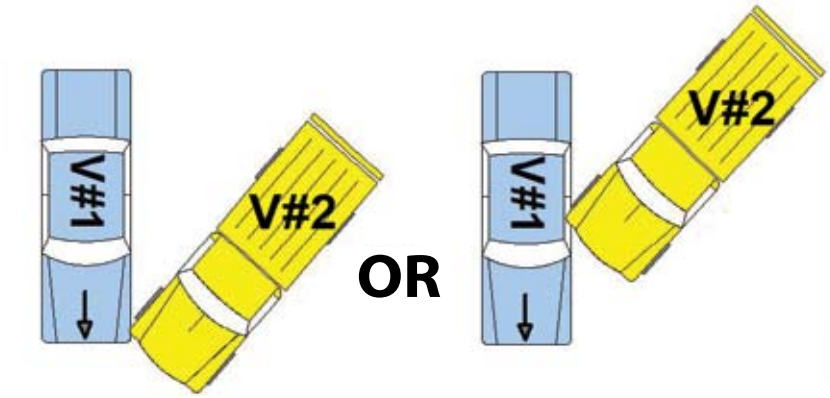
FRONT TO REAR:

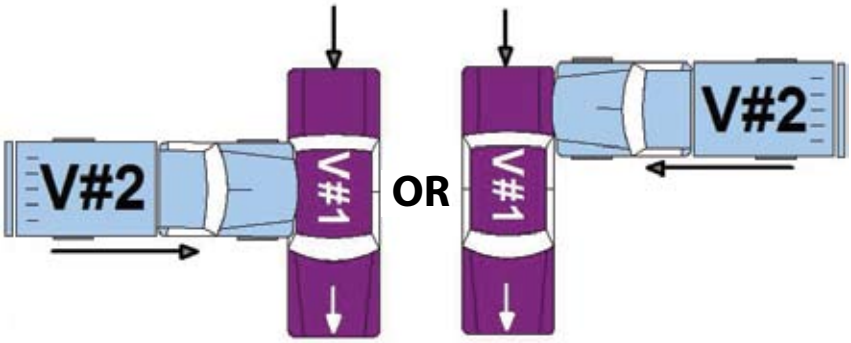


FRONT TO FRONT:

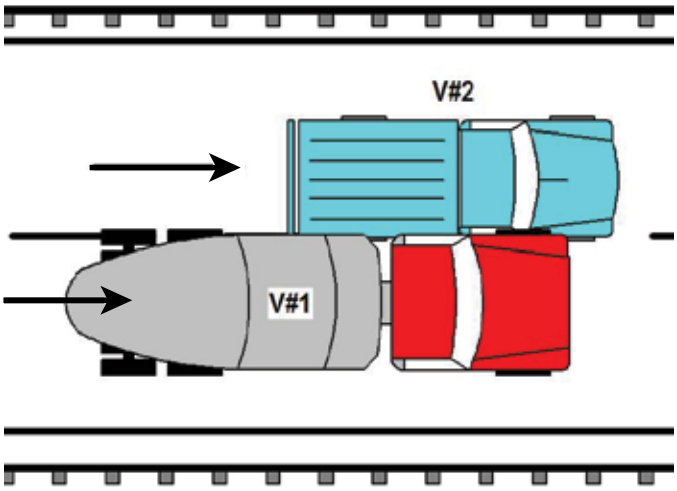


Angle:

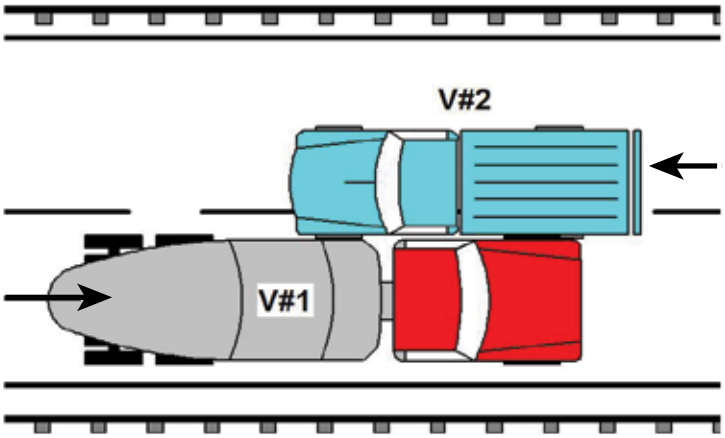




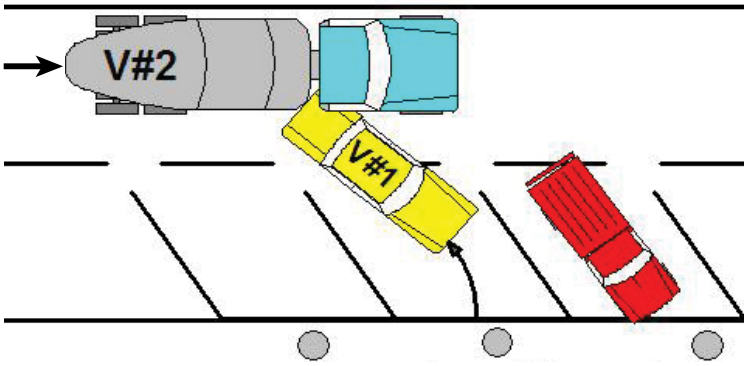
Sideswipe, same direction:



Sideswipe, opposite direction:



Rear to side:



Rear to rear:

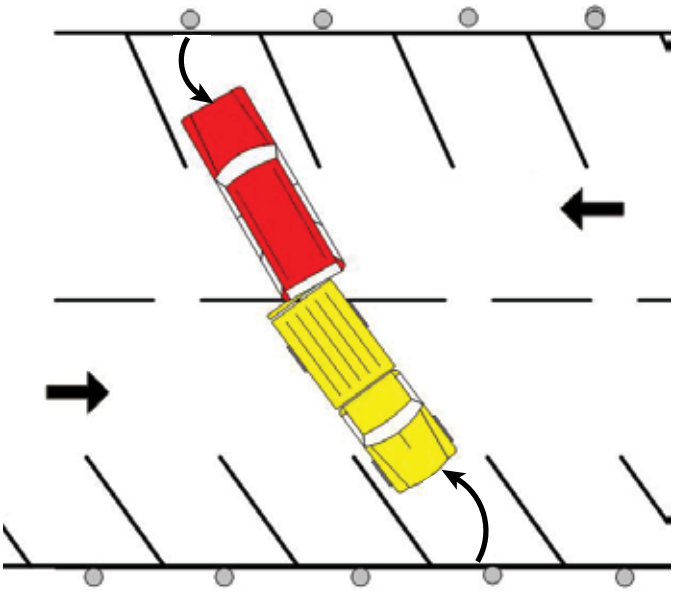
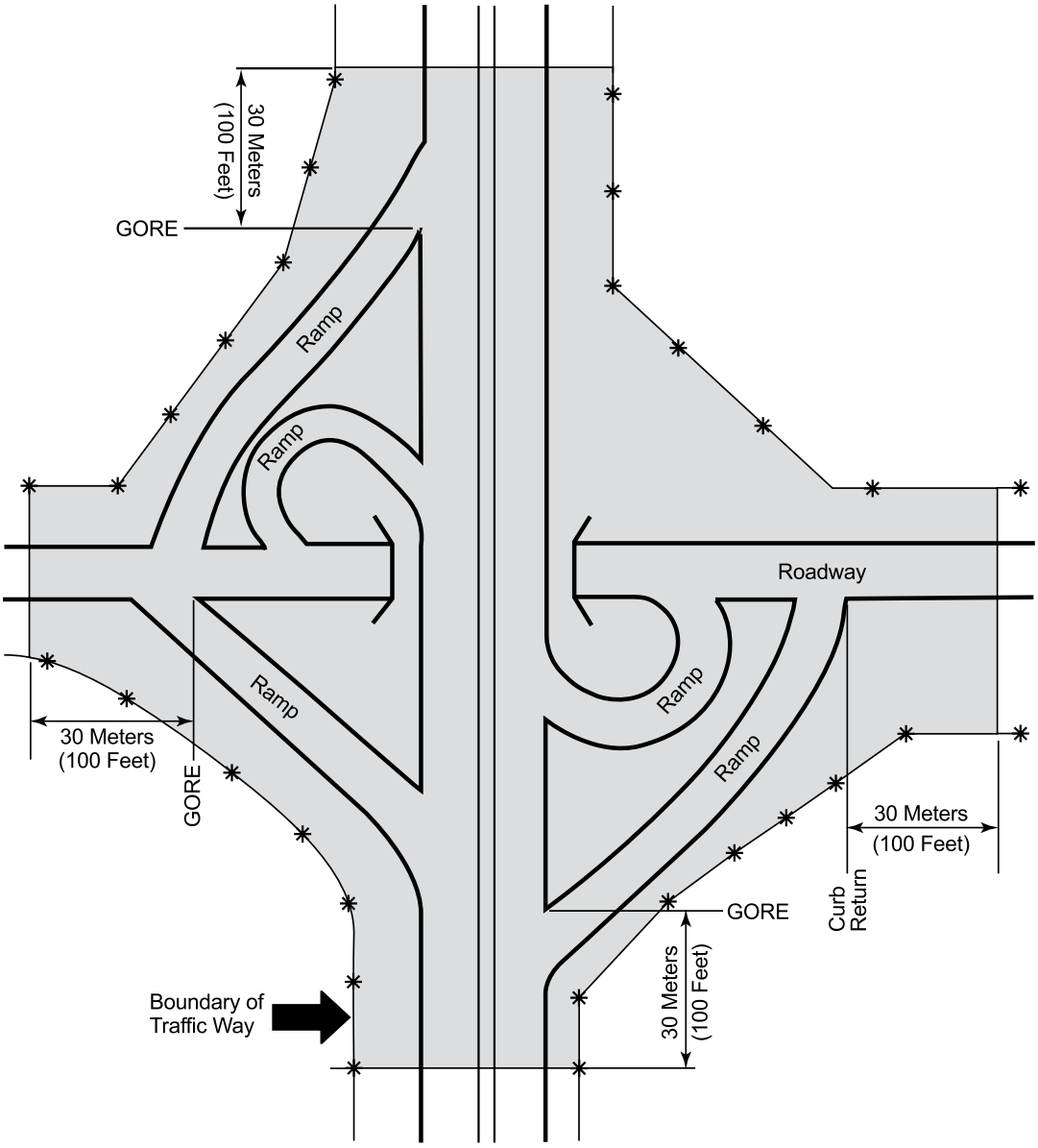


DIAGRAM OF AN INTERCHANGE[3]

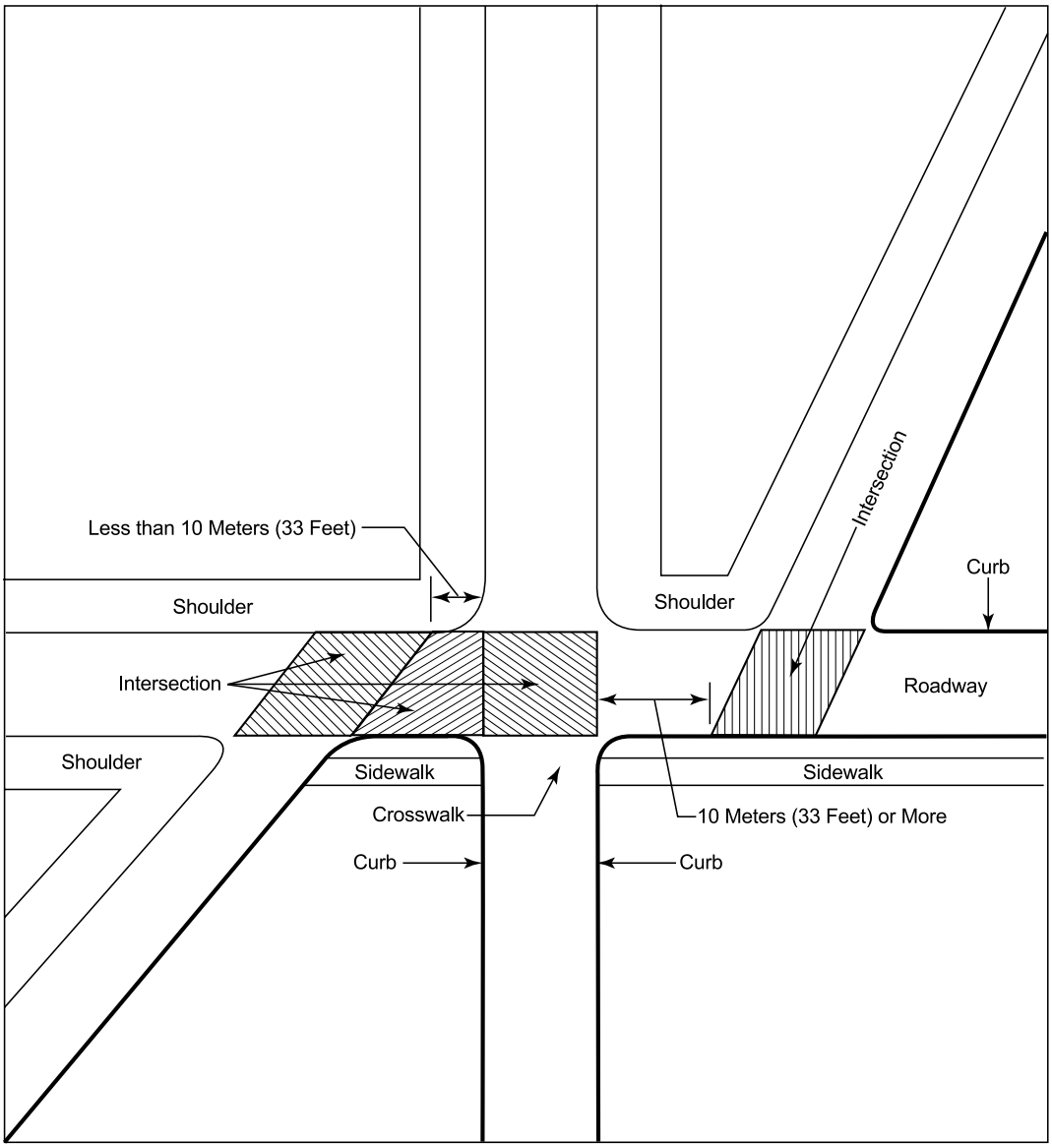
Crashes which occur within the shaded areas are Interchange Crashes.



[3] Source: ANSI D16.1-2007 Manual on Classification of Motor Vehicle Traffic Accidents, Seventh Edition

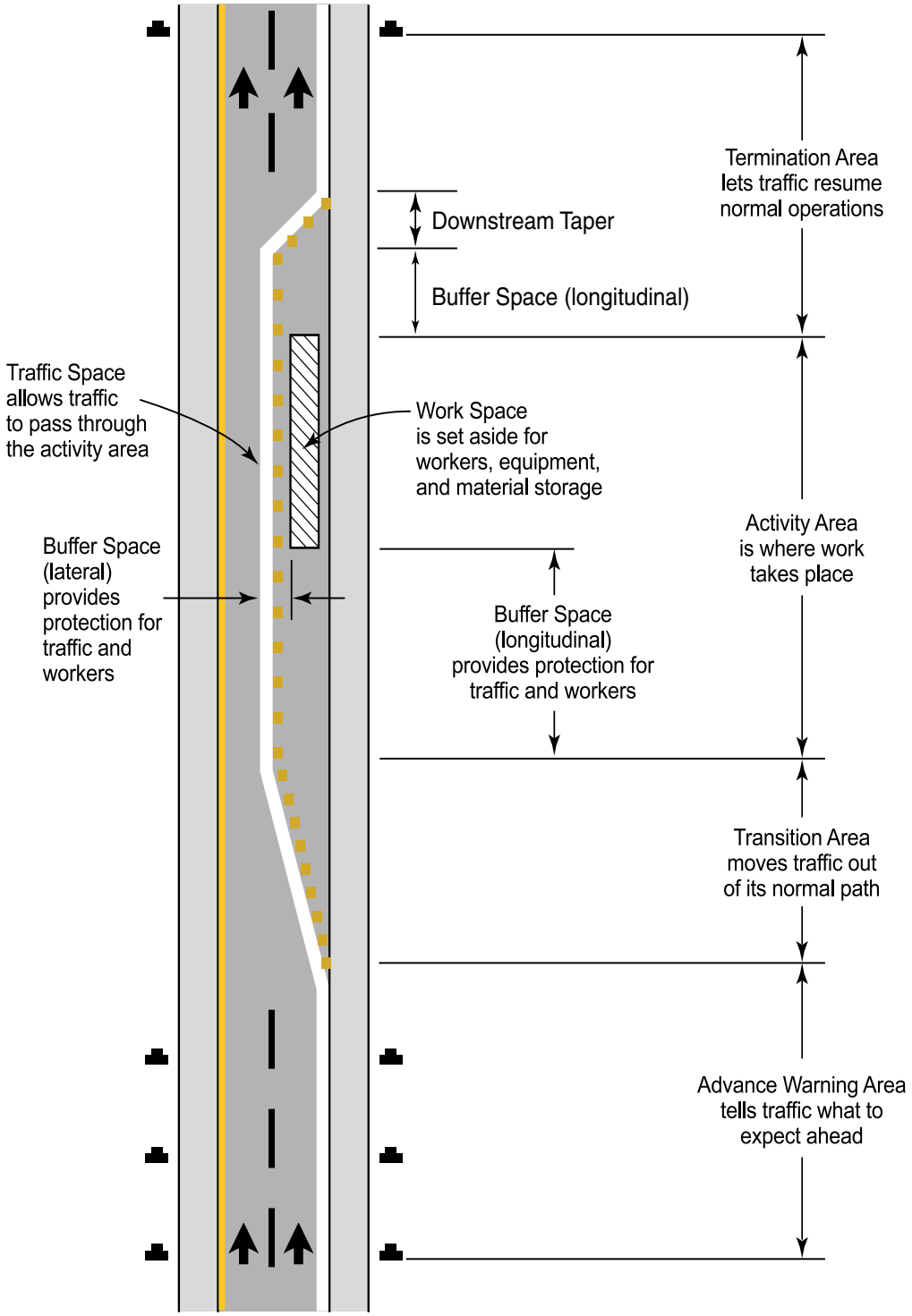
Appendix H

Diagram of an Intersection[4]



[4] Source: ANSI D16.1-2007 Manual on Classification of Motor Vehicle Traffic Accidents, Seventh Edition

DIAGRAM OF A WORK ZONE AREA[5]



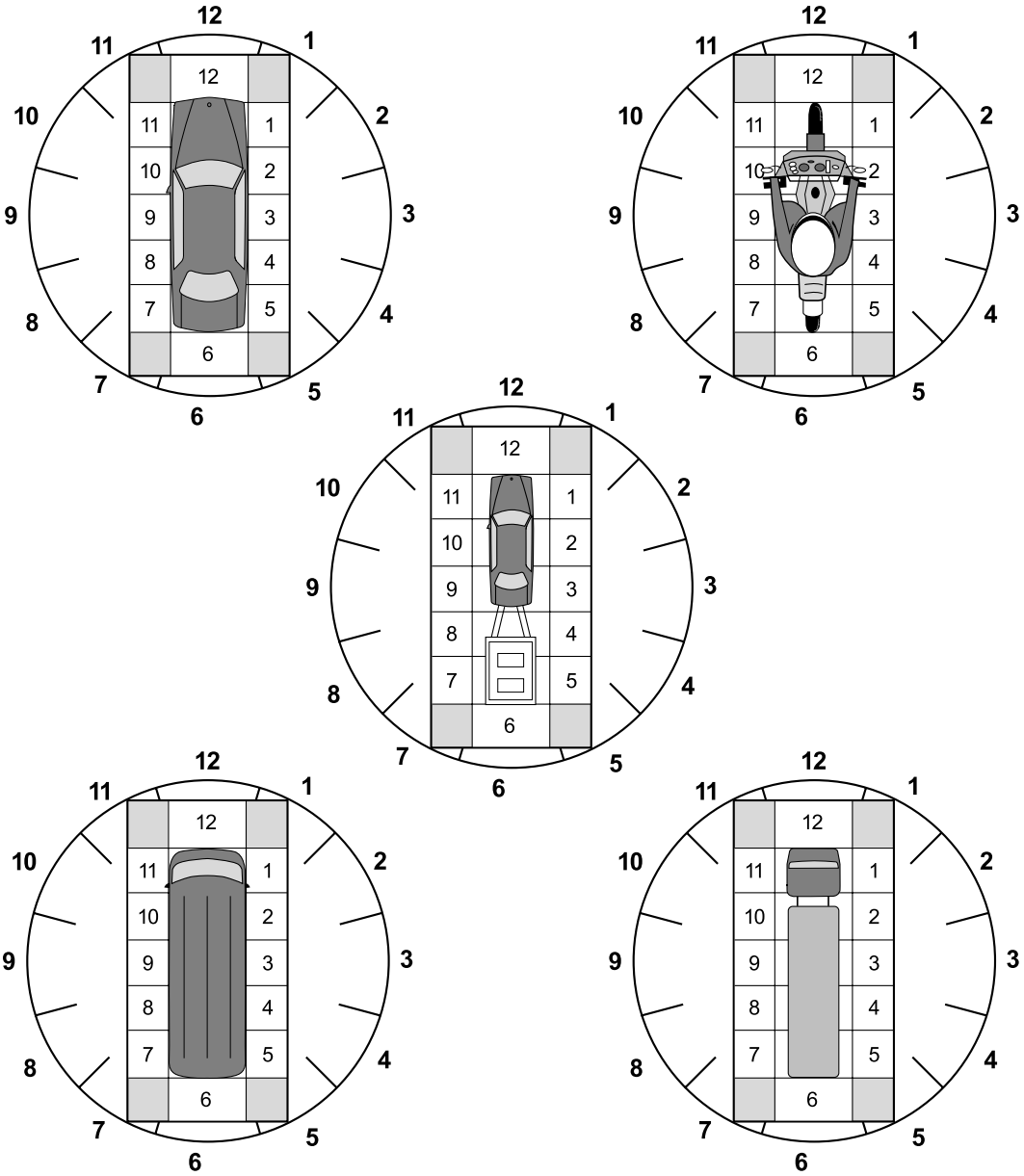
Legend:

Direction of travel

Source: FHWA

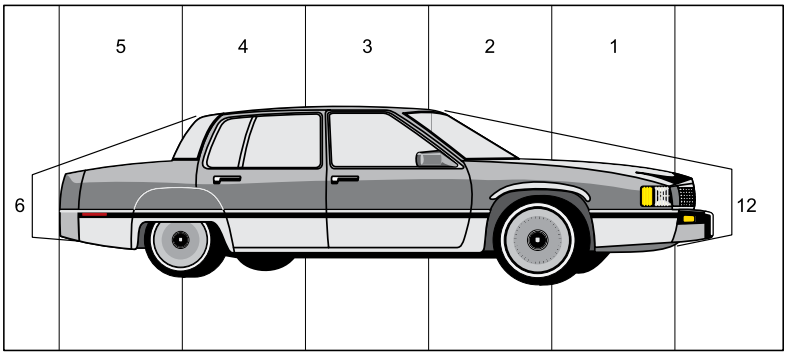
[5] Source: FHWA

CLOCKPOINT DIAGRAMS FOR DIFFERENT TYPES OF MOTOR VEHICLES[6]

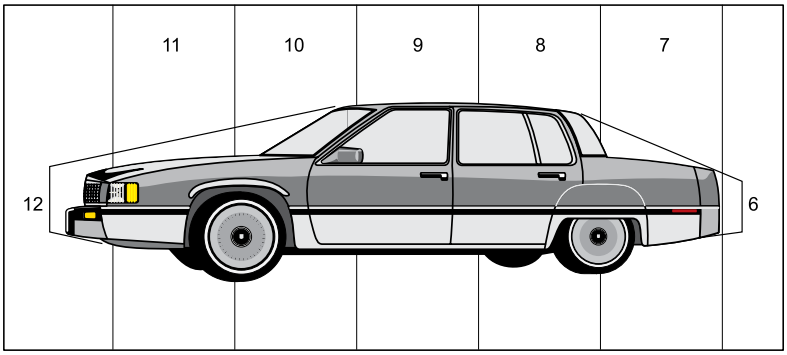


[6] Source: FARS Coding Manual

Impact Points[7]



Right Side



Left Side

[7] Source: FARS Coding Manual

DEFINITIONS FOR TRUCK CONFIGURATIONS AND PLACARDS[8]

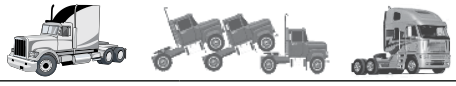
VEHICLE CONFIGURATION

Bus (9-15 Seats, Including Driver)

Truck/Trailer (Single-Unit Truck Pulling a Trailer)

Bus (16 or More Seats, Including Driver)

Truck Tractor (Bobtail)



Single-Unit (2 Axles, 6 Tires)

Tractor/Semi Trailer (One Trailer)

Single-Unit (3 or More Axles)

Truck Tractor/Double (Two Trailers)

Truck Tractor/Triple (Three Trailers)

CARGO BODY TYPE

Bus (9-15 Seats, Including Driver)

Dump

Pole

Bus (16 or More Seats, Including Driver)

Concrete Mixer

Log

Van/Enclosed Box

Auto Transporter

Intermodal Chassis

Cargo Tank

Garbage/Refuse

Vehicle Towing Motor Vehicle

Flat Bed

Grain, Chips, Gravel

No Cargo Body

[8] Source: FMCSA

Truck and Bus Crashes Reportable to FMCSA

Report a Traffic Crash If It Involves…

Any truck that has a gross vehicle weight rating (GVWR) of more than 10,000 pounds or a gross combination weight rating (GCWR) of more than10,000 pounds used on public highways

OR

Any motor vehicle with seating to transport nine (9) or more people, including the driver's seat

OR

Any motor vehicle displaying a hazardous materials placard (regardless of weight)

…AND Results In

A fatality: any person(s) killed in or outside of any vehicle (truck, bus, car, etc.) involved in the crash or who dies within 30 days of the crash as a result of an injury sustained in the crash

OR

An injury: any person(s) injured as a result of the crash who immediately receives medical treatment away from the crash scene

OR

A tow-away: any motor vehicle (truck, bus, car, etc.) disabled as a result of the crash and transported away from the scene by a tow truck or other vehicle

Crashes involving commercial motor vehicles and some non-commercial motor vehicles must be reported on a State's crash report and to the FMCSA. A commercial motor vehicle is any motor vehicle that is used on a trafficway for the transportation of goods, property, or people in interstate or intrastate commerce.

Included:

Here are some examples of commercial and noncommercial operations that, when involved in a crash, should be included if they meet the criteria on the front of this card.

Examples:

1. A trucking company or individual owner/operator hauling the goods of a business for a fee.
2. A manufacturing company hauling its own products to retail stores, or a retail store delivering products to its buyers.
3. A farm hauling its produce to market.
4. A motorcoach, airport shuttle, or hotel-owned shuttle bus or limousine service transporting passengers.
5. A government-owned truck or bus.
6. A school bus transporting students to/from school or school-related activities.
7. A rented or leased truck used to transport either commercial or personal goods.
8. A truck or truck tractor owned and operated for commerce being used for a personal trip or to transport personal goods.

Excluded:

Here are some examples of non-commercial operations that, when involved in a crash, should not be included.

Examples:

1. A non-commercial horse owner transporting hay bales from his pasture on one side of the road to his stables on the other side of the road in a truck with a GVWR greater than10,000 pounds.
2. A homeowner carrying recyclables to a drop-off point in a personally owned pickup truck with a GVWR greater than 10,000 pounds.
3. A family of 10 persons taking a trip in the family's 12-person van.
4. A personally owned pickup truck hauling a boat, horse or utility trailer with a GCWR greater than 10,000 pounds not operating in commerce or as part of a business.
5. A family operating a personally owned and registered recreational vehicle or motor home.

How to Find the Responsible Carrier and Correct U.S. DOT

EXAMPLE 1: John Smith owns his own truck tractor, operating under John Smith Trucking. He contracts with White Manufacturing to take one of its trailers loaded with its goods from New York to Los Angeles.

Who is the Motor Carrier:
A. John Smith?
B. White Manufacturing?

John Smith is the motor carrier, because he is the entity that has agreed to carry this particular load.

EXAMPLE 2: John Smith, driving his truck tractor, utilizes a cargo broker, K&S Trucking, to obtain goods from Intermodal Inc. shipping company for his return trip back to New York.

Who is the Motor Carrier:
A. John Smith?
B. K&S Trucking?
C. Intermodal Inc.?

John Smith is the motor carrier, because K&S transferred the load to him.

EXAMPLE 3: John Smith, driving his truck tractor, leases his services to Polyester Chemical Company. Polyester directs Smith to deliver a semi-trailer from New York to St. Louis.

Who is the Motor Carrier:
A. John Smith?
B. Polyester?

In this case Polyester is the motor carrier, because it told Mr. Smith to take the particular load.

EXAMPLE 4: John Smith is driving a tractor/semi-trailer owned and operated by ABC Trucking.

Who is the Motor Carrier:
A. John Smith?
B. ABC Trucking?

ABC Trucking is the motor carrier. John Smith is just a driver for ABC Trucking.

EXAMPLE 5: John Smith is driving a tractor owned by ABC Trucking, which has been leased to XYZ Trucking. XYZ uses the tractor to pull XYZ trailers in its regular shipping service.

Who is the Motor Carrier:
A. John Smith?
B. ABC Trucking?
C. XYZ Trucking?

In this case XYZ is the motor carrier, because XYZ is directing the carrying of the load.

How to Find the Responsible Carrier and Correct U.S. DOT

SIDE OF THE VEHICLE
In most cases, this is good for name and number. Look for a number preceded by the letters: USDOT.

DON'T STOP
...keep on moving...
The information on the side of the truck may not be the U.S. DOT #, name, or address of the responsible motor carrier.

DRIVER INTERVIEW
1. Is the vehicle leased or rented?
2. Who is the motor carrier responsible for this load?
3. Who is directing and controlling the movement of this vehicle?
4. Where is the motor carrier's principal place of business?

LEASE AGREEMENT
identifies the name of the lessee and their U.S. DOT #.

DRIVER'S LOG
contains the name of the motor carrier and the city and State for the carrier's principal place of business.

SHIPPING PAPERS provide the name of the motor carrier responsible for the load, but not the carrier's U.S. DOT #.

NOTE: VEHICLE REGISTRATION
Generally good for identifying owner or registrant.
CAREFUL: This may not be the responsible carrier!

FMCSA WEB SITE: http://safer.fmcsa.dot.gov/CompanySnapshot.aspx is an excellent source for verifying a motor carrier's U.S. DOT #, legal name, "doing business as" name, physical address, and phone number.

Federal Motor Carrier Safety Administration

U.S. Department of Transportation
www.fmcsa.dot.gov

Reporting Hazardous Materials Information

ACCURATE REPORTING SAVES LIVES

Data you collect is used to calculate risk assessment, determine response methods, and develop regulations. Vehicles carrying hazardous materials are required to carry shipping papers containing the HM Class and ID number (or name). Your Accident or Collision Report/Supplement may ask the following hazardous materials questions (exact wording will vary by State):

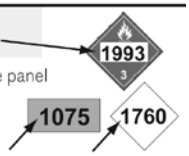
1. DOES THE VEHICLE HAVE A HAZARDOUS MATERIALS PLACARD? YES ● NO ○

Placards should be on all four sides of the vehicle. For containers with bulk packages inside, if the required ID# marking is not visible, the transport vehicle must be marked on each side and each end.

Some Common Placards

2. ENTER THE FOUR-DIGIT NUMBER (OR NAME) FROM THE PLACARD 1 9 9 3

The four-digit number may be on an orange panel or a white "square-on-point" panel. If no four-digit number appears on the placard, enter the Placard Name.



3. ENTER THE HAZARDOUS MATERIALS CLASS NUMBER FROM THE BOTTOM OF THE PLACARD 3

The Class Number can be a one- or two-digit number with a decimal in the middle. **5.1** It is critical for identifying and studying various types of hazardous materials involved in traffic crashes.

4. WAS HAZARDOUS CARGO RELEASED? YES ● NO ○

The intent of this question is to determine whether any of the **placarded material** was released or escaped from its transport container into the environment. Fuel or oil carried by the vehicle for its own use is NOT considered cargo and should not be reported in this section.

Nine Classes of Hazardous Materials

Class 1: Explosives
Divisions: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6

Class 2: Gases
Divisions: 2.1, 2.2, 2.3

Class 3: Flammable Liquid and Combustible Liquid

Class 4: Flammable Solid, Spontaneously Combustible, and Dangerous When Wet
Divisions 4.1, 4.2, 4.3

Class 5: Oxidizer and Organic Peroxide
Divisions 5.1, 5.2

Class 6: Poison (Toxic) and Poison Inhalation Hazard

Class 7: Radioactive

Class 8: Corrosive

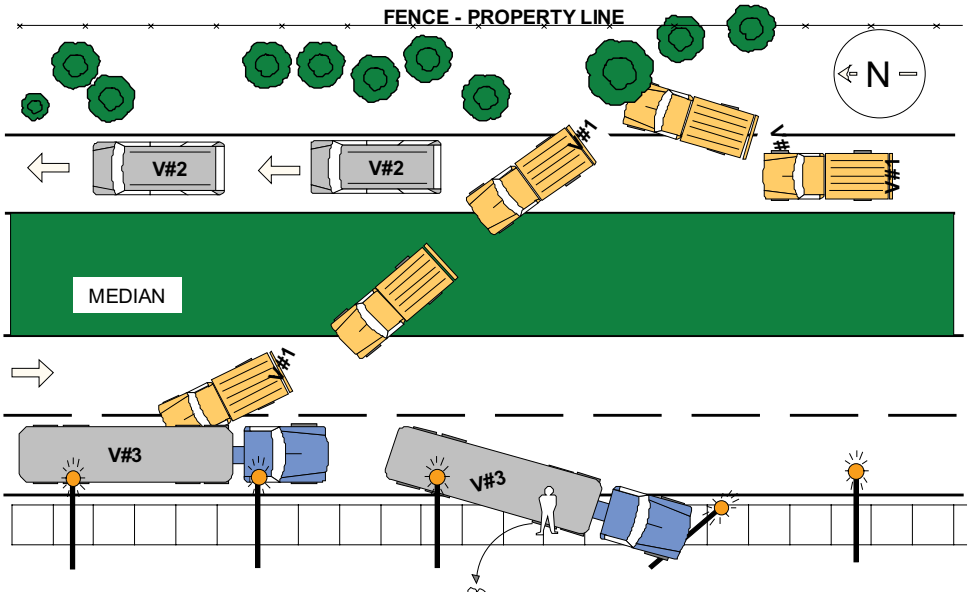
Class 9: Miscellaneous

Dangerous

Federal Motor Carrier Safety Administration

U.S. Department of Transportation
www.fmcsa.dot.gov

SEQUENCE OF EVENTS EXAMPLES



NARRATIVE

V#1, a pickup, was traveling in the right-hand lane of northbound SR7 following V#2, a van. V#2 slowed suddenly. D#1 did not notice V#2 slowing in time and swerved to the right to avoid striking V#2. V#1 struck a tree off the right side of the road. V#1 veered off the tree and proceeded to cross over the center median grass striking V#3 traveling in the right-hand southbound lane injuring the driver of V#1.

After being struck by V#1, V#3 struck the curb on the right-hand side of the road, crossed over the sidewalk, and struck a pedestrian and then a light pole. V#2 did not know the accident had occurred and kept on driving.

VEHICLE 2 FROM DIAGRAM:

There would be no Sequence of Events recorded for this vehicle as it was a "non-contact" vehicle.

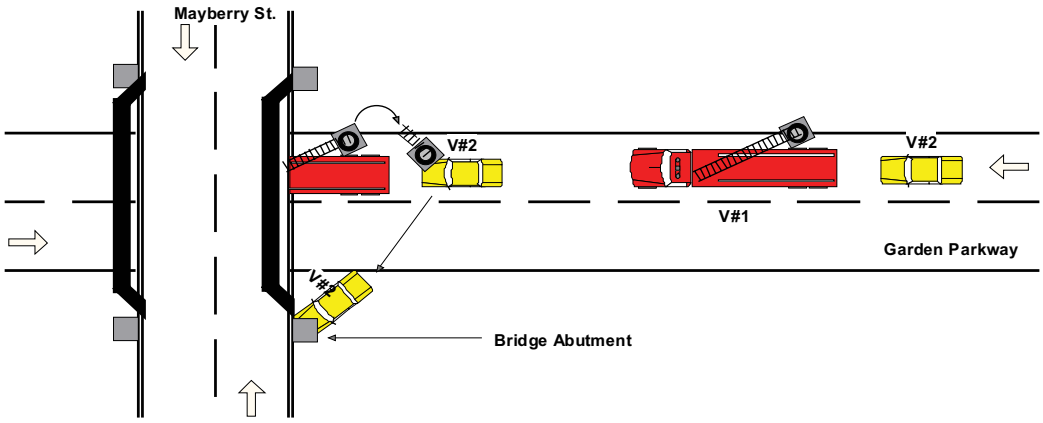
VEHICLE 1 SEQUENCE OF EVENTS (V20):

Ran off Roadway – Right
Tree (Standing)
~~Reentering Roadway**~~
Cross Median
Motor Vehicle In-Transport

VEHICLE 3 SEQUENCE OF EVENTS (V20):

Motor Vehicle In-Transport
Curb
~~Ran off Roadway – Right**~~
Pedestrian
Utility Pole/Light Support

**MMUCC recommends a minimum of four events be recorded on the crash report. For states that record only four, it is recommended that non-harmful events be eliminated first for crashes where more than four events occur in a vehicle's sequence.



Narrative

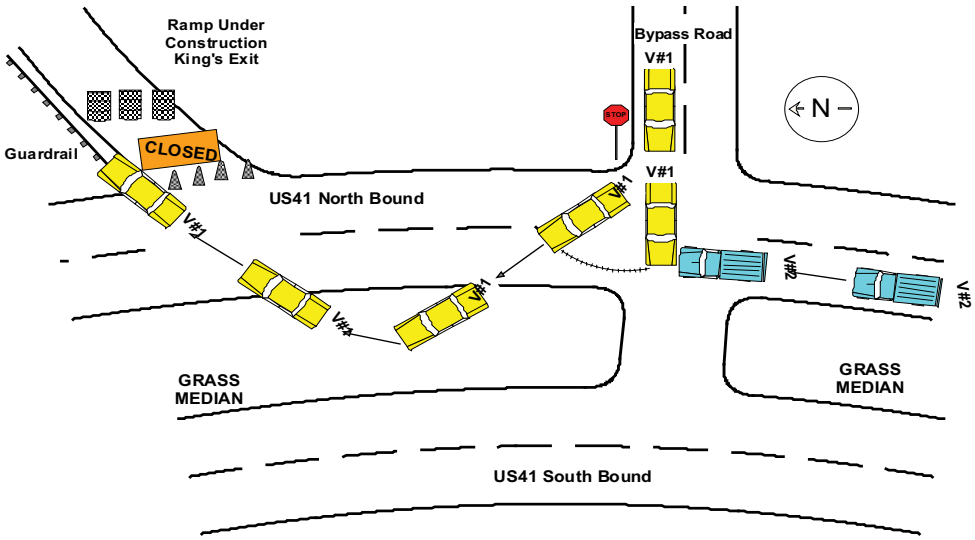
V#1, a fire truck returning from an emergency, was traveling west on Garden Parkway approaching the Mayberry Street underpass when a malfunction in the hydraulic system of its hook and ladder apparatus caused the ladder to raise and swing to the right of the vehicle. When V#1 went under the Mayberry Street overpass the ladder and bucket struck the bottom of the bridge, breaking off the top portion of the ladder. The ladder piece struck the right front quarter panel of V#2, which was following directly behind V#1. V#2 lost control and struck the underpass bridge abutment on the eastbound side of the road.

Vehicle 1 Sequence of Events (V20):

Equipment Failure
Bridge Overhead Structure
Cargo/Equipment Loss or Shift
MV In-Transport

Vehicle 2 Sequence of Events (V20):

Struck by Falling Shifting Cargo or Anything Set in Motion
Cross Centerline
Ran off Roadway - Left
Bridge Pier/Support



Narrative

D#1 was stopped at the stop sign on the south end of the bypass road around the King's Mine Overpass construction. Upon entering US41 with the intention of crossing over the northbound lanes and then turning to the south, D#1 failed to see V#2 northbound on US41. V#2 struck the front driver's side of V#1 causing it to spin clockwise.

D#1 was either unconscious or disoriented. D#1 apparently had her foot on the accelerator and went approx. 1000 feet to the north in the median and then crossed over northbound US41.

After crossing the northbound lanes, V#1 started up the ramp at the King's Mine Interchange which is currently closed for construction. V#1 went head-on into the guardrail end on the west side of the ramp.

Vehicle 1 Sequence of Events (V20):

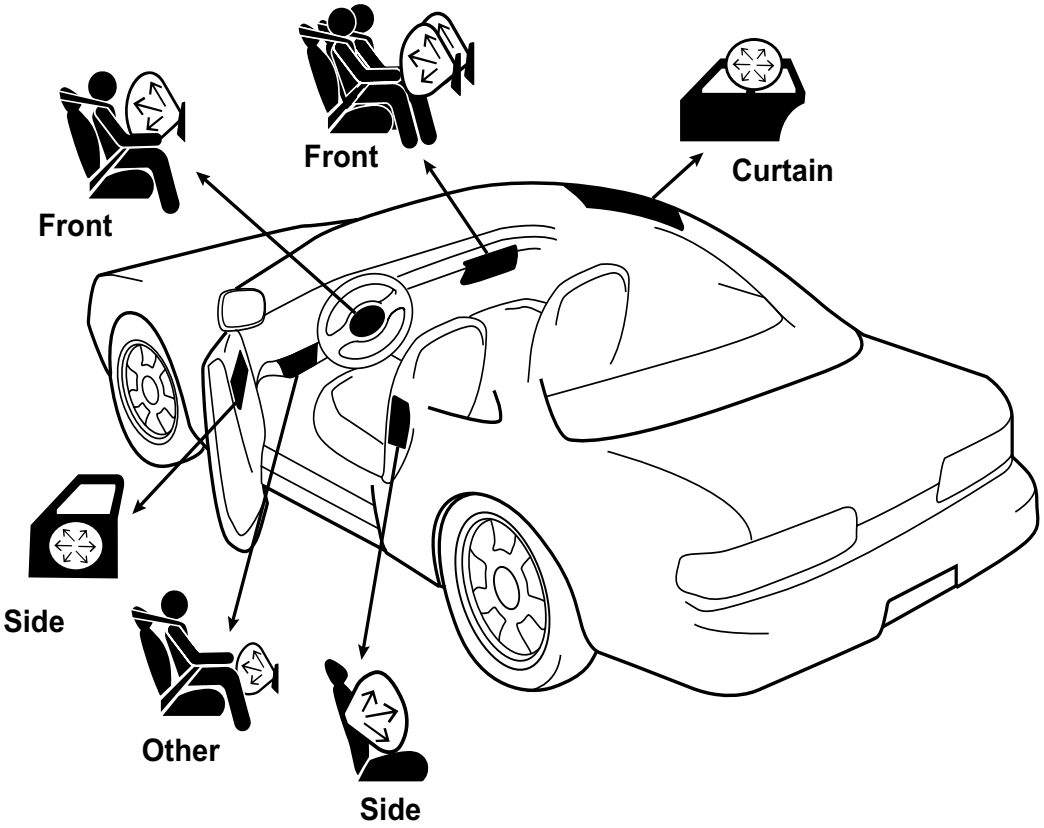
Motor Vehicle In-Transport
Ran off Roadway – Left
~~Reentering Roadway~~**
Ran off Road - Right
Guardrail End

Vehicle 2 Sequence of Events (V20):

Motor Vehicle In-Transport

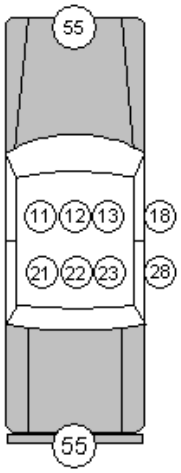
**In this example V#1 has more than 4 events in its sequence. If an event was dropped to get to four events, it is recommended that the non-harmful "reentering roadway" be eliminated as leaving the roadway on the left followed by leaving on the right would imply that the vehicle reentered.

AIR BAGS DIAGRAM

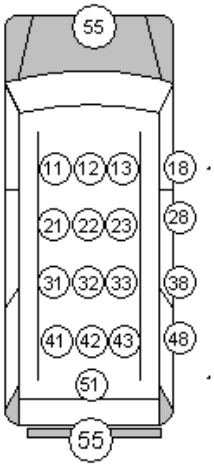


SEATING POSITION*

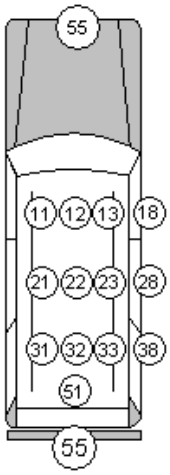
Car



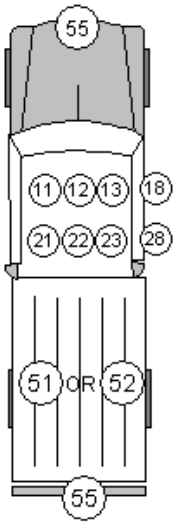
Van



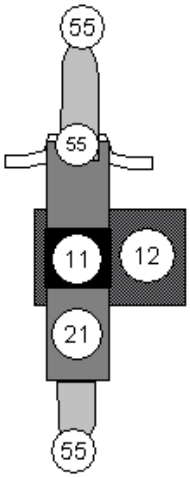
SUV



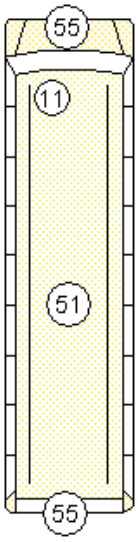
Pickup/Single Truck (Enclosed or Unenclosed Bed)



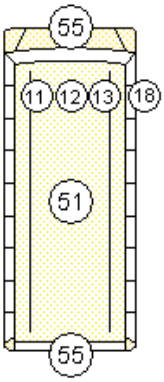
Motorcycle



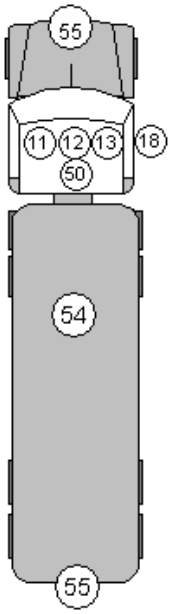
Bus



Van Based Bus



Tractor Trailor



Codes for Seating Position

00	Non-Motorist
11	Front Seat – Left Side (Driver's Side)
12	Front Seat – Middle
13	Front Seat – Right Side
18	Front Seat – Other
19	Front Seat – Unknown
21	Second Seat – Left Side
22	Second Seat – Middle
23	Second Seat – Right Side
28	Second Seat – Other
29	Second Seat – Unknown
31	Third Seat – Left Side
32	Third Seat – Middle
33	Third Seat – Right Side
38	Third Seat – Other
39	Third Seat – Unknown
41	Fourth Seat – Left Side
42	Fourth Seat – Middle
43	Fourth Seat – Right Side
48	Fourth Seat – Other
49	Fourth Seat – Unknown
50	Sleeper Section of Cab (Truck)
51	Other Passenger in enclosed passenger or cargo area (includes passengers in 5th row of 15-seat, 5-row vans)
52	Other Passenger in unenclosed passenger or cargo area
53	Other Passenger in passenger or cargo area, unknown whether or not enclosed
54	Trailing Unit
55	Riding on Vehicle Exterior
99	Unknown

*Source: FARS Coding Manual

DOT HS 810 957
June 2008

Department of Transportation
Federal Highway Administration
Federal Motor Carrier Safety Administration
National Highway Traffic Safety Administration

Governors Highway Safety Association
GHSA
The States' Voice on Highway Safety