

NATIONAL ACCIDENT SAMPLING SYSTEM

DATA COLLECTION, CODING AND EDITING MANUAL  
1987 CRASHWORTHINESS DATA SUBSYSTEM

VERSION 10

U.S. DEPARTMENT OF TRANSPORTATION  
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## ACKNOWLEDGEMENT

### NASS DATA COLLECTION, CODING AND EDITING MANUAL

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The production of this and previous editions of the NASS Data Collection, Coding and Editing Manual could not have been made possible without contributions from many unidentified sources within the U.S. Department of Transportation, the NASS Zone Centers and PSU teams, and the transportation community.









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# NASS DATA COLLECTION, CODING AND EDITING MANUAL

## 1.0 INTRODUCTION

### 1.1 Purpose of the Manual

In order to produce a national traffic accident data base for the evaluation of old and the development of new highway and vehicle safety standards and to identify highway safety needs, the National Accident Sampling System was created. The final system will consist of thirty-six teams of accident researchers situated throughout the country. At each site (Primary Sampling Unit - PSU), the accident research team researches a non-probability sample of police reported accidents involving light vehicles which were towed from the scene due to damage. This system has been termed the Crashworthiness Data Subsystem (CDS).

Zone Centers have been established to provide for the quality control of the CDS data collected. Quality control is carried out through Zone Center site visits to the PSUs and through the review of accident case report materials received at the Zone Center. The Zone Centers provide quality control in the areas of sampling, completeness of data, reliability, and validity of data. In addition, the Zone Centers provide annual team evaluations, training, extra PSU staff (when needed), and act as a communication link between the PSU teams and the staff of the National Center for Statistics and Analysis.

The purpose of this manual is to provide PSU team members, Zone Centers, the Transportation Safety Institute (TSI) NASS Training Program Coordinator, and the National Center for Statistics and Analysis with a consistent, standardized set of instructions for sampling accidents and collecting, coding and editing the data.

### 1.2 Overview

The manual includes six substantive sections; each is summarized below.

Section 2.0 Description of the Sampling Frame describes the procedure for determining whether or not the incident reported on a police accident report (PAR) qualifies for inclusion in the study. In addition, it explains the four variables used to classify for sampling the PARs which qualify for NASS. The five PAR sampling strata are defined in terms of the values of the these variables.

Section 3.0 Overview of Sampling Activities describes the procedures for compiling the sampling frame list and selecting the accidents to be researched. The manual sampling method which is used as a back-up for the NASS Automated Case Selection System is discussed in detail. Detailed instructions for use of the Automated System are found in the MDE User's Manual.

Section 4.0 Overview of Information to be Collected on Sampled Accidents describes the forms which are to be filled out on each accident, the different records (e.g., injury records), photographs and other information (e.g., CRASH runs), which make up a completed case report. Also discussed are the mandatory data items and forms which must be filled out before a case can qualify for submission. Procedures for filling out form logs are described. In addition, the NASS criteria for acceptable data completion are presented. Finally, the special procedures for handling Non-light vehicles are included.

Section 5.0 Submission Instructions describes when and where to submit case reports. It also describes the Quality Control procedures to be used at the PSU sites.

Section 6.0 Coding Instructions provides the general instructions for collecting and coding the data called for in the field forms. Documentation for each data element includes variable name, element values (attributes), definitions (where needed), data sources, collection method, reference materials (if needed), and remarks.

The Appendices contain some of the necessary references, including: (1) the Uniform Symbols for Scene Marking, (2) the Uniform Symbols for Accident Diagramming, (3) the Photography Instructions, and (4) the Summary of Case Form.

Other references to be used in NASS not contained in this manual include: (1) the Fourth Edition of ANSI D16.1-1983; (2) the CRASH3 User's Manual; (3) SAE J224 MAR80; (4) the 1985 NASS Injury Coding Manual; (5) NATB books (see variable V16); (6) Passenger Car and Truck Investigators Manual (see variable V16); (7) the Branham Automobile Reference Book; (8) Diesel and Gasoline Truck Indices; (9) the MVMA - Passenger Car Specifications (see variable V84); (10) Microcomputer Data Entry User's Manual for the NASS; and (11) the NASS Accident Investigation Procedures Manual.

### 1.3 How to Use This Manual

This manual is designed to be updated periodically without the need for replacing the entire document. This will be accomplished by adding, deleting, and changing pages. Additions will be inserted in their proper location and will be identified by a different month and year. Pages which are changed will have the same month and year identifier.

When potential data encoding problems are detected in the NASS Data Collection, Coding and Editing Manual or interpretations of specific circumstances (including NASS definitions) are required, the following procedures, outlined by NCSA, will be followed:

- (a) Potential problems that are identified at the team level will be sent to the cognizant Zone Center via the NASS message system.
- (b) The Zone Center will review the potential problem.
  - (1) If it is a misinterpretation of the manual, a clarification will be provided by the cognizant Zone Center via the NASS message system (with a telephone follow-up, if necessary).
  - (2) If the potential problem is determined to be valid, the cognizant Zone Center will broadcast the potential problem with a recommended solution to the other three (3) Zone Centers for review and concurrence. The final recommended solution will be sent to NCSA by the cognizant Zone Center for review and approval. This includes all additions, deletions, modifications or substantive interpretations that redefine, broaden or narrow the established definition of NASS variables or attributes.
- (c) Changes or interpretations which affect field data encoding and are approved by the NCSA will be given an effective implementation date and sent to Indiana University for inclusion in the NASS Coding Manual.

The above procedures were not established to restrict team or Zone Center operations but to ensure that program objectives and goals are not inadvertently changed (i.e., a variable is redefined beyond its intended purpose). When defining variables, NCSA must consider their operational use within the restrictions of the data collection time frame and their intended purpose. Any diversions from these established procedures may destroy the data validity and/or result in serious analysis problems.

## 2.0 DESCRIPTION OF THE SAMPLING FRAME

### 2.1 Accidents Which Qualify for NASS

The procedures for properly developing the list of motor vehicle accidents within the study area which qualify for research are shown in Figure 2-1 and described below.

Start with a Police Reported Incident--All incidents which meet the criteria of a motor vehicle accident, as defined in ANSI D16.1-1983 (section 2.4.20, page 16), and are (a) reported on the state accident form, or on local accident forms, (b) signed by a police officer, and (c) available through the police agency files, are to be considered for study. Other accident report forms, such as special driver report forms, that do not meet the requirements above are excluded from consideration.

Must Be Reported to the State--For an incident to qualify for the study, the police jurisdiction must send a copy of the Police Accident Report (PAR) to the state for inclusion in the state accident statistics. If a report will not be included in the state file, then the incident is not to be included in the list. If the researcher cannot determine whether or not an incident will be reported to the state, then he/she should include it in the list.

Must Involve a Harmful Event--If the incident does not involve property damage and/or personal injury, do not include it in the list. The presence of a Police Accident Report (PAR) creates a rebuttable presumption that a harmful event has occurred. It is the duty of the researcher to scrutinize any PAR which alleges the absence of a harmful event.

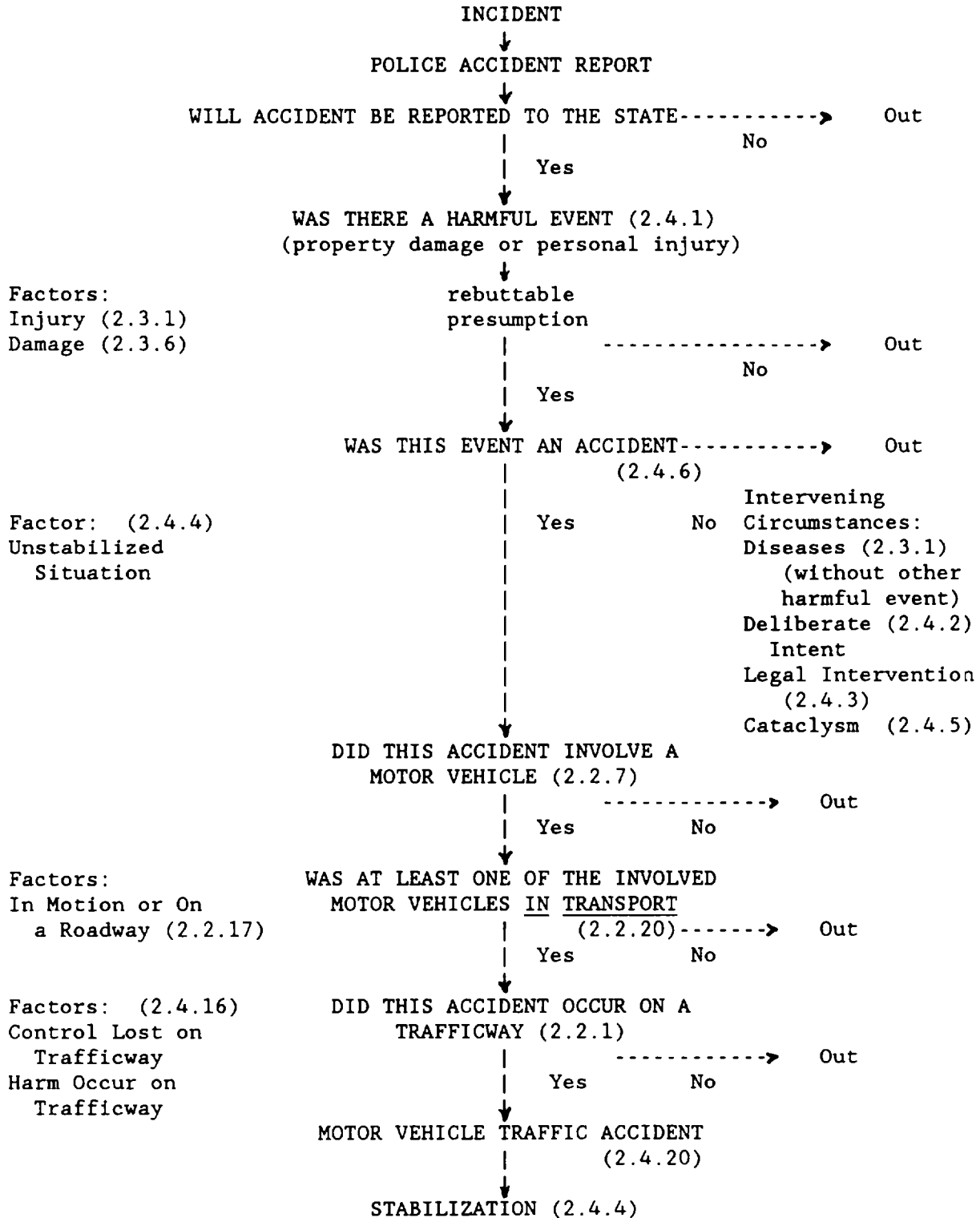
The Harmful Event Must Have Occurred as a Result of an Accident--An accident involves at least one harmful event (ANSI D16.1-1983, section 2.4.1, page 12) produced by an unstabilized situation (ANSI D16.1-1983, section 2.4.4, pages 14-15). There are four (4) ways in which a harmful event occurs that is not a result of an accident. They are: (a) the harmful event results from a diseased condition, (b) the unstabilized situation was the result of deliberate intent, (c) the unstabilized situation was the result of legal intervention, or (d) the harmful event results from a cataclysm (ANSI D16.1-1983, section 2.4.5, page 15). To clarify the meaning of each of these "intervening circumstances", consider the examples below.

Disease: Even if the unstabilized situation is initiated by a disease such as cerebral hemorrhage, heart attack, diabetic coma, or epileptic seizure, which affects the driver of a motor vehicle in-transport, any subsequent harmful event which occurs is considered an accident. This includes any nonvehicular damage that this vehicle causes. The disease itself is not a harmful event for our classification as a traffic accident.

Deliberate Intent: A harmful event which has been intentionally produced does not fall within the definition of an unstabilized situation and, thus, is not an accident.

A driver kills himself/herself (suicide) or self-inflicts injury by driving a motor vehicle: (1) against a fixed object, (2) into a body of water, or (3) otherwise misuses a motor vehicle in transport, and this intent is verified in some manner: such intentional events are not motor vehicle accidents. If during such intentional acts other injury or .pa

FIGURE 2-1



A motor vehicle traffic accident (MVTA) originates on a police accident report (PAR) filed with the state. It involves (a) a harmful event not directly resulting from a cataclysm, (b) produced by an unstabilized situation, (c) involving at least one motor vehicle, (d) in-transport [in motion or on a roadway] such that (e) the harmful event occurred on a trafficway or the unstabilized situation originated on a trafficway.

damage occurs that goes beyond the original intent, then these events are accidental and meet the specifications of a motor vehicle accident, unless the contrary can be clearly established.

Example 1: A driver who intends to commit suicide by driving head-on into another vehicle is involved in an accident, since any harmful event which results to the other vehicle or occupants goes beyond the original intent of the driver.

A person, having announced intent in some manner, causes death, injury, or damage by driving a motor vehicle against persons, motor or other road vehicles, or other property, with homicidal, injury, or damage inflicting intent; such intended acts are not motor vehicle accidents. If, in doing such intended acts, other injury or damage occurs that goes beyond the original intent (i.e., unintended consequences), these events are accidental and meet the specifications of a motor vehicle accident, unless the contrary can be clearly established.

Example 2: A driver (not connected with a law enforcement agency) who intentionally rams another vehicle, intending to inflict harm upon the vehicle or its occupants, is not involved in an accident. In Example 1 above, if the driver intended to inflict harm upon the other vehicle or its occupants, as well as inflict harm upon himself/herself, then this also would not be an accident.

However, **malicious mischief**, such as throwing a rock toward a motor vehicle, dropping an object from an overpass, or rolling an object upon a trafficway, is not considered to be deliberate intent unless it is clearly established that the act was directed toward a specified person or motor vehicle. See ANSI D16.1-1983, section 2.6.3, page 25.

For the purposes of NASS sampling (given limited information on a PAR), a first harmful event resulting from deliberate intent should not be classified as an accident, except where a subsequent harm occurs to a different vehicle or person such that the harm was an unintended consequence of the original event.

When in doubt, follow the instructions for listing the accident contained in Section 3.0 of this manual and call your Zone Center for guidance.

Legal Intervention: Legal intervention is a type of deliberate intent involving intentional acts by a law enforcement agent, officer, or other official. If in doing such intended acts, injury or damage occurs that goes beyond the original intent, then the other events are accidental and meet the specifications of a motor vehicle accident, unless the contrary can be clearly established. The following are examples of legal intervention and should not be classified as accidents:

- (a) A road block is set up to stop a lawbreaker, and the lawbreaker crashes into it, either intentionally or unintentionally.
- (b) A police unit cuts in front of another vehicle to force it to the curb or shoulder and, as a result, the two vehicles collide.
- (c) A vehicle loses control as a result of bullets fired into it from a police officer's gun, and crashes.

The following are examples of an accident:

- (d) A driver, other than a lawbreaker, crashes unintentionally into a roadblock.
- (e) A lawbreaker, while eluding the police, loses control of his vehicle and crashes into another vehicle.
- (f) A police car skids and crashes while chasing a law violator.

If in (c) above, the vehicle had created a harmful event with another vehicle or person, then the presumed unintended consequences of the action would qualify this situation as an accident.

One example which has previously been encountered is as follows: A prisoner jumps out of a police car and is injured. An officer in another car who observes this event, writes a report. Is this an accident? Yes. Although the prisoner exited the car intentionally, the subsequent injury (harmful event) occurred as an unintended consequence of the prisoner's escape attempt, thus constituting this event as an accident. It should be assumed that the injury was an unintended consequence of the prisoner's action unless the contrary can be clearly established.

For the purposes of NASS sampling, the same guidance as given above applies.

Cataclysm: ANSI D16.1-1983 lists the following events as catastrophic: a cloudburst, cyclone, earthquake, flood, hurricane, lightning, tidal wave, torrential rain, tornado, or volcanic eruption. If any one of these events was on-going at the time of the accident and produced the unstabilized situation which led to the harm, then the event(s) is(are) not considered an accident. One key phrase is "on-going". Consider the following example: A motor vehicle in-transport was overwhelmed by a landslide or an avalanche which was a direct result of a cataclysm, such as an earthquake, torrential rain, etc. This circumstance would not be considered an accident. However, this exclusion would not apply if a cataclysm were not in existence at the time of the event; nor would this exclusion apply if the motor vehicle was unintentionally driven against any fallen materials covering a trafficway as a result of any landslide or avalanche. As this example points out, the catastrophic event "exclusion" should occur very rarely.

Another key phrase is "produced the unstabilized situation". The situation in which a vehicle hydroplanes in a torrential rain and exits the roadway, striking another motor vehicle or object, would fit the criteria for a NASS accident, but the situation in which a cloudburst/torrential rain washes a roadway out from under a vehicle travelling on a roadway would be excluded from the NASS sample. (Remember, the cataclysm must be on-going at the time of the accident.)

For the purposes of NASS sampling, list any accidents which you believe should be excluded under the cataclysm exception. Confirm their exclusion by relating the events to your Zone Center before drawing the sample.

After a case has been selected the case can be dropped if either subsequent research or an official ruling (e.g., by the police, by a medical examiner, etc.) reveals that one of the exceptions (i.e., disease, deliberate intent,

legal intervention, or cataclysm) applies. When dropping the case notify your Zone Center and follow the procedures outlined in Section 5.3.

Must Involve A Motor Vehicle as Defined by ANSI--If the police report which has been sampled does not involve at least one motor vehicle as defined by ANSI D16.1-1983 (section 2.2.7, page 7), then it should be returned to the file and not included in the list which qualifies for inclusion.

Example: A bicycle which runs off the road and hits a tree is not a motor vehicle accident and should not be included.

Must Involve a Motor Vehicle in-Transport--Use the ANSI D16.1-1983 (section 2.2.20, page 9) definition to determine if the motor vehicles in the accident are in-transport. There must be at least one motor vehicle in the accident in-transport for the accident to qualify. (NOTE: Any driverless vehicle of which any portion is located on the roadway is considered as a vehicle in-transport.)

Example 1: A bicyclist running into a car which is parked off the roadway does not constitute a motor vehicle accident for this study and would be excluded. If a police report has been filled out on such an incident, return the police report to the file because it does not qualify.

Example 2: Vehicles parked on roads of reduced width, such as can result from snow accumulation and incomplete snow removal, are to be considered in-transport if any portion is on the roadway.

Must Involve a Motor Vehicle In-Transport on a Trafficway--Exclude accidents which occur in places other than a trafficway. Examples of places which are not on the trafficway include parking lots (except entrances and roadways within parking lots which are customarily used to get from the entrance to a parking aisle) and private driveways. Review carefully the diagrams depicting rural, urban, and divided trafficways in Figures 2-2, 2-3 and 2-4.

Example: An abandoned vehicle, a portion of which is on the roadway is struck by a bicyclist, causing injury to the bicyclist: a police report is filled out by an investigating officer. Is this a motor vehicle accident? Yes it is. This is because there is a police reported incident involving a motor vehicle in-transport on a trafficway.

A driveway is a private way providing access to property adjacent to a trafficway. An alley is an unnamed private way providing access, in general, to the rear of houses or buildings, some of which may be further served by a driveway.

Most driveways (but not all) and alleys are not trafficways in NASS. Examples of non-NASS trafficways are driveways to: (1) service stations, (2) residential dwellings, and (3) most apartment complexes, hotels, motels, and other commercial establishments. However, there is an instance where a driveway, which otherwise would qualify as a private way, is to be considered as a NASS trafficway. This instance occurs when the location of the First Harmful Event (see A12) is in the "throat" of the driveway.

An accident is considered to have occurred in the throat if, at the junction of a trafficway and a private way (ANSI D16.1-1983, section 2.2.2, page 6), a motor vehicle in-transport is either entering or exiting the private way such that any part of the vehicle is in contact (on or over) with the road (of the



FIGURE 2-2

Example of a Rural Trafficway

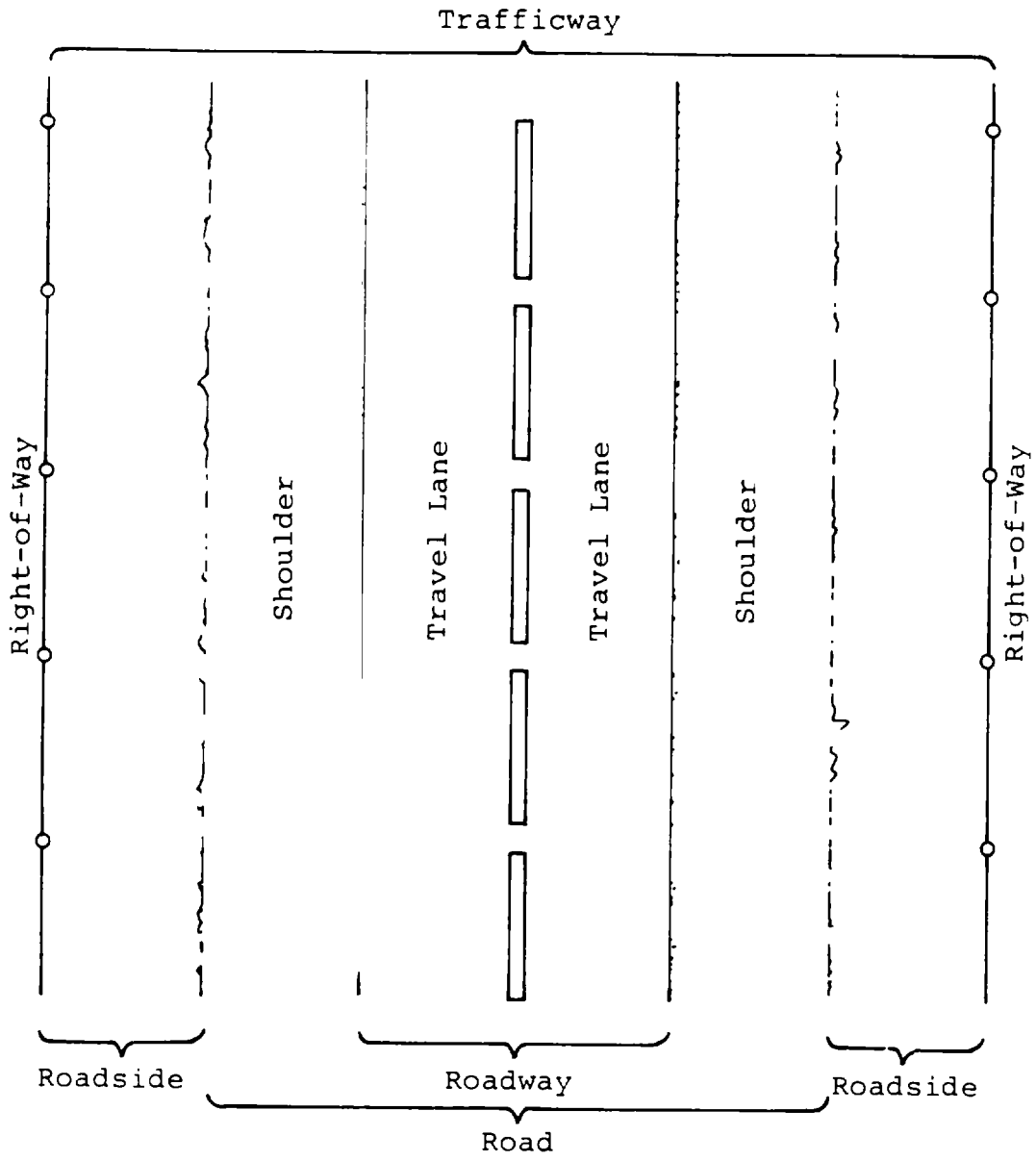
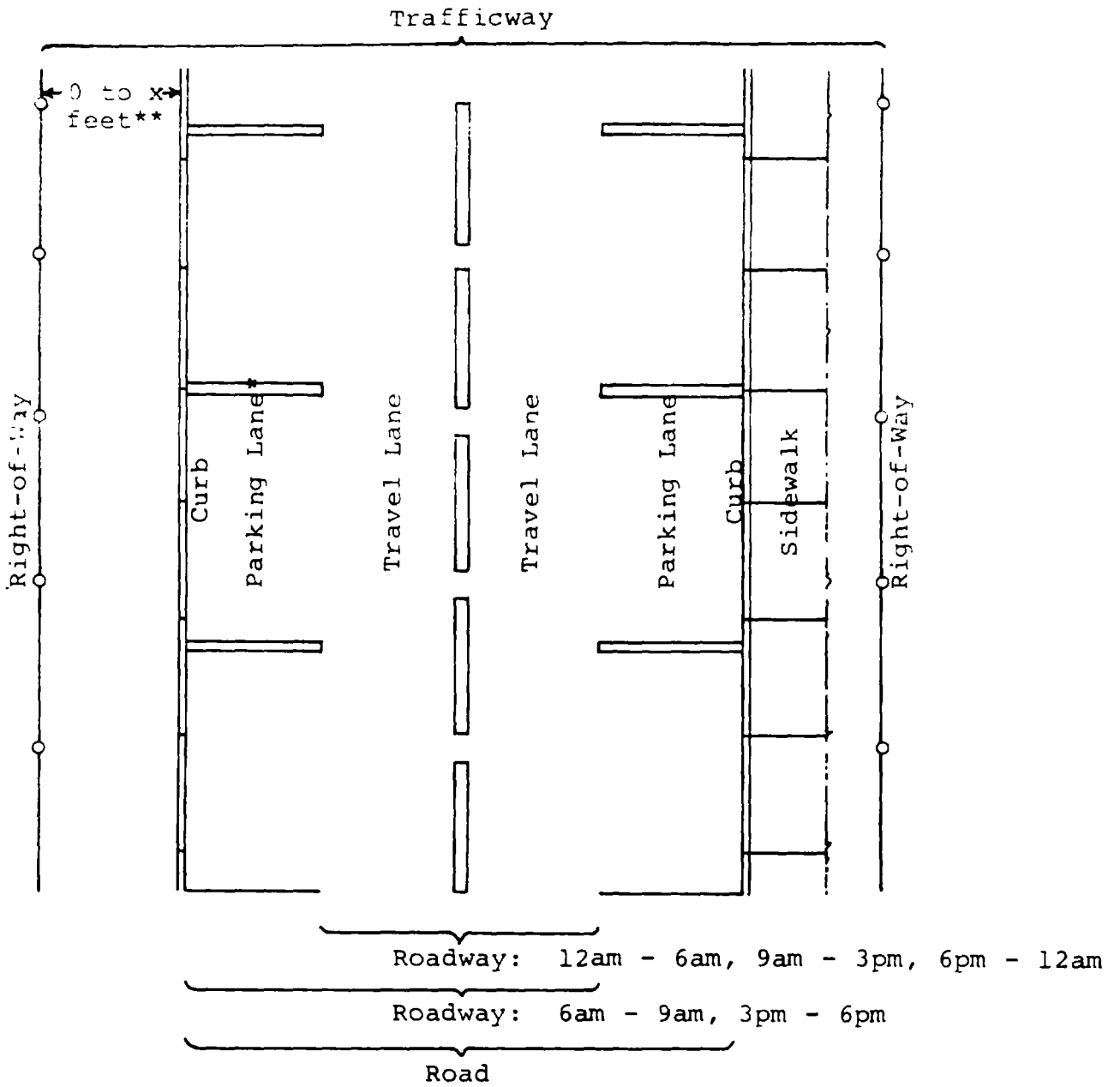


FIGURE 2-3

Example of an Urban Trafficway

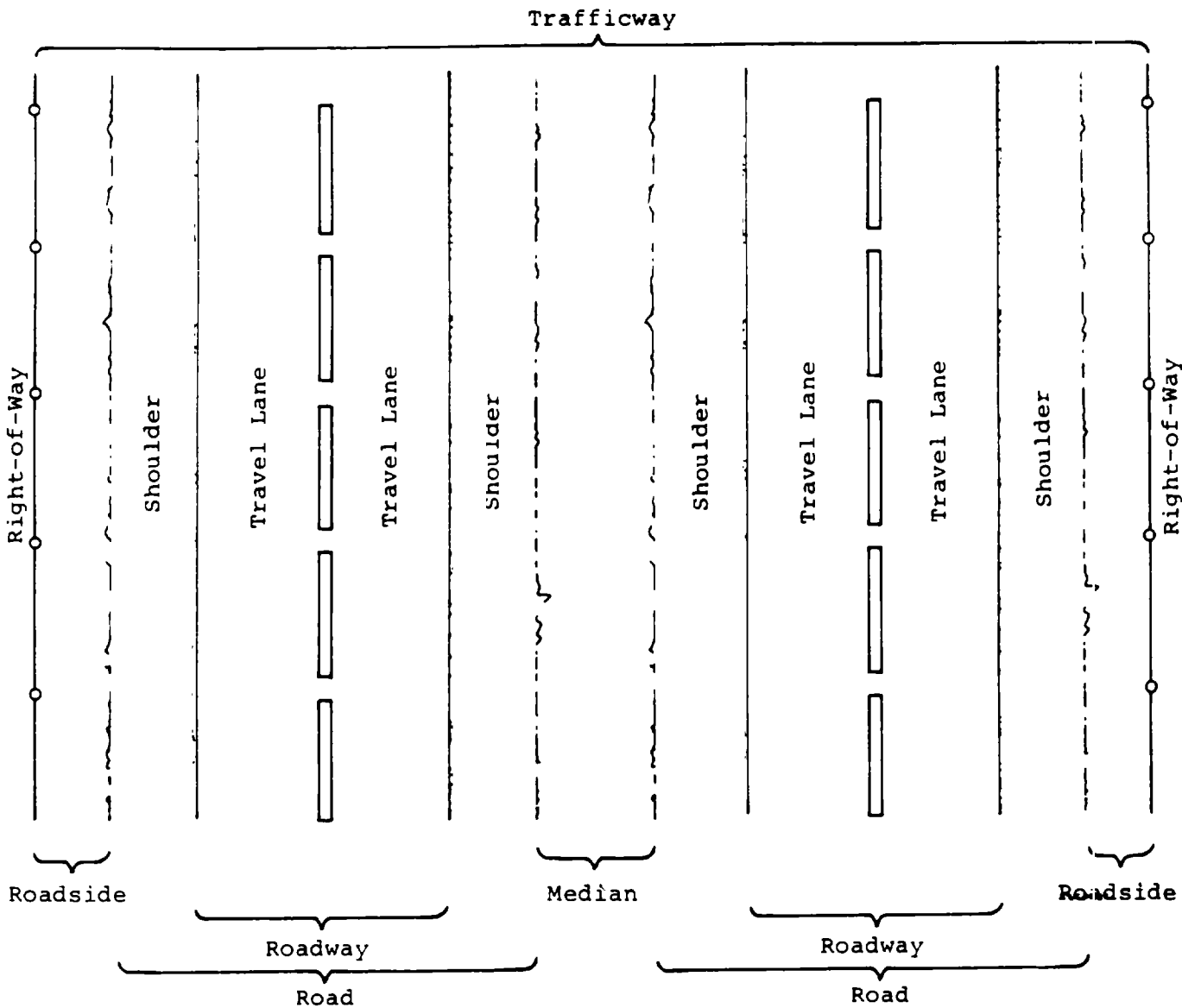


\* No parking allowed 6 to 9 a.m. or 3 to 6 p.m.

\*\* The actual right-of-way in many cases will not be known. But it is clear that the trafficway always goes from curb to curb or from shoulder to shoulder.

FIGURE 2-4

Example of a Divided Trafficway



trafficway) (ANSI D16.1-1983, section 2.2.19, page 9) at the location of the first harmful event (on the private way). In cases where a pedestrian, other nonmotorist associated with a nonmotorist conveyance (see variable P08, Pedestrian or Nonmotorist's Type), or road vehicle (ANSI D16.1-1983, section 2.2.6, page 7) is crossing laterally a private way (e.g., a driveway) and the pedestrian, nonmotorist, or vehicle is on the trafficway of the street or highway (e.g., within the horizontal extension of a sidewalk), then the "road" requirement of the "throat" rule is extended to include all of the trafficway. The road was used because it is more operationally defined than the trafficway; however, pedestrians, for example, crossing driveways who are struck by a vehicle entering the street or highway would technically not have their first harmful event occurring in the "throat". For this reason, where the trafficway is clearly defined, the throat can be extended up the private way to include any first harmful events which occur on the trafficway.

Certain driveways within parking or shopping lots qualify as trafficways in NASS if they satisfy the three criteria discussed below.

The phrase "open to the public as a matter of right or custom" (ANSI D16.1-1983, section 2.2.1, page 6) causes problems when the property is privately owned. One problem area centers around shopping centers. It has been stated many times that private ownership does not automatically disqualify a case for consideration as a NASS accident. The nature and extent of "land ways" (ANSI D16.2-2983, section 2.1.11, page 6) on private property, and the differences in accident reporting criteria by police, have brought about the narrowing of the definition of a trafficway (ANSI D16.1-1983, section 2.2.1, page 6) to that which can be operationally defined. In parking or shopping lots three criteria have been suggested:

- \* There must exist two or more contiguous lanes of travel that are clearly marked;
- \* The land way must intersect another land way inside the lot or center; and
- \* The junction of the internal land ways must have traffic controls (i.e., STOP or YIELD signs or markings).

The intent is to select those land ways which serve the purpose of getting traffic to and from the parking area; however, the fact that parking is allowed immediately adjacent to the land way does not disqualify it from consideration. Figure 2-5 (containing four schematics) does not attempt to cover the entire spectrum of possibilities but only illustrates some common examples. For situations A, B, and C none of the land ways should be considered as trafficways, since the criteria are not met. However, a NASS accident could occur at each of those if it satisfied the "throat rule" above. In situation D the screened-in areas are roadways since they meet the criteria.

In summary, each of the preceding questions is designed to focus your attention to the specific subset of transportation-related accidents characterized as "motor vehicle traffic accidents". In NASS, you research Motor Vehicle Traffic Accidents. To put this subset of accidents which qualify for NASS in perspective, see Figure 2-6. This figure outlines the major definitional sections of ANSI D16.1-1983 into meaningful groups and shows how the phenomenon of motor vehicle traffic accidents fits into the overall transportation accident picture. Accompanying Figure 2-6 are the primary ANSI definitions of interest to NASS. Figure 2-6 refers to these definitions. These definitions are provided here as both a reference source to you, the NASS researcher, as

Figure 2-5

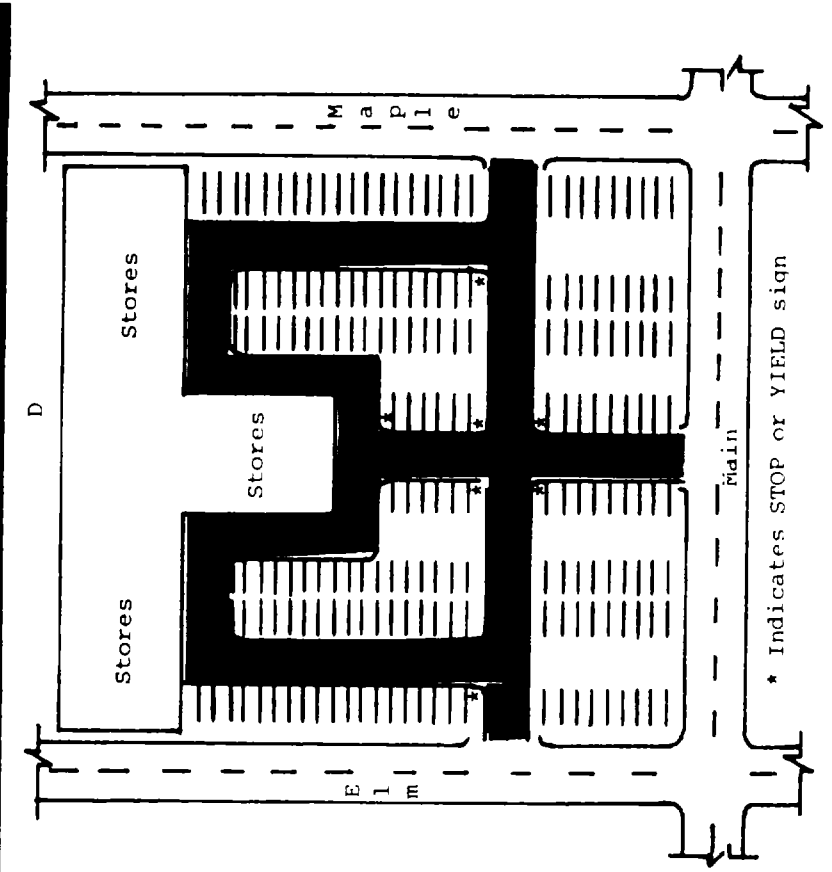
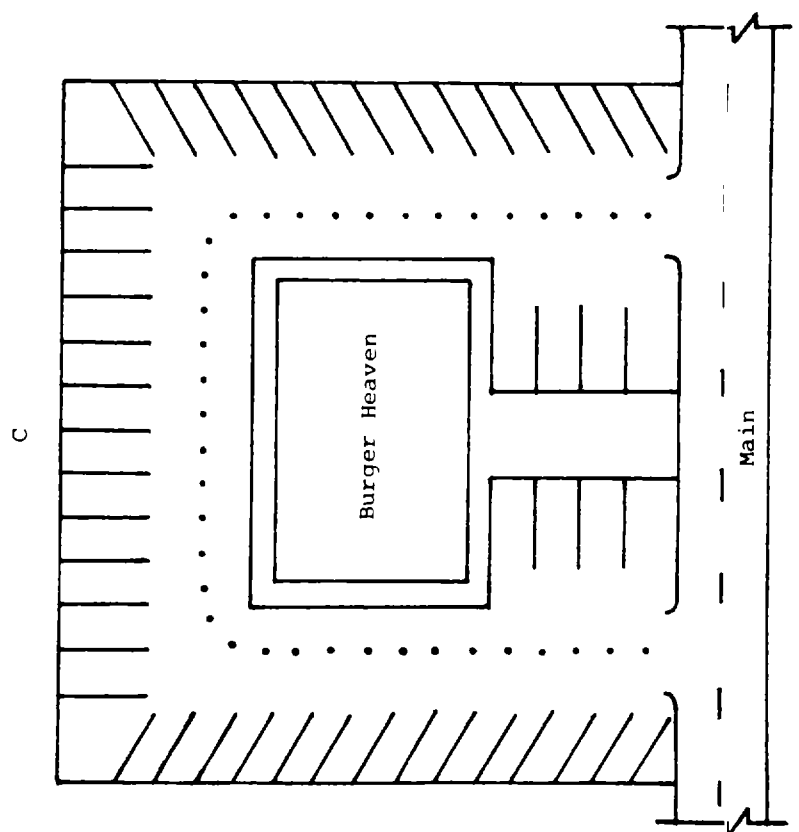
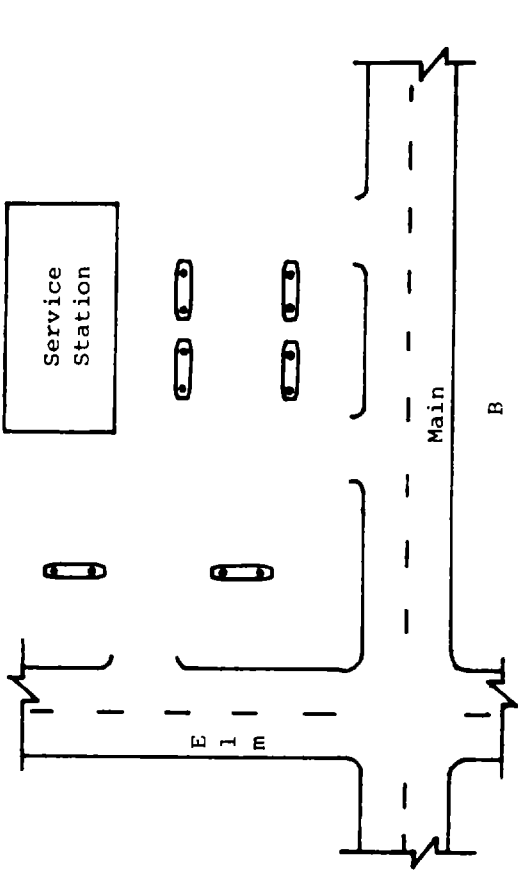
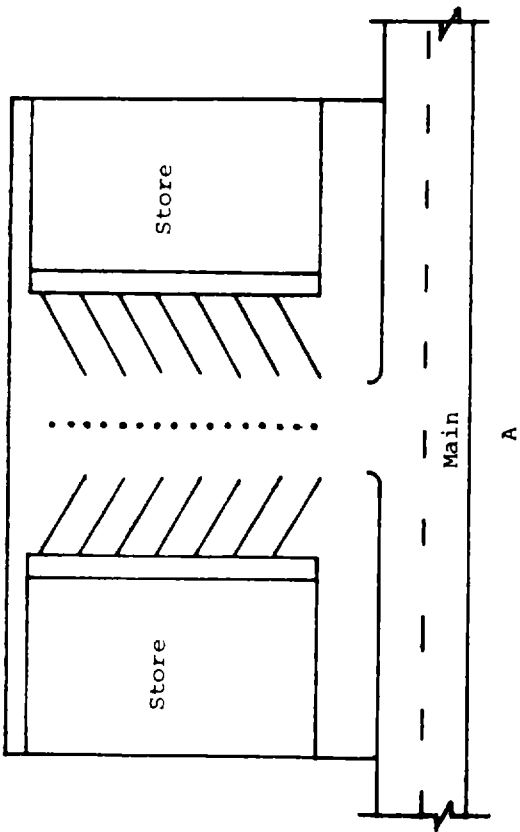


FIGURE 2-6

	ANSI
	-----
Person	2.1.1
Property	2.1.2
Transport device	2.1.3
Animal	- -
<u>Transport vehicle</u>	2.1.4
Aircraft	2.1.6
Watercraft	2.1.7
<u>Land vehicle</u>	2.1.8
Railway vehicle	2.2.4
<u>Road vehicle</u>	2.2.6
<u>Motor vehicle</u>	2.2.7
Other road vehicle	2.2.8
<u>In-transport</u>	2.2.20
<u>Transport way</u>	2.1.5
Airway	2.1.9
Waterway	2.1.10
<u>Land way</u>	2.1.11
Railway	2.2.3
Private way	2.2.2
<u>Trafficway</u>	2.2.1
Road	2.2.19
Shoulder	2.2.18
<u>Roadway</u>	2.2.17
Roadside	- -
Median	- -
<u>Accidents</u>	2.4
Harmful event	2.4.1
Injury	2.3.1
Damage	2.3.6
Unstabilized situation	2.4.4
Deliberate intent	2.4.2
Legal intervention	2.4.3
Cataclysm	2.4.5
<u>Accident</u>	2.4.6
<u>Transport accident</u>	2.4.7
Aircraft accident	2.4.8
Watercraft accident	2.4.9
Railway accident	2.4.11
<u>Road vehicle accident</u>	2.4.15
<u>Motor vehicle accident</u>	2.4.10
Other road vehicle accident	2.4.12
or	
<u>Traffic Accident</u>	2.4.16
	2.4.18
Nontraffic accident	2.4.17
	2.4.19

Motor Vehicle Traffic Accident

	Traffic Accident	Nontraffic Accident
Motor Vehicle	2.4.20	2.4.21
Other Road Vehicle	2.4.22	2.4.23

FIGURE 2-6 (Definitions)

**TRANSPORT VEHICLE:** (2.1.4) A transport vehicle consists of one or more devices or animals and their load. Such devices or animals must include at least one of the following:

- (1) a transport device, or a unit made up of connected transport devices, while idle or in use for moving persons or property from one place to another,
- (2) an animal or team of animals while in use for moving persons or property other than the animal or team itself from one place to another, or
- (3) a movable device such as construction, farm, or industrial machinery outside the confines of a building and its premises while in use for moving persons, the device itself, or other property from one place to another.

If such a device or animal has a load, the load is part of the transport vehicle. Loads include:

- Persons or property upon, or set in motion by, the device or animal;
- Persons boarding or alighting from the device or animal;
- Persons or property attached to and in position to move with the device or animal.

If the load upon a transport device includes another transport device, the entire unit including the load is considered to be a single transport vehicle.

Inclusions: (1) Transport Devices--

- airplane towing a sailplane,
- tugboat pushing a barge,
- boxcar coupled to a caboose,
- truck tractor towing a semitrailer and a trailer,
- snowmobile towing a skier;

(2) Animals--

- horse carrying a rider,
- dog team drawing a sled,
- team of horses drawing a sled,
- burro carrying a load of firewood,
- mule towing a boat on a canal;

and (3) Other Movable Devices--

- road grader while traveling under its own power from a maintenance depot to a working place,
- lawn mower while being ridden down a street under its own power,
- farm tractor while pulling a wagon loaded with corn from a field to a storage place,
- army tank while moving under its own power from a firing range to a motor pool.

Exclusions: (1) Transport Devices--

- pickup truck while being used to power a saw,
- dump truck while spreading its load,
- tow truck while using its winch,
- jeep while pulling a device picking up golf balls,
- transit-mix concrete truck while discharging its load, and
- a dump truck while plowing snow.

**LAND VEHICLE:** (2.1.8) A land vehicle is a transport vehicle which is neither an aircraft nor a watercraft.

**ROAD VEHICLE:** (2.2.6) A road vehicle is any land vehicle other than a railway vehicle.

**MOTOR VEHICLE:** (2.2.7) A motor vehicle is any motorized (mechanically or electrically powered) road vehicle not operated on rails.

**OTHER ROAD VEHICLE:** (2.2.8) An other road vehicle is any road vehicle other than a motor vehicle. Inclusions: animal-drawn vehicle (any type), animal harnessed to a conveyance, animal carrying a person, street car (not on rails), pedalcycle.

**IN TRANSPORT:** (2.2.20) 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 for travel by similar transport vehicles.

When applied to motor vehicles, "in transport" means 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.

**TRANSPORT WAY:** (2.1.5) A transport way is any way or place reserved or commonly used for the operation of transport vehicles.

**LAND WAY:** (2.1.11) A land way is the space within property lines or other boundary lines of any transport way that is neither an airway nor a waterway.

**TRAFFICWAY:** (2.2.1) A trafficway is any land way open to the public as a matter of right or custom for moving persons or property from one place to another.

Inclusions:

- Within areas with guarded entrances, such as military posts or private residential developments, land ways are trafficways if the guards customarily admit public traffic.

FIGURE 2-6 (Definitions - continued)

**Exclusions:**

A land way under construction is not a trafficway if traffic is prohibited from entering by signing or barriers which are in conformance with applicable standards. However, if any part of the land way is open to travel while the remainder is closed, that part which is open for traffic is a trafficway. Likewise, any temporary bypass of a construction site is a trafficway.

A land way temporarily closed to travel and marked by signing or barriers which are in conformance with applicable standards is not a trafficway even though used by authorized vehicles, such as maintenance vehicles, or when intentionally or inadvertently used by unauthorized vehicles. A land way open only to local traffic is not considered closed.

**ROAD:** (2.2.19) Road is that part of a trafficway which includes both the roadway and any shoulder alongside the roadway.

**SHOULDER:** (2.2.18) A shoulder is that part of a trafficway contiguous with the roadway for emergency use, for accommodation of stopped road vehicles, and for lateral support of the roadway structure.

**ROADWAY:** (2.2.17) A roadway is that part of a trafficway designed, improved, and ordinarily used for motor vehicle travel or, where various classes of motor vehicles travel or motor vehicles are segregated, that part of a trafficway used by a particular class. Separate roadways may be provided for northbound and southbound traffic or for trucks and automobiles.

**HARMFUL EVENT:** (2.4.1) A harmful event is an occurrence of injury or damage.

**Inclusions:**

Injury or damage resulting when a driver dies or loses consciousness because of a disease condition such as a stroke, heart attack, diabetic coma, or epileptic seizure. In such case the immediate effect of the disease, such as the driver's death or loss of consciousness, is not itself considered to be a harmful event.

**INJURY:** (2.3.1) An injury is bodily harm to a person. **Exclusions:** effects of diseases, such as stroke, heart attack, diabetic coma, epileptic seizure.

**DAMAGE:** (2.3.6) Damage is harm to property that reduces the monetary value of that property. **Inclusions:** harm to wild animals, or birds, which have monetary value. **Exclusions:** harm to wild animals, or birds, which have no monetary value. Harm to a snowbank unless, for example, additional snow-removal costs are incurred because of the harm. Mechanical failure during normal operation such as tire blowout, broken fan belt, or broken axle.

**UNSTABILIZED SITUATION:** (2.4.4) An unstabilized situation is a set of events not under human control. It originates when control is lost and terminates when control is regained or, in the absence of persons who are able to regain control, when all persons and property are at rest.

**Exclusions:** Sets of events which are the result of deliberate intent or legal intervention.

**Examples:**

1. If intentional acts cause injury or damage beyond that reasonably to be expected from the acts, the unexpected injury or damage is not the result of deliberate intent. There is, therefore, an unstabilized situation unless the contrary can be clearly established.
2. In a motor vehicle crash live electric wires fall on a motor vehicle, but there is no injury from the electric current while the occupants remain in the motor vehicle. The unstabilized situation ends with the occupants in a temporary position of safety. Any subsequent injury resulting from attempts by the occupants to leave the motor vehicle, or attempts by others to rescue the occupants, is a part of a new unstabilized situation.
3. In a motor vehicle crash the occupants of the motor vehicle are carried or thrown into water, but there is no injury from the submersion and the occupants reach a temporary position of safety. At this point the unstabilized situation has ended. Any subsequent injury from attempts by the occupants to reach shore, or from attempts by others to rescue the occupants is part of a new unstabilized situation.
4. In a motor vehicle crash objects are loosened but remain in place until all persons are removed from danger from objects that might fall or roll. No property damage would result if the objects fell or rolled. This ends the unstabilized situation. Any subsequent injury attributable to the fall or roll of the loosened objects is not part of the original unstabilized situation.
5. In a motor vehicle crash the motor vehicle catches on fire and is burning, but all occupants have been rescued and the fire is under control. No additional property damage is expected. This is the end of the unstabilized situation. If the heat of the fire ignites nearby combustible materials, any subsequent injury or damage from the induced ignition is not part of the original unstabilized situation.



FIGURE 2-6 (Definitions - continued)

6. In a motor vehicle crash an involved motor vehicle carrying explosive materials is stopped and occupants and bystanders are removed from the scene. At this point the unstabilized situation is ended. If the explosive materials detonate during later attempts to remove or salvage them, any injury or damage resulting from the explosion is not part of the original unstabilized situation.

**DELIBERATE INTENT:** (2.4.2) Deliberate intent is the classification given to the cause of an event which occurs when a person acts deliberately to cause the event or deliberately refrains from prudent acts which would prevent the occurrence of the event. Inclusions: suicide, self-inflicted injury, homicide, injury or damage purposely inflicted. Exclusions: injury or damage beyond that which was intended.

**Examples:**

1. When a driver intentionally kills or injures himself with a motor vehicle, by driving it against a fixed object or into a body of water, for example, the driver's death or injury is a result of deliberate intent.
2. When a driver intentionally kills or injures another person with a motor vehicle, by running into a pedestrian, for example, the death or injury is a result of deliberate intent.
3. When a driver intentionally causes damage with a motor vehicle, by ramming another vehicle, for example, the damage is a result of deliberate intent.

**LEGAL INTERVENTION:** (2.4.3) Legal intervention is a category of deliberate intent in which the person who acts or refrains from acting is a law-enforcing agent or other official.

**Examples:**

1. If a lawbreaker crashes either intentionally or unintentionally into a road block set up by police to stop him, the crash is considered a result of legal intervention. If a driver other than the lawbreaker crashes into the road block, the crash is not considered to be a result of legal intervention.
2. If a police car is intentionally driven into another vehicle, the crash is considered to result from legal intervention. If a lawbreaker being pursued by the police loses control of his vehicle and crashes, the crash is not considered to result from legal intervention unless the police intended that the lawbreaker crash.

**CATAclysm:** (2.4.5) A cataclysm is a cloudburst, cyclone, earthquake, flood, hurricane, lightning, tidal wave, torrential rain, tornado, or volcanic eruption.

**ACCIDENT:** (2.4.6) An accident is an unstabilized situation which includes at least one harmful event not directly resulting from a cataclysm. Inclusions: motor vehicle driven into water after a bridge was washed out during a hurricane or flood (cataclysm), motor vehicle driven into fall materials covering a roadway after a landslide or avalanche (cataclysm). Exclusions: motor vehicle in transport washed away with a bridge during a hurricane or flood (cataclysm), motor vehicle in transport buried by a landslide or avalanche (cataclysm).

**TRANSPORT ACCIDENT:** (2.4.7) A transport accident is an accident (1) that involves a transport vehicle in transport and (2) in which the first harmful event is not produced by the discharge of a firearm or explosive device.

**ROAD VEHICLE ACCIDENT:** (2.4.15) A road vehicle accident is a transport accident that is either a motor vehicle accident or an other road vehicle accident.

**MOTOR VEHICLE ACCIDENT:** (2.4.10) A motor vehicle accident is a transport accident that (1) involves a motor vehicle in transport, (2) is not an aircraft accident or watercraft accident, and (3) does not include any harmful event involving a railway train in transport prior to involvement of a motor vehicle in transport.

**OTHER ROAD VEHICLE ACCIDENT:** (2.4.12) An other road vehicle accident is a transport accident that (1) involves an other road vehicle in transport and (2) is not an aircraft accident, watercraft accident, motor vehicle accident, or railway accident.

**TRAFFIC ACCIDENT:** (2.4.16) A traffic accident is a road vehicle accident in which (1) the unstabilized situation originates on a trafficway or (2) a harmful event occurs on a trafficway.

**NONTRAFFIC ACCIDENT:** (2.4.17) A nontraffic accident is a road vehicle accident which is not a traffic accident.

**MOTOR VEHICLE TRAFFIC ACCIDENT:** (2.4.20) A motor vehicle traffic accident is a motor vehicle accident which is a traffic accident.

well as enabling you to understand the larger accident picture to which ANSI refers. Be sure to remember the location in this manual of **Figures 2-1 and 2-6**; together, they can serve as a handy reference source to remind you of what constitutes a "NASS accident".

Ideally a police report should report only one accident. Unfortunately, this is not always true. There are practical and understandable reasons why this occurs. This manual would be remiss if it failed to discuss the issue of stabilization.

Stabilization--At times, one police report will contain more than one accident. This will happen when events constituting an accident have stabilized (see ANSI D16.1-1983, section 2.4.4, pages 14-15) and units involved in the first sequence are subsequently involved in another accident sequence which is recorded on the same police report. If more than one accident is recorded on a police report, based on the ANSI definition of stabilized, then use the following protocol to determine which of the accidents is to be stratified and listed:

- (1) If injury is involved and you can determine the relative degree of injury between events and one event is of higher severity, then choose that event.
- (2) If injury is involved and you determine that the relative injury between events is approximately equal, then choose the first of the highest equal injury events.
- (3) If injury is involved but you cannot determine the relative injury between events, then choose the first event.
- (4) If no injuries, then choose the first event.

In those cases where an accident, by NASS criteria, other than the one reported on the PAR, is alluded to (e.g., in the narrative), there is a rebuttable presumption that this PAR is the only PAR that will be submitted to report both accidents. This presumption may be overridden if the researcher has knowledge of: (1) another PAR on file, (2) a statement in the narrative indicating that there is, or will be, another PAR, or (3) the dispatcher or other police personnel having knowledge of the accidents, indicates that there is, or will be, another report filed.

Example: The PAR narrative states: "Vehicle #1 had been struck by an unidentified vehicle that did not stop. As driver of Vehicle #1 opened door to get out, door caught rear wheels of trailer of Vehicle #2." There is no other mention of the unidentified vehicle which failed to stop anywhere else on the PAR. The PAR contains two separate accidents. The injury severity for both is "no injury"; therefore, the first is used for stratification purposes, independent of the police emphasis on the second.

However, caution must be exercised when separating accidents on a PAR. At times, it will appear that two distinct events of an accident sequence should be considered separately. According to ANSI (D16.1, section 2.4.4, pages 14-15), an unstabilization terminates "...when all persons and property are at rest..." "Property" can refer to the damaged vehicles, separated components of the vehicles, or cargo. Often the interviews will be the only source for determining whether or not stabilization occurred before the second event.

Example: Two vehicles collide in the eastbound lanes of a divided trafficway. Cargo from one vehicle spills into the westbound lanes and another vehicle is damaged. If it can be determined that stabilization never occurred (i.e., the cargo struck the vehicle, or the vehicle struck the moving cargo), the two harmful events would be considered one accident, and all three vehicles considered applicable to the NASS case. If it should be discovered during the research that the cargo came to rest for a period of time prior to being struck by the third vehicle, then the events would be considered as two separate accidents.

### 2.1.1 Common Questions and Answers About Which Incidents Qualify for NASS

Please find below a list of some common questions which arise when determining if an accident report qualifies for the NASS.

Question: Now that the snow is gone, the potholes remain. If a motor vehicle in-transport hits a pothole, causing damage to a tire and wheel or to the exhaust system, is this incident eligible for NASS?

Answer: Yes, it is eligible for NASS. To be eligible, recall that, first, a police report must be filed and, second, that the criteria set forth in ANSI D16.1-1983 (section 2.3, pages 10-12), have been met. In essence, these criteria mandate that the following occurs: (a) a harmful event (damage or injury), (b) involving a motor vehicle, (c) in-transport, and (d) that the unstabilized situation originated (i.e., control was lost) on a trafficway or the harmful event occurred on a trafficway. If the parties involved suffered damage to the wheels, suspension, exhaust system, or under carriage of their vehicles, then you have a valid accident for NASS; however, ANSI D16.1-1983 specifically excludes damage from mechanical failure during normal operation (section 2.3.6, page 11). The intent is to exclude a "blow-out" incident where the driver brings the vehicle safely to the side of the road without incurring other damage. This exclusion was not meant to exclude an incident where a "blow-out" led to other vehicle damage (e.g., ran into a tree) while the driver was attempting to regain control.

Question: A man driving a motor home slams on his brakes to avoid another vehicle in his lane; he succeeds. However, his young daughter is thrown against the instrument panel and suffers possible injuries. Is this a motor vehicle accident?

Answer: It is a motor vehicle traffic accident involving one vehicle. The other vehicle is not involved.

Question: A car loses control on a trafficway, leaves the trafficway, and does damage to a private lawn. There is no damage to the car and the driver is not hurt. Is this a traffic accident?

Answer: Yes! It would also be a traffic accident if the motor vehicle left the scene before the police arrived (i.e., a hit-and-run vehicle). In these situations, the determining factor is whether or not the private citizen called the police (i.e., considered their lawn damaged), and if the police filed an accident report that was eventually reported to the state.

Question: A pulp wood truck is travelling down a public road with an insecure load; the load shifts and all of the wood falls off the truck. The wood bounces and rolls, and then strikes a fence on the side of the road,

doing approximately \$500 worth of damage to the fence. There is no damage to anything except the fence and no other vehicles are involved; however, there is a police report made out on the incident, which is eventually included in the state file. Does this incident qualify for NASS?

Answer: Yes this situation does qualify for NASS. The harmful event is the damage to the fence.

Question: A power line falls onto a motor vehicle in-transport, causing personal damage -- is this incident applicable for NASS? A tree falls onto a motor vehicle as it was driving down the road -- is this incident applicable for NASS.

Answer: Both of the above situations, plus many similar ones (e.g., rocks fell onto the vehicle), fall into the category of near cataclysmic events. ANSI D16.1-1983 excludes, from the definition of an accident (section 2.4.6, page 15), harmful events resulting from a cataclysm. To further define this exclusion, the cataclysm must have been on-going at the time the accident happened. Cataclysms are defined in ANSI D16.1-1983 (section 2.4.5, page 15). Therefore, to exclude the situation of an object (power line, rock, etc.) falling on a motor vehicle in-transport, the cataclysm which caused the object to fall must have been on-going at the time of the incident. In terms of the specific questions, they are NASS accidents.

Question: We have a rare situation where a bystander dropped his gun; it struck the ground and discharged. A bullet struck the windshield of a vehicle in-transport. Should this incident be listed as a motor vehicle accident?

Answer: No, this is a firearms accident. However, it is entirely possible that a firearms accident could trigger a traffic accident.

Question: A tow truck is towing a pickup. The towed pickup truck loses an axle, which subsequently strikes a vehicle parked in a parking lot. Is this a NASS accident?

Answer: Yes it is. A motor vehicle in-transport loses part of its cargo (axle of pickup), which strikes (harmful event) a vehicle not in-transport. This would be an example of an other noncollision (A12, First Harmful Event, equals "06").

Question: A motor vehicle, parked in a driveway, slipped out of gear and rolled down the drive, across the street, and struck a tree on the other side. Is this an applicable accident?

Answer: It depends on the location of the vehicle when control was lost and the location when the harm occurred. To be an applicable NASS accident, the control must have been lost on a trafficway or the harmful event must have occurred on a trafficway. If the vehicle was up in its driveway (i.e., outside of the trafficway--it must be clearly beyond the curb or any sidewalk boarding the curb), then control was lost (i.e., control is assumed lost when the gears slipped) off a trafficway. If the tree that was struck was off the trafficway (same as above), then it is not an applicable NASS accident and whether the vehicle is on or off the roadway at impact is irrelevant. Given that you have to make a decision at the police station (must have a police report to start with), scrutinize the

police report for any information which would help you in determining the locations of the key elements. If the police report is uninformative concerning these key elements, include the accident for sampling purposes. If selected, a review of the scene should determine whether or not the case remains.

## 2.2 NASS PAR Sampling Strata

Before an accident, represented by a PAR, can be selected for research in the NASS, it must first be listed with all other qualifying PARs (the process of listing PARs is described in Section 3.2). From the listed PARs a sample of PARs will be chosen.

To increase the efficiency of the sample, qualifying PARs are grouped into sampling strata based on accident outcome, and a sample is selected. The information used to stratify the PARs is found in the report itself.

Type of Vehicle is the indication on the police report of the types of vehicles involved in the accident. Vehicles are classified as either "light vehicles" or as "non-light vehicles". Light vehicles include the vehicle types: automobile, automobile derivative and short utility vehicles, van based light trucks, and light conventional trucks where the qualifying trucks must have a gross vehicle weight rating (GVWR) of less than or equal to 10 000 pounds. If there is no indication by the police officer of the type of vehicles involved in the accident (e.g., a hit-and-run accident), then classify the vehicle as a non-light vehicle. The exact distinction between a light vehicle and a non-light vehicle is defined in terms of the variable Body Type (V17). The specific codes which identify light vehicles are listed in variable A02, Case Number-Stratification, and in Example 1. below.

Most severe police reported injury is the indication on the police report of injury severity, if any, to the occupants of any towed light vehicle involved in the accident. This severity should be translated into the KABCO codes, if necessary (see explanation of Variable 079 of this manual). For purposes of stratification, NASS is only concerned with the most severely injured occupant of any towed light vehicle. The injury severity to persons not in a towed light vehicle is not considered.

Disposition of the injured is the indication on the police report that at least one occupant of a towed light vehicle went directly from the accident scene to a treatment facility (hospital, clinic, doctor's office, etc.) for treatment (e.g., not transported solely to have a blood alcohol test conducted). The means of transportation is not a consideration nor is the length of stay at the facility. The transportation of any one occupant of a towed light vehicle qualifies the accident as "transported". The transportation or nontransportation of any person who was not in a towed light vehicle is not considered. If the PAR does not indicate the disposition of the injured occupant(s) of the towed light vehicle(s), then consider the accident as having no transported occupants.

Tow status of the vehicles is the indication on the police report that an in-transport vehicle involved in the accident was towed due to damage from the accident scene. If no light vehicles were towed due to damage from the accident scene, or if the disposition of the light vehicles was not noted by the police officer, then the accident is classified as all other accidents (see Stratum E).

The five PAR sampling strata used by NASS are:

- Stratum A-Accidents in which at least one occupant of a towed light vehicle had a police reported injury of "K" (fatal injury).
- Stratum B-Accidents not qualifying for Stratum A in which at least one occupant of a towed light vehicle had a police reported injury of "A" (incapacitating injury).
- Stratum C-Accidents not qualifying for Strata A or B in which at least one occupant of a towed light vehicle was transported from the scene to a treatment facility for treatment.
- Stratum D-Accidents not qualifying for Strata A, B, or C which involve at least one light vehicle that was towed from the scene due to damage.
- Stratum E-All other accidents that do not qualify for Strata A, B, C, or D.

Notice that the five PAR sampling strata are hierarchical. PARs included in Stratum A are not considered for Strata B, C, D, or E and so forth. Therefore, in reviewing PARs for stratification, first identify all in-transport light vehicles in the accident. If no in-transport light vehicles were present, then classify this accident in Stratum E.

**Second**, from among the light vehicles present in the accident, identify those that were "towed" as a result of damage received in this accident. If no in-transport "towed" light vehicles were present in this accident, then classify this accident in Stratum E.

If at least one in-transport towed light vehicle was present, then **third**, determine the most severe police reported injury to the occupant(s) of all towed light vehicles present. If one or more occupants of a towed light vehicle was killed ("K" injury), then classify this accident in Stratum A. If no occupant of a towed light vehicle was killed, but at least one occupant of a towed light vehicle received an "A" injury, then classify this accident in Stratum B.

If the most severe police reported injury to any occupant(s) of the towed light vehicle(s) present was a "B", "C", or "U" injury, then **fourth**, determine if one or more of those receiving "B", "C", or "U" injuries was transported from the scene to a medical facility for treatment purposes. If at least one "B", "C", or "U" injured occupant was transported to a medical facility for treatment purposes, then classify this accident in Stratum C. If no "B", "C", or "U" injured occupant of a towed light vehicle was transported to a medical facility for treatment purposes, then classify this accident in Stratum D. If the PAR indicates that no occupant of a towed light vehicle was injured (PAR "O" classification), then classify this accident in Stratum D.

Examples:

1. Accident: A heavy truck and a motorcycle crash. The driver of the motorcycle is killed. Stratification: This is a stratum "E" case because it does not involve a light vehicle (i.e., V17 must be "01" through "13", or "40" through "69").
2. Accident: A light vehicle and a motorcycle crash. The light vehicle is not towed, but the driver has an "A" injury. The motorcyclist is killed ("K" injury). Stratification: This is a stratum "E" case. It has a light vehicle, but the light vehicle was not towed. The injury to the motorcyclist is irrelevant.

3. Accident: A light vehicle rolls over ejecting and causing a "K" injury to one of the occupants, but the vehicle is not towed. Stratification: This is a stratum "E" accident because it does not have a towed light vehicle. The injury is irrelevant because it did not occur to an occupant of a towed light vehicle.
4. Accident: A light vehicle and a motorcycle crash. The light vehicle is towed, but none of the occupants are injured. The motorcyclist was killed ("K" injury). Stratification: This is a stratum "D" accident. There was at least one towed light vehicle, but no one in a towed light vehicle was injured or transported. The death of the motorcyclist does not affect the stratification. The only injuries that affect stratification are those suffered by occupants of towed light vehicles.
5. Accident: Two light vehicles crash. Vehicle 1 is towed, but none of the occupants are injured. Vehicle 2 is not towed, but an unbelted infant hits the instrument panel and dies instantly. Stratification: This is also a stratum "D" accident. The stratification is determined by the most severe injury to an occupant in a towed light vehicle.
6. Accident: A heavy truck and a light vehicle crash. The heavy truck catches on fire and the occupants burn to death. The light vehicle is towed; one occupant receives a "C" injury, and another occupant receives a "B" injury and is transported for treatment. Stratification: This is a stratum "C" accident. The most severe injury to the occupants of the towed light vehicle determines the stratum.

Stratification versus research: It is very important to remember that while only the injuries to the occupants of towed light vehicles determine the stratum, once a case is selected for research all the light vehicles, towed or nontowed, and all their drivers and occupants receive full inquiry. The non-light vehicles in these accidents and their drivers and occupants and any pedestrians and/or nonmotorists will receive an abbreviated level of research inquiry. See Section 4.6.

### 2.2.1 Common Questions and Answers Regarding Stratification

Please find below some typical examples of questions involving the classification of accidents.

Question: A vehicle ran off the road, struck a small tree, and continued on, eventually striking a pedestrian. Would this be coded as an other motor vehicle accident, since ANSI requires that in a pedestrian accident (section 2.5.3, page 25), the first harmful event must involve a collision with a pedestrian?

Answer: In NASS we are concerned with what is defined in ANSI as a motor vehicle traffic accident (MVTA) (section 2.4.20, page 16). The components of a MVTA are: (a) a police report, (b) a harmful event, (c) from an unstabilized situation, (d) involving at least one motor vehicle (e) in-transport [in motion or on a roadway], such that (f) the harmful event occurred on a trafficway or the unstabilized situation originated on a trafficway. Beyond this, we are not concerned with subdividing accidents according to ANSI. For this accident to be considered as a part of the CDS, the vehicle must have been a "light vehicle", and it must have been towed as a result of the damage it sustained in the accident. Beyond this only the most serious police reported injury, the transported status of the vehicle's occupant(s) need to be considered.

Question: When a hit-and-run accident occurs which involves a single in-transport vehicle, and no information is available about the hit-and-run vehicle, how do you classify the accident on the stratification record?

Answer: Stratify the PAR as a Stratum E accident since no information about the vehicle is equivalent to V17, Body Type, equalling "99" (Unknown).

Question: How do you stratify a vehicle not in-transport? The vehicle is unoccupied.

Answer: Vehicles not in-transport are not considered when determining the PAR sampling Stratum.

Question: It is, at times, difficult to determine whether or not a parked vehicle was on the roadway from simply reviewing a police accident report. Usually, the PAR merely states that the vehicle was parked. Unless one is familiar with the roadway, how do you determine if the vehicle was in-transport or not?

Answer: Vehicles which are legally parked are not in-transport. In certain situations illegally parked vehicles are in-transport; however, the fact that a vehicle was illegally parked when struck has never automatically made that vehicle in-transport.

In 1982-1983 this issue was resolved for bus zones. Figure 2-7 presents six bus stop parking area situations which were discussed and resolved over two zone center seminars (May '82-ZOD, and May '83-ZOB). For situations I through V any vehicle in the bus zone was considered in-transport. In situation VI a non-bus in the bus zone was considered in-transport. The mid-block bus zone concept was extended as well to fire hydrants located mid-block.

During the 1986 zone center seminar (May '86-ZOA) the question of vehicles illegally parked beyond the end of legal parking (either implicit or explicit) near an intersection was considered. The following resolution was obtained. If a vehicle is illegally parked because of time, then the vehicle is not in-transport. If a vehicle is illegally parked because of location, then the vehicle is in-transport. One major exception is when time changes the character of the parking location. See Figure 2-3 above. If any part of a struck vehicle is beyond the end of legal parking, then this vehicle is in-transport. This means that any vehicle not authorized to be in a bus zone, fire hydrant zone, loading/unloading zone, NO PARKING area, or yellow curbed area is in-transport regardless of where that area is located (i.e., end of block or mid-block).

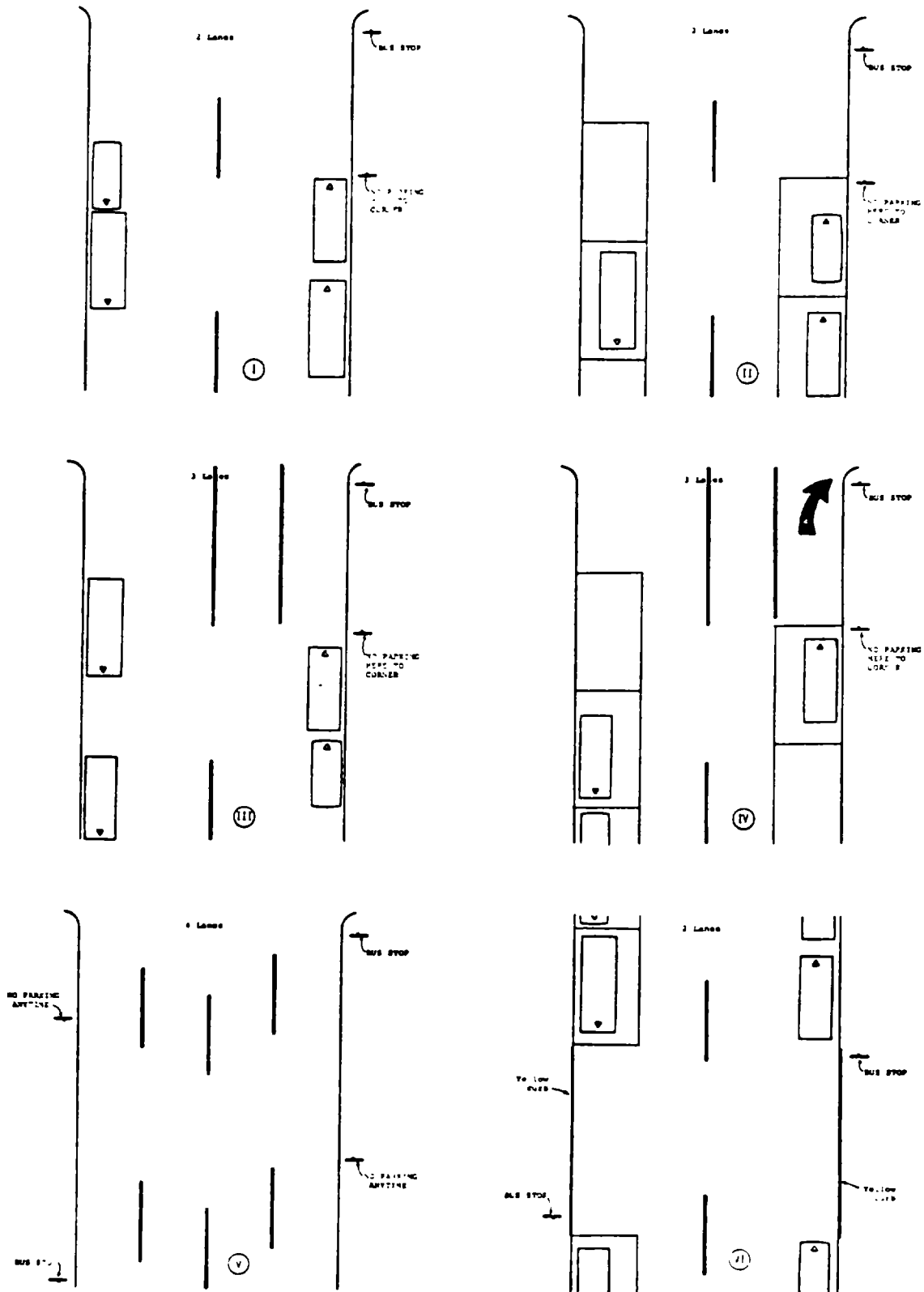
For sampling purposes, the PAR scene sketch should be used in conjunction with the violations issued section to determine if a vehicle was illegally parked because of location.

Illegal parking includes any occupied vehicle which is stopped in an illegal location. Any vehicle entering or exiting one of the above mentioned areas (i.e., bus zone, fire hydrant zone, loading/unloading zone, NO PARKING zone, or yellow curbed area) is, of course, in-motion and thus in-transport.



Figure 2-7

BUS STOP PARKING AREA SITUATIONS I - VI



Question: A vehicle had several persons riding on top of it. The police spotted the vehicle and started to give chase. The persons jumped off. In the process, one was injured. Is this person an occupant or a non-motorist? What about the vehicle and its occupants?

Answer: The persons riding on the roof do not fit the appended-to-the-vehicle-for-motion exclusion (e.g., person on a bicycle or skateboard who is holding onto the back of a vehicle for added motion) cited under variables 008, Occupant Number, and 014, Occupants Seat Position; therefore, these persons are occupants of the in-transport vehicle. Regarding the injured person, if that injury (harmful event) occurred as a result of exiting from the vehicle, then stabilization did not occur for that person. Therefore, in addition to those in the vehicle, consider the person who was injured while jumping from the vehicle as an occupant also. Since the vehicle was not towed due to damage, it makes no difference whether the vehicle was a light vehicle or not. Stratum E would be assigned to this PAR.

Question: A pickup truck was towing (pulling) a friend's passenger car to a service station. The care broke loose and impacted a tree. No damage occurred to the pickup. How would you stratify this accident?

Answer: Any motor vehicle on a roadway is in-transport. An exception occurs where the vehicle is attached to another vehicle by means of fixed linkage. The critical issue is whether or not the attached vehicle has any control over its movement. In this instance, the answer depends on how the car and truck were attached. If the car was attached by a tow bar or any other form of fixed linkage, then the car is considered a trailing unit and the tow status of that vehicle is not considered in stratifying for sampling. On the other hand, if the linkage was nonfixed (e.g., rope, chain, etc.), then the car was in-transport, and its tow status is considered. A fixed linkage is defined as one which has the property of keeping the towed unit separated from the power unit by a distance which is essentially constant. Included within this definition are cradle linkages where the towed unit has two or more wheels off the ground. If the linkage was fixed this is a Stratum E accident since the pickup was not towed due to damage. If the linkage was nonfixed and if the car was towed due to damage, then the accident qualifies for the CDS.

### 3.0 OVERVIEW OF SAMPLING ACTIVITIES

The procedure for selecting the NASS Accident Sample consists of three tasks:

- Task 1: Contact sampled police jurisdictions on specified days to review the police accident reports (PARs).
- Task 2: At each jurisdiction, list and stratify, using the NASS Stratification Record (SR), all PARs which qualify for NASS. Classify each into one of the five NASS PAR Sampling Strata. Note on the SR the accident with the most recent accident date, accident time, and PAR number. Do this for each PAR Strata A, B, C, and D.
- Task 3a: Using the Microcomputer Data Entry (MDE) system, enter the listed PARs into the NASS Automated Case Selection System. The automated system will specify the sample of accidents to be researched.

or

- Task 3b: If the NASS Automated Case Selection System is not accessible, manually select the sample of accidents to be researched by following the procedures below.

Most teams will perform these tasks on Monday and Thursday of each week. Alternatively, a few teams will perform these tasks on Tuesday and Friday of each week. Still other teams will sample only on Mondays or more than twice a week. Section 3.2 below discusses the Monday-Thursday example. However, the procedure to be followed is the same regardless of the schedule.

#### 3.1 List and Sampling Forms

The Case Load Assignment Sheet (CLAS) for an example PSU and the Stratification Record (SR) are attached.

##### 3.1.1. Case Load Assignment Sheet (CLAS)

The Case Load Assignment Sheet (Table 3-1) provided to your PSU is unique to your PSU. It includes the expected Case Load for each contact date for the period specified at the top of the form. Updated versions of the CLAS will be sent to you semi-annually or when your workload changes. The CLAS must be initialed by a COTR and by Sample Design staff from the Mathematical Analysis Division.

Case Loads for 1987 will be fixed (i.e., a fixed number of cases will be assigned on each contact day). Standard average weekly caseloads are as follows:

<u>Team Size</u>	<u>Average Cases per Week</u>	<u>Average Cases per researcher per Week</u>
1	1.25	1.25
2	3.00	1.50
3	5.25	1.75
4	7.00	1.75

Workload reductions will be given by reducing the number of cases assigned. There will be no SDO (Source Documents Only) cases in 1987, even though there

Table 3-1

C A S E L O A D A S S I G N M E N T S H E E T

PSU		Period	
78 -Douglas		05-Jan-87 to 30-Jun-87	
Contact Date	Caseload Assignment	Contact Date	Caseload Assignment
05-Jan-87	3	06-Apr-87	3
08-Jan-87	3	09-Apr-87	2
15-Jan-87	2	13-Apr-87	3
19-Jan-87	3	16-Apr-87	2
22-Jan-87	2	20-Apr-87	3
26-Jan-87	3	23-Apr-87	3
29-Jan-87	3	27-Apr-87	2
02-Feb-87	2	30-Apr-87	3
05-Feb-87	3	04-May-87	3
09-Feb-87	3	07-May-87	2
12-Feb-87	2	11-May-87	3
16-Feb-87	3	14-May-87	2
19-Feb-87	2	18-May-87	3
23-Feb-87	3	21-May-87	3
26-Feb-87	3	25-May-87	2
02-Mar-87	2	28-May-87	3
05-Mar-87	3	01-Jun-87	3
09-Mar-87	3	04-Jun-87	2
12-Mar-87	2	08-Jun-87	3
16-Mar-87	3	11-Jun-87	2
19-Mar-87	2	15-Jun-87	3
23-Mar-87	3	18-Jun-87	3
26-Mar-87	3	22-Jun-87	2
30-Mar-87	2	25-Jun-87	3
02-Apr-87	3	29-Jun-87	3

Total Assignment:

132

-----

Approved -- MAD:

CTM:

23-Dec-86

will often be an SDO type of coding on some forms within a fully researched case.

### 3.1.2 Stratification Record (SR)

All teams will use the same Stratification Record form (Table 3-2). Make photocopies as needed of the form provided. Instructions for completing the form are given in Section 3.2.2.

## 3.2 Listing and Sampling Instructions

### 3.2.1 Contacting Police Jurisdictions

Contact each of the jurisdictions indicated on the Jurisdiction Contact Schedule on the day(s) of the week specified. For most teams, the jurisdictions are given in two different visitation patterns. For example, some jurisdictions are to be contacted on both Monday and Thursday while others are to be contacted on either Monday or Thursday (i.e., only one visit each week). If a team wishes to change the contact day for any jurisdiction, it must notify both its respective Zone Center and COTR for approval to implement the change.

### 3.2.2 Completing the Stratification Record

At each police jurisdiction, follow the guidelines in Section 2 (2.0-2.2) to identify the PARs which qualify as NASS accidents and are to be listed in the CDS. Complete the Stratification Record as follows:

- a. At the top of the SR enter the PSU number and name, the contact date, the police jurisdiction name, and the name or initials of the team member making the visit.
- b. For each qualifying PAR:
  1. Enter the accident date, accident time, and PAR number in the appropriate columns. In addition, enter in the appropriate columns the number of in-transport motor vehicles and the total number of persons involved in the accident. Vehicles not in-transport (e.g., some parked vehicles) are not included. Also, the total in the number of persons column includes all drivers, other occupants, and pedestrian/nonmotorists. Note that blanks, zero or unknown are not allowed in any column. When the correct number of vehicles or number of persons is not shown on the PAR, the default for these columns shall be one vehicle per accident and one occupant per vehicle. Also, the number nine ("9") should be used for "nine or greater" for each column. Finally, if an accident occurs that involves a single in-transport vehicle and that vehicle was driverless and neither pedestrian nor nonmotorists were present, then enter one ("1") in the number of persons column since zero is not allowed.
  2. Determine the sampling Stratum:
    - (a) Determine if at least one occupant of a towed light vehicle involved in the accident was killed ("K injury),

S T R A T I F I C A T I O N   R E C O R D

PSU: \_\_\_\_\_

CONTACT DATE: \_\_\_/\_\_\_/\_\_\_

JURISDICTION: \_\_\_\_\_

LISTED BY: \_\_\_\_\_

STRATUM	P A R   I N F O R M A T I O N				
	DATE	TIME	NUMBER	NO. VEH	NO. PER
1.	- - 87				
2.	- - 87				
3.	- - 87				
4.	- - 87				
5.	- - 87				
6.	- - 87				
7.	- - 87				
8.	- - 87				
9.	- - 87				
10.	- - 87				
11.	- - 87				
12.	- - 87				
13.	- - 87				
14.	- - 87				
15.	- - 87				
16.	- - 87				
17.	- - 87				
18.	- - 87				
19.	- - 87				
20.	- - 87				

Total Accidents per Stratum:    A \_\_\_    B \_\_\_    C \_\_\_    D \_\_\_    E \_\_\_

Total NASS Accidents listed on this Page: \_\_\_\_.

- (1) If so, it belongs in Stratum A.
  - (2) If not,
- (b) Determine if at least one occupant of a towed light vehicle involved in the accident had an "A" injury,
- (1) If so, it belongs in Stratum B.
  - (2) If not,
- (c) Determine if at least one occupant of a towed light vehicle involved in the accident was transported directly from the accident scene to a treatment facility for treatment,
- (1) If so, it belongs in Stratum C.
  - (2) If not,
- (d) Determine if at least one towed light vehicle was involved in the accident,
- (1) If so, it belongs in Stratum D.
  - (2) If not, it belongs in Stratum E (all other accidents).
3. Make an entry in the STRATUM column as follows. If the PAR is the first listed for that Stratum, enter "1" in the STRATUM column. If it is the second enter a "2", etc.
- c. After listing all applicable PARs at a jurisdiction and entering 1, 2, 3, etc., in the STRATUM column, total each Stratum and enter each Stratum's total at the bottom of the page in the appropriate spaces.

During each contact date visit to a police jurisdiction, all PARs that qualify for NASS and have not been listed previously are to be listed.

### 3.2.3 The NASS Automated Case Selection System (ACSS)

The Automated Case Selection System will be executed for each contact date listed on the Case Load Assignment Sheet. The Microcomputer Data Entry User's Manual includes instructions for using the NASS ACSS. Any problems or difficulties that are not identified in the manual should be referred to your Zone Center.

The ACSS reports the selected PARs on the Automated Case Selection System Report (ACSSR). See Table 3-3 for an example of the ACSSR.

If the ACSS is not accessible for a twenty-four (24) hour period, select the appropriate cases using the Manual Sample Selection Procedure described in the section below. When the ACSS is available, the PARs must be entered sequentially by contact date for each contact date missed. Compare the cases which were selected manually with those reported on the ACSSR for the same contact day. If they do not agree, then the accidents selected by the ACSS must be used for research.

N A S S  
\* AUTOMATED CASE SELECTION SYSTEM \*  
R E P O R T

\*\*\*\*\*

PSU NUMBER:

CONTACT DATE: / /

THE SAMPLE SELECTION ALGORITHM EXECUTED SUCCESSFULLY.

LAST CASE NUMBER:

THE FOLLOWING PARS WERE SELECTED:

Case Number	Police Jurisdiction	PAR Stratum	Accident Date	Time	PAR Number	Type of Case
-----+-----+-----+-----+-----+-----+-----						



### 3.2.4 The Manual Sample Selection Procedure

The manual sampling procedure is to be executed in totality beginning with Step 1 on each contact day. When PARs at all jurisdictions to be contacted that day have been listed, identify the cases to be researched as follows (see Figure 3-1):

Step 1: Write down the number of cases (Case Load) to be selected that day. Within each Stratum, sort the accidents in descending order by (1) Accident Date, (2) Accident Time, and (3) PAR number.

If your sort in any given Stratum produces two or more accidents with the same date and time but from different jurisdictions, then the accident from the higher numerically valued jurisdiction (remember jurisdictions are assigned a value by the ACSS) is considered more recent for the purposes of Steps 2.-5. below.

For accidents whose time is Unknown (A15-9999), be advised that the ACSS will assign that accident's time a numerical value higher than the times of the other accidents that occurred on that accident's date. This means that for any given Stratum and for those accidents with the latest date in that Stratum, the accidents with an Unknown time will have the highest priority of selection.

NOTE: In previous years jurisdiction was used to sort the accidents to obtain a measure of size representation of the PSU. This year NASS is interested in severe accidents that can provide information on a case-by-case basis; therefore, jurisdiction is only needed as a sort when there are two or more accidents with the same accident date and time.

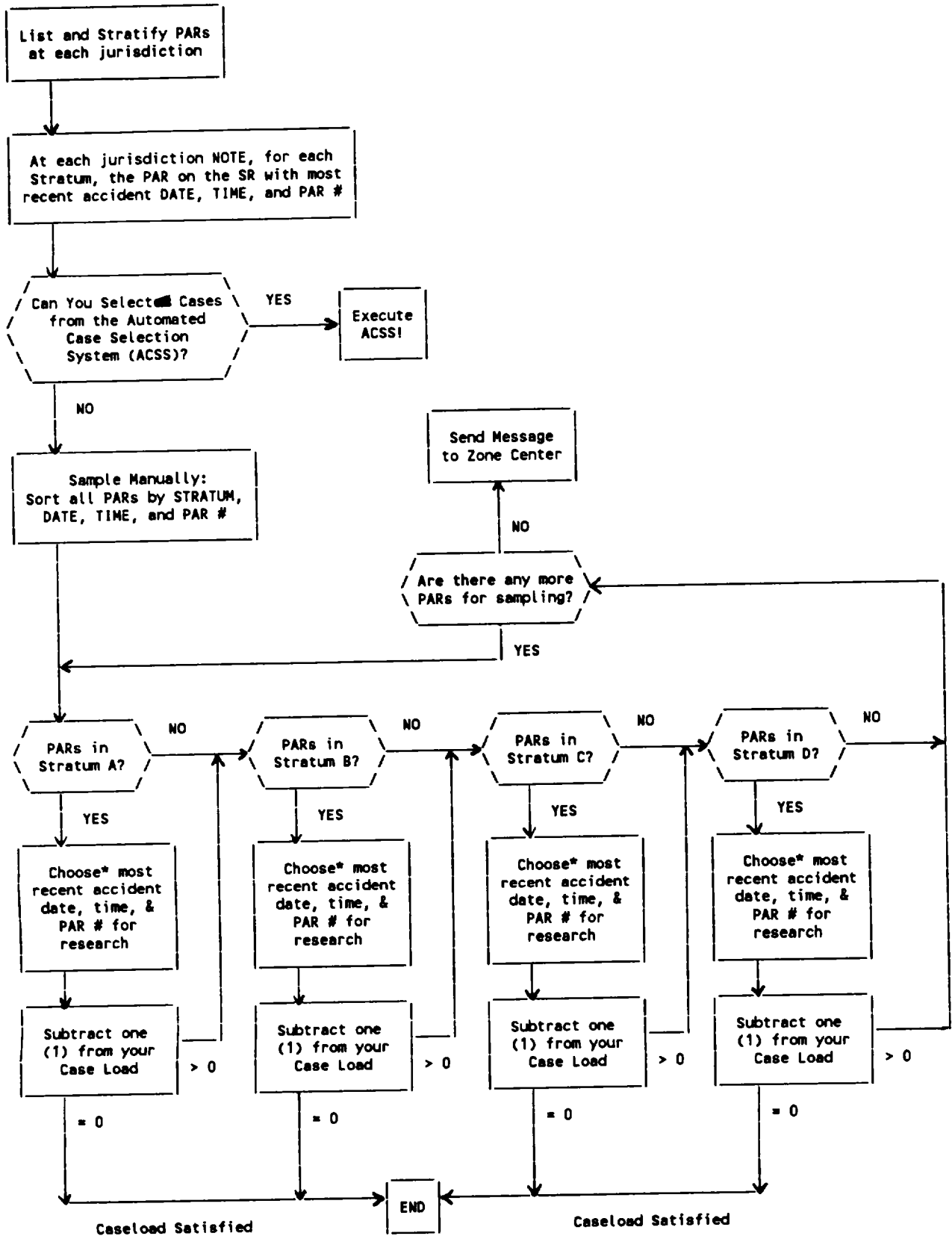
Step 2: If there were no PARs from Stratum "A" go to Step 3. If there were PARs:

- (1) Choose the Stratum "A" PAR with the most recent accident date, time, and PAR number; this accident will be researched.
- (2) Subtract one (1) from the Case Load.
  - (a) If the result is 0 (zero), then the sampling process is complete.
  - (b) If the result is greater than 0 (zero), go to Step 3.

Step 3: If there were no PARs from Stratum "B" go to Step 4. If there were PARs:

- (1) Choose the Stratum "B" PAR with the most recent accident date, time, and PAR number; this accident will be researched.
- (2) Subtract one (1) from the Case Load.
  - (a) If the result is 0 (zero), then the sampling process is complete.
  - (b) If the result is greater than 0 (zero), go to Step 4.

Figure 3-1



\* In the event you have two or more accidents with the same most recent Accident Date and Time, choose the accident from the lower numerically valued jurisdiction.

Step 4: If there were no PARs from Stratum "C" go to Step 5. If there were PARs:

- (1) Choose the Stratum "C" PAR with the most recent accident date, time, and PAR number; this accident will be researched.
- (2) Subtract one (1) from the Case Load.
  - (a) If the result is 0 (zero), then the sampling process is complete.
  - (b) If the result is greater than 0 (zero), go to Step 5.

Step 5: If there were PARs from Stratum "D":

- (1) Choose the Stratum "D" PAR with the most recent accident date, time, and PAR number; this accident will be researched.
- (2) Subtract one (1) from the Case Load.
  - (a) If the result is 0 (zero), then the sampling process is complete.
  - (b) If the result is greater than 0 (zero), return to Step 2.

NOTE: No cases are to be selected from Stratum E.

### 3.2.5 Temporary Case Numbers

Assign a temporary case number to the accident that were selected. Case numbers should be assigned in the following sequence: PAR Sampling Stratum, Accident Date, Accident Time, and PAR number. The permanent case number will be assigned by the Automated Case Selection System, after the sample for this contact day has been selected by the Mainframe.

### 3.3 Sampling Problems: How To Handle Them

The following section describes problems that sometimes arise in sampling and outlines ways to address them. A critical element in each case is time; that is, the longer the period between the occurrence of the problem and the implementation of some corrective action, the less likely are the Mathematical Analysis Division's (MAD) chances of resolving it. If a problem occurs which is not listed below, the researcher should inform his/her COTR or the MAD sampling design staff at once.

Problem 1: A team lists and stratifies accidents correctly, but the PAR for the selected case is missing when the researcher returns to the police jurisdiction after sampling.

Action: After all attempts to locate the PAR have been exhausted unsuccessfully, obtain the next most recent PAR in the same Stratum and jurisdiction. In the event that the originally selected PAR was the only one in that Stratum at that jurisdiction, then obtain the next most recent PAR in the selected Stratum independent of jurisdiction. If the missing PAR was the only one from that Stratum, contact MAD. As a general rule, if the PAR used is different than the PAR selected, annotate the change on your sampling materials and send a message to your Zone Center.

- Problem 2: A team does not find any accidents to list.
- Action: No cases will be selected this day. However, the MDE must be entered to close the Listed Cases File, even though it will be empty, and a Mainframe connect must be made to receive the next contact date.
- Problem 3: A team lists some accidents, but fewer than or equal to the number of cases to be selected on that day.
- Action: Research all the accidents available in Strata A, B, C, and D and send a message to the Zone Center indicating that insufficient accidents were listed to meet the day's Case Load.
- Problem 4: A team cannot list and select on the designated contact date due to extreme weather conditions (in particular, snow hazards) or holiday.
- Action: When circumstances are foreseen, make arrangements with MAD to visit the jurisdiction(s) either the day before or the day after. When circumstances are unforeseen and the jurisdictions can be visited prior to the next contact date, list and select on the first practical day. In either situation list only PARs with accident dates prior to or equal to the missed contact day. If the jurisdiction(s) cannot be visited before the next contact day, notify the MAD sample design staff immediately.
- Problem 5: Upon visiting the accident scene it is determined that the selected accident occurred outside of the PSU.
- Action: If the PAR is for an accident which occurred outside of the PSU, the research is to be completed as long as it meets all other requirements for a NASS accident (i.e., Section 2.1 of the NASS Data Collection, Coding and Editing Manual).
- Problem 6: A team lists and properly selects an accident according to the information on the PAR. However, during the research it is determined that the case either (a) does not meet the criteria (i.e., Section 2.1 above) for accidents which qualify for NASS, or (b) does not meet the criteria for selection in the CDS.
- Action: If the incident is not a NASS accident, then follow the dropped case procedure (see Section 5.3). If the NASS accident, which was stratified in Strata A, B, C, or D, does not, in fact, contain any in-transport towed light vehicles, then (a) research the case if at least one in-transport nontowed light vehicle was present, or (b) follow the dropped case procedure if "only" in-transport non-light vehicle(s) were present. In essence, the only time a researcher drops a case based on CDS criteria is when there is no in-transport light vehicle in the accident (i.e., further research determines that an error was made on vehicle type during stratification).

It is extremely important, when problems 1 and 6 arise, that the Zone Center and Headquarters (COTR and MAD sample design staff) are notified immediately. Dropped cases are to be reported to headquarters at the end of each quarter, along with the reasons why they were dropped.

### 3.4 Beginning of Year Sampling Instructions

At the beginning of a new calendar year, some accidents that occurred in the previous year will be listed at your police jurisdictions. It is important that the accidents in each calendar year be kept separate for sampling purposes. Special instructions will be issued in December of each calendar year detailing how the separate sampling will be accomplished.

#### 4.0 OVERVIEW OF INFORMATION TO BE COLLECTED ON CASES SAMPLED

For each case sampled, please include in the case report a copy of the police report, newspaper photos and articles, correspondence, collision diagram, slides (including index), the applicable crashworthiness data subsystem data collection forms with field loss medical injury record, CRASH, and MDE output.

##### 4.1 Sequencing of Case Materials

Case report forms and miscellaneous materials are to be sequenced in conformity with the guidelines depicted in Figure 4-1. There are seven distinct groupings which may exist with each case, and while the number of groupings may vary with each accident, it is important for the case reviewer (team or Zone Center) that the composition of the seven groups be maintained.

The first group contains the police report, the NASS Case Summary Form, newspaper photographs, articles, and other miscellaneous, non-NASS generated materials. This group will give the Zone Center reviewer a general appreciation of the accident from non-NASS sources and facilitates review of sampling. The documents in this group should be bound with a paper clip. The group will appear in every case, although it will often be composed only of the police report and the NASS Summary of Case Form.

The second group contains the Accident Collision Diagram, slides, and the slide index; thus, it provides the reviewer with a general overview of the case based upon the NASS research. Differences between the two versions (Non-NASS and NASS) are to be expected periodically, and preliminary review of this and the preceding group will alert the reviewer to those differences and their eventual resolution in the final NASS version. This group should appear in every case, bound together with a paper clip.

Third, the Accident Form and the Accident Log, which is located on the back of the last page of the Accident Form, forms a group which will appear in every case.

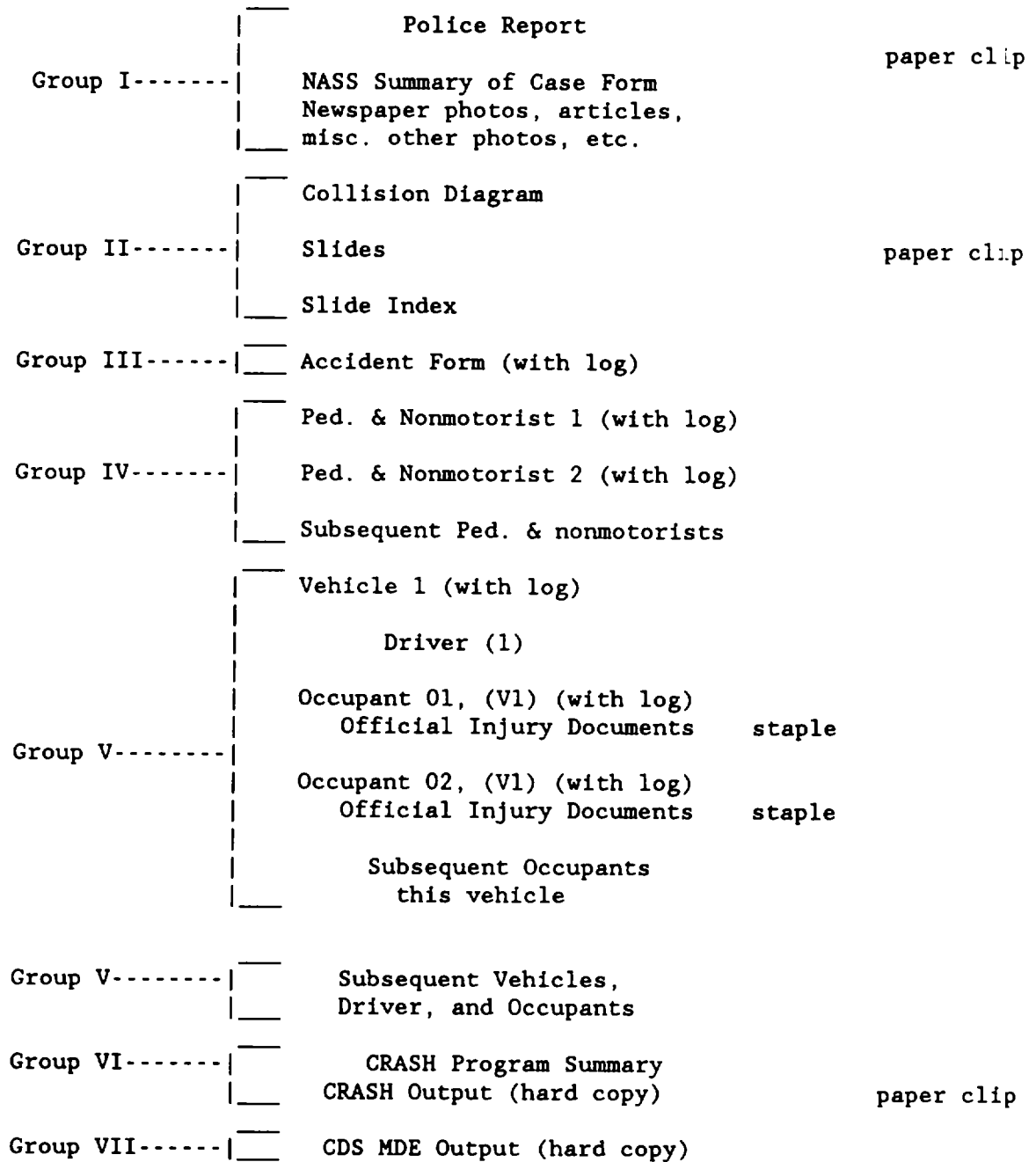
Fourth, all Pedestrian and Nonmotorist Forms (with logs) should be grouped together, beginning with pedestrian or nonmotorist number 1. Pedestrian and Nonmotorist Forms will appear only in cases where applicable.

The fifth group contains a Vehicle Form, the Driver Form, forms for all the occupants contained in the vehicle, and any official injury documents for those occupants. The first form in this group is the Vehicle Form (with log), for this vehicle. The Driver Form appears next. This will be followed by the first Occupant Form (with log) for this vehicle which has any official injury documents stapled to the back of it. All additional Occupant Forms (with logs) will follow in numerical order [Occupant 02 (V1), Occupant 03 (V1), etc.]. At least one group of this type will appear in every NASS case. Additional vehicles, their drivers, occupants, and official injury documents should be grouped in a similar manner. Thus, each group may be thought to represent a vehicle and its occupants; and, each such group physically distinguishes one vehicle and its occupant from any other.

The sixth group is composed of the CRASH (or Poles or OLDMISS) Program Summary and the Output (hard copy), if the program has been exercised for the collision. Upon reviewing the above forms and having become familiarized with the accident, the reviewer is then prepared to evaluate both the appropriateness

FIGURE 4-1

SEQUENCE OF CASE MATERIALS



of using the program and the viability of the various inputs on the Program Summary. These two items, the summary and any output (always include the input data), should be bound together with a paper clip.

The seventh group is composed of the Microcomputer Data Entry (MDE) output.

#### 4.2 Information Required on Field Forms (Mandatory Variables)

Case Identification Variables--When using the microcomputer data entry system to enter the field data, certain information is required on each field form (log data are not entered) before it will be accepted. Every field form submitted must have a Primary Sampling Unit Number, A Case Number-Stratification, Record Number, Transaction Code, Version Number, and Investigator I.D. Number. The Record Number, Transaction Code Number, and Version Number will be preprinted on each of the forms. Team members should fill out the Primary Sampling Unit Number, Case Number-Stratification, and the Investigator I.D. Number.

Accident Form--For each accident researched, one Accident Form must be filled out. The additional mandatory information needed on this form is the Date, Number of Vehicle Forms Submitted, and Number of Pedestrian & Nonmotorist Forms Submitted.

Pedestrian and Nonmotorist Form--If a Pedestrian and Nonmotorist Form is submitted, the only additional mandatory data item is the Pedestrian or Nonmotorist's Number.

Vehicle Form--For each accident researched, at least one Vehicle Form must be submitted. The additional mandatory information to be included on this form consists of the assigned Vehicle Number and the Number of Occupant Forms submitted.

Driver Form--For every Vehicle Form there must be included one Driver Form. The additional mandatory data items to be filled out on the Driver Form are Vehicle Number and Driver Presence in Vehicle.

Occupant Form--When Occupant Forms are filled out, Vehicle Number and Occupant Number must always be present.

Treatment of Missing Data--When light vehicle accident-involved drivers, vehicles, or occupants, cannot be located or interviewed and all data items are missing, the appropriate form must be filled out with missing data codes and submitted with the case.

#### 4.3 Update Procedures for Hard Copy Field Forms

Data elements which may be updated in the hard copy case report are restricted to certain variables which appear on either Driver or Occupant Forms. No other data will be updated if it is acquired after the initial submission of the case. Note that for MDE, any variable except for the mandatory variables may be updated before the case is forwarded to the Zone Center. Update records have been developed for those variables which are allowable hard copy update candidates. Update records which have been specially designed to accommodate these variables are not to be included with the initial submission of the case; instead, they are retained at the PSU and filled out partially upon initial case submission. Subsequently, they are completed when the update information arrives. On the original case form, all data variables which the researcher intends to update should be coded with any available



appropriate information or the code designating "Unknown". In addition, the variable number should be circled. This will "signal" that an attempt will be made to update that data variable. In the case of injury updates, the "Update Candidate" circle should be marked in the affirmative. This procedure applies only to those data variables on the Driver or Occupant Forms which are designated below as candidates for updating.

The researcher is to complete the required sections prior to initial case submission so that the subsequently acquired information may be associated with the right case and vehicle or occupant number. The newly acquired information should be entered on the front of the Update Forms and any supporting documents attached to the back.

Driver Update Record--This form is to be used only if Alcohol Test Results (D25) is not known at the time of initial submission.

Occupant Update Record--This form should be used when the researcher expects to receive data after the initial submission. Additional information required on this form prior to initial case submission allows the researcher to update variables 009, 010, 020, 021, 022, 031 through 078, and 080, based on subsequent receipt of official or interviewee data. These data would be difficult to update without recorded knowledge regarding the initial coding of Treatment - Mortality (020), Hospital Stay (021), Working Days Lost (022), injury data (031-078), and Time to Death (080). This information may then be combined with the new injury data using the NASS injury coding rules to revise the variables on the updated version. Also, a copy of the interior sketch (page 11 of the Vehicle Form) is made prior to the initial submission, so that the researcher will be able to check for specific components contacted by the occupant when coding the injury sources on the update form.

Update Filing and Submission Instructions--The researcher must complete each of the sections on the above forms, as required, prior to the initial submission. This allows the new information (update form) to be associated with the corresponding field form in the initial submission, and allows the originally coded data to be combined with the new data (using the NASS injury coding rules).

All update records may then be stored in a three-ring binder and segregated into two sections: (1) Driver Update Record Forms, and (2) Occupant Update Record Forms. Each new addition of an update record may then be indexed by Case Number-Stratification, Vehicle Number, and Occupant Number. They may also be partially cross-indexed alphabetically based on the name of the driver or occupant in the appropriate section. This will facilitate the processing of inquiries from Zone Centers as well as the retrieval of the update record when the official medical data is received.

The name of the individual and any other descriptive information unique to the team which may identify the individual should be sanitized from the Driver Update Record, and/or the Occupant Update Record, and the attached reports after the information from the latter has been included on the update record.

Update records should be accumulated, packaged in an individual Zone Center approved size manila envelope (but not one envelope for each update), which identifies the PSU and is boldly marked: UPDATES, and sent to the Zone Center on a periodic basis according to the schedule in Section 5.2. If the updates are not obtainable by the due date, the reasons the updates could not be are

to be indicated on the update record and sent to the Zone Center. All updates or reasons the updates were not obtainable must be submitted to the Zone Center within 96 days of the date the case was sampled.

The update records, described above, will be attached by the Zone Center to the corresponding forms included in the initial submission to the Zone Center.

#### 4.4 Form Logs

The field forms (Accident, Pedestrian and Nonmotorist, Vehicle, Driver, and Occupant) have a unique log printed on the back of the last page. These logs provide information with respect to the acquisition and processing of accident data in the NASS system, as well as the quality of data collected. This information is used to establish reasonable acquisition expectations, to identify and evaluate Zone Center quality control effectiveness, and to provide complete and timely feedback to team members. Careful examination of the logs will reveal that minimal effort is required for the researcher to answer the questions, particularly if the entries are made in conjunction with, and at the time, the particular task is accomplished. The form logs also contain sections which will be completed by the Zone Center during the process.

##### 4.4.1 Accident Log

The sections to be completed by the PSU are identified under the heading "Completed by Team" or "For Team Use". The block at the top of the page labeled "Forms: For Team Use" is an area where the researcher accounts for the number of forms which are required and ultimately included with the case. The information on this section is transcribed to the front of the case envelope before submission to the Zone Center. Many of the forms which are needed under the required component of this section may be identified early in the research; thus, this section will serve to aid the researcher in determining the status of the case while it is in progress. At the time of initial submission, or final submission (if there are to be no updates for the case), the researcher uses this section to verify that the number of forms included in the case report equals the number of forms required, with the exception of medicals. The number of medicals (Official Medical Data) required should reflect the number of people who were treated in a hospital, medical clinic, etc. This is true independent of the ability of the PSU to obtain the data. The number of medicals included in the case report will reflect the number of medicals (on a person basis) which are included in the case at the time of initial submission.

The block marked "Completed by Team" is to be filled out by the appropriate researcher as the different activities described are completed. Each of Questions 1 through 15 (discussed below) must be completed before the case is submitted. Questions 1 through 6, commonly called the "header data", are coded the same as Variables A01 through A06 on the Accident Form. Question 7, Type of Case, is coded the same as A07 on the Accident Form. Question 8, Date of Accident, is filled in with the same month, day, and year as is designated under variable A08 on the Accident Form. Question 9, Date Sampled (Listed), is the contact date listed on the Case Load Assignment Sheet (CLAS), unless contact date was a holiday or a day when inclement weather prevented the sample, in which case the date the case was actually listed would be coded. Question 10, Date Scene Field Work Completed, is the date the researcher locates and inspects the accident scene. Question 11, Completing Person, is to be filled in with the number of the researcher who located and inspected the scene, and who will assume responsibility for the completeness and overall quality of the case. The status of the scene location, mapping of the scene

and the quality of the scene drawing is documented under Question 12. Question 13, Date Case Released to Zone Center, is filled in with the date the MDE "release" transaction was completed. Cases are to be released before they are forwarded to the Zone Center. The status of the case upon submission to the Zone Center is recorded under Question 14. If the case is complete and requires no updates, Box (1) is checked. If the case is to be updated, box (2) is checked, and if the case was dropped, box (3) is checked and the reason noted. Question 15, Are Special Studies Included, is used to record the status of special studies. For each special study included with a case, a "1" is placed in the column entitled "SS9" independent of the name of the special study. There will be no Crash Cushion special study in 1987, but this variable (A25) and log location are used to accommodate the use of the 1986 MDE software. The remaining (SS8, SS10-SS15) special study columns are coded with "0". The remainder of the Accident Log is completed by the Zone Center quality review staff and is identified under the heading "Completed by Zone Center". This section is completed by the case reviewer as the case report flows through the quality review process.

Question 16, Date Hard Copy Received at Zone Center, is filled in with the date the hardcopy arrives at the Zone Center. Question 17, Type of Review, is coded "1" if the case is reviewed. If the case is not reviewed (a percentage of cases of key case researchers), "2" is coded. Question 18, Date Review Completed, is filled in with the date that all quality review associated with the case is completed. Question 19, Reviewed By, is to be filled in with the number/initials of the person who is primarily responsible for the review of the case and made the assessment that the review is complete. Question 20, Case Review Status, is coded "1" if the review is completed and all updates are received and incorporated. If the review is not completed or all updates not received, Question 20 is coded "2". Question 21, Date Case Released to Master File, is filled in with the date the MDE "approval" transaction was completed. The remaining Accident Log Questions 22-30 are completed by the Zone Center using the criteria indicated for each data code for that question. If the review process involves reviewing a given percentage of the researcher's cases, Questions 22-30 are not completed for cases coded "2" under Question 17, Type of Review.

#### 4.4.2 Pedestrian and Nonmotorist Log

Questions 1 through 7 are coded the same as Variables P01 through P07 on the Pedestrian and Nonmotorist Form. Question 8, Manner of Last Contact Attempt is coded "4" (Other). The remaining codes ("1", "2", and "3") are not applicable for coding in 1987. Question 9, Results of Last Contact Attempt, is coded "09" (Other). The remaining codes ("01"- "08" and "10"- "12") are not applicable for coding in 1987. Questions 10 and 11 are coded with "0's". Question 12, Source of Interview Data, is coded "1" (No data obtained). The remaining codes ("2"- "7") are not applicable for coding in 1987. Question 13, Reasons Medical Data Not Obtainable, is coded "00" (Not medically treated). The remaining codes ("01"- "11") are not applicable for coding in 1987.

#### 4.4.3 Vehicle Log

The Vehicle Log must be completed for all vehicles in 1987. All questions (1-16) on the log should be completed by the researcher for each vehicle. Questions 1 through 7 should be coded the same as Variables V01 through V07 on the Form. Question 8 is coded "0" in 1987. Questions 9 and 10 determine the lag time between the date the accident was sampled (Accident Form Log) and the date the vehicle was inspected, as well as the number of the researcher who completes the vehicle inspection. If a vehicle inspection is not completed,

Questions 9 and 10 should be coded "0's". Question 11, Reason Vehicle Inspection Not Completed, identifies the reasons why a vehicle inspection could not be completed. Question 12, Reason Highest Total Delta V Unknown, identifies the reasons why the CRASH or other reconstruction programs could not be used (the negative codes "5" through "11" are prioritized for coding). Code "11" (Insufficient data) is used when a vehicle inspection is required but the information obtained does not satisfy the minimum requirements to perform a reconstruction. Question 13, Confidence in Reconstruction Program Results (for Highest Delta V), allows the researcher to judge the quality of the reconstruction program output as well as the data input. Question 14, Reconstruction Program Output on Other than Highest Delta V, identifies cases where CRASH or other reconstruction program was run on a secondary impact and the results recorded in their appropriate noncoded location. Question 15, Data Obtained for This Vehicle's Most Severe Impact: Regardless of Usage, allows the researcher to encode the overall quality of the data related to this vehicle (i.e., CDC Crush Profile or Damage sketch, and Trajectory data). Codes referencing TDC and out-of-scope vehicles (i.e., "02", "03", "06", "08", "09", and "11") are not applicable for coding in 1987. For Question 16, Submission of Potential Safety Problem Bulletin, code "0" (No) when the Body Type (V17) is known and no potential safety problem bulletin was submitted. Use code "0" (No) whenever the Body Type (V17) is Unknown ("99"). All teams will be provided with bulletins (forms)--Figure 4-2, to report any potential vehicle safety problems which they encounter. Code "1" (Yes) if a bulletin is submitted.

Submit bulletins to Mr. Vernon Roberts at NHTSA. It has been requested that each team be placed on the mailing list for reports of active defect investigations. Teams should become familiar with current investigations and be on the lookout for accidents which are relevant to these investigations; although, other defects or vehicle problems encountered are also of interest and should be reported. Attach a copy of the bulletin submitted to NHTSA to the Vehicle Form before submitting the case to your Zone Center. A list of potential safety problems of current interest to NHTSA follows in Table 4-1. This list is provided for guidance and is not intended to be inclusive. The remaining vehicle log questions, 17-24, are completed by the Zone Center.

Questions 17-21 and 24 are completed using the criteria indicated for each data code for that question. If the review process involves reviewing a given percentage of the researcher's cases, Questions 17-21 and 24 are not completed for cases coded "2" under Accident Log Question 17, Type of Review. Question 22, Date Official Record Update Received, is filled in with zeros. Question 23, Reviewed by, is coded zeros in 1987.

For non-light vehicles encode the log questions as follows:

Question	Code	Question	Code	Question	Code
8	0	14	0	20	0
9	0s	15	00	21	0
10	0	16	0	22	0s
11	00	17	0	23	00
12	00	18	0	24	0
13	0	19	0		

#### 4.4.4 Driver Log

The researcher should be sure that each question (1-14) has been addressed for each driver before completing the log. Questions 1 through 7 are coded the same as Variables D01 through D07 of the Driver Form. Question 8 records the Occupant Number assigned to the driver. If no driver was present, code '00'. Question 9, Type of Driver Interview Data Obtained, enables the Zone Center to know what type of interview information was obtained. Response "0" (Driver not present) means that there was no driver in the vehicle when it was impacted. Response "1" (No data obtained) means no driver or surrogate interview was obtained. Response "2" (Driver history only) is not applicable for coding in 1987. Response "3" (Accident circumstances only) means that an interview was obtained with a driver or person who has knowledge regarding the circumstances surrounding the particular accident this driver was involved in (i.e., a person who can provide answers to the applicable questions asked on pages 2-5 of the Driver Form). Response "4" (Driver history and accident circumstances) is not applicable for coding in 1987.

Question 10, Source of Driver Data, identifies the source of the driver data obtained during the interview. Needless to say, the objective in NASS is to interview the driver him/herself--response "2" (Driver). In certain instances (e.g., driver is fatally injured or incapacitated) another person or persons may provide the information. This question (10) allows the researcher to identify the person. Response "0" (Driver not present) means that there was no driver in the vehicle when the accident occurred. Response "1" (No Data obtained) means that no driver or legitimate surrogate interview was obtained. Response "3" (Other occupant) is used if the data source was an occupant of the vehicle operated by the driver under consideration. Response "4" (Relative or friend) is not applicable for coding in 1987. Use response "5" (Eyewitness) when the interviewee was not involved in the accident but witnessed its occurrence. Response "6" (Combination of 3, 4, and 5) is appropriate when the interview data was obtained from more than one person such that: (1) the driver was not one of the persons, and (2) the interviewees were from different categories. For example, if the data are obtained from an occupant and an eyewitness then code "6" (combination of 3, 4, and 5) should be used. If the data are obtained from the driver and another person, then code "1" (Driver).

The valid combinations for Question 9 and 10 are shown in the table below.

Question	
if 9 =	then 10
0,1	0,1
3	2,3,5,6, or 7

Question 11, Result, encodes the success or failure in obtaining an interview, as well as documenting the reasons why no interview was obtained. Responses "00" and "11"- "12" mean that no interview was required or required interview obtained, respectively, while responses "01" through "05" and "10" reflect no personal contact. Responses "06" through "08" reflect unsatisfactory contact, while response "09" reflects unsuccessful attempts to obtain an interview for reasons other than that documented in the previous codes. For Questions 12 and 13, the researcher records the date the interview was conducted and the

Table 4-1

SPECIFIC AREAS OF INTEREST TO NHTSA RULEMAKING

CRASH AVOIDANCE

1. Accidents involving vehicles driven by handicapped drivers.
2. Accidents involving vehicles equipped with adaptive aids.
3. Accidents in which failure of a multipiece rim (not a tire failure) caused or contributed to the severity of the accident.
4. Accidents involving malfunction of a speed governor or speed control unit.
5. Accidents where the driver reported confusion about the location of display or control elements of the vehicle.
6. Accidents where underinflation of tires caused or contributed to the severity of accident.
7. Accidents involving pedestrian and/or cyclist injured by impact with outside mirrors.
8. Accidents involving injury to motorcycle drivers due to impact with the motorcycle mirrors.
9. Accidents where driver reported that distortion of image in convex mirror confused him (especially late model GM cars).
10. Accidents where commercial vehicle drivers reported that they could not see car, pedestrian, or cycle in a specific blind spot (such as in the right front area of large truck-tractors).
11. Accidents where driver or a passenger car or light truck reported that they could not see because of an obstruction of view by some part of the vehicle (such as inside mirror or roof support pillar).
12. Accident where the vehicle's defrost/defog system or wiper system could not provide an adequate view of the traffic scene through the windshield.
13. Accidents where drivers reported they didn't see a heavy duty commercial vehicle before striking the rear or the side of that vehicle (i.e., truck conspicuity problems).
14. Accidents involving heavy duty vehicles where a malfunctioning antilock system is alleged to have caused or contributed to the severity of the accident.
15. Accidents involving heavy duty vehicles where brakes out of adjustment caused or contributed to the severity of the accident.
16. Accidents involving heavy duty vehicle hot brake fade (i.e., runaways).

Table 4-1 (continued)

17. Accidents involving pickup trucks pulling fifth-wheel type trailer.
18. Accidents involving heavy duty air braked vehicles in which the vehicle's being stalled in traffic due to emergency brake application (loss of air pressure) caused an accident.
19. Accidents involving braking, jackknifing, or loss of control of trailers equipped with electric brakes or no brakes.

#### CRASHWORTHINESS

1. Seat and/or seat back failures in crashes and their contributions to occupant injury.
2. Identify external vehicle components (i.e., hood, grill, windshield wiper, etc.) that penetrate the windshield and the degree of such penetration in crashes involving vans and light trucks.
3. Ejections through the hatchback or station wagon rear doors in rear impacts. Identify whether ejection was through window opening or through door or hatchback opening because of latch failure.
4. Cars involving child restraints that break or involve injury. Identify the restraint by make and model, how and which position used.

#### CORROSION

1. Structural rust of uni-body undercarriage, vehicle chassis frames, floor boards in areas of seat belt attachment points seat or seat track anchorages.
2. Rust which develops in areas where the owner can observe the rust and therefore be forewarned, but which might have safety implications such as cowl area and wipers, around windshield or backlite.
3. Rust on weight bearing or vehicle guidance components, the failure of which could affect vehicle safety and do not normally wear out in service, such as tie rods, control arms, strut rods.
4. Rust of areas where the owners report exhaust intrusion such as wheel wells, wagon tire wells and rear floor pans.

POTENTIAL SAFETY PROBLEM BULLETIN

Reporting Date: \_\_\_\_\_

SEND TO: Vernon Roberts, NRD-32  
National Highway Traffic Safety Administration  
Nassif Building, Room 6213  
400 Seventh Street, S.W.  
Washington, D.C. 20590

SUBJECT: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

IDENTIFICATION:

TEAM \_\_\_\_\_ CASE NO. \_\_\_\_\_ ACCIDENT DATE: \_\_\_\_\_

ACCIDENT LOCATION \_\_\_\_\_

INVESTIGATING POLICE AGENCY \_\_\_\_\_

VEHICLE MODEL YEAR \_\_\_\_\_ MAKE/MODEL \_\_\_\_\_

VIN \_\_\_\_\_ ODOMETER READING \_\_\_\_\_

ACCIDENT DESCRIPTION (include sanitized police report)

(continue on back)

\_\_\_\_\_  
ITEM DESCRIPTION (include hardware and photograph if possible)



Investigator I.D. Number of the researcher completing the interview, respectively. If an interview is not conducted, Questions 12 and 13 are coded "0's". No driver records will be required in 1987. Therefore, anytime a driver is present in the vehicle, code question 14 "6" (No information on driver). If a driver is not present in the vehicle, code question 14 "0" (Driver not present). All remaining codes ("1", "2", "3", "4", "5", "7", "8", and "9") are not applicable for coding in 1987.

Question 15, Date Official Driver Record Update Received, and Question 16, Reviewed By, are left "Blank".

Complete the Driver Form log questions for a non-light vehicle as follows:

Driver Present				Driver Not Present			
Question	Code	Question	Code	Question	Code	Question	Code
9	1	13	0	9	0	13	0
10	1	14	6	10	0	14	0
11	09	15	Blank	11	00	15	Blank
12	0s	16	Blank	12	0s	16	Blank

#### 4.4.5 Occupant Log

Each attempt to contact the involved occupant is recorded on the INTERVIEW CONTACT RECORD portion of the log, which is noncoded and is provided on the bottom of the Occupant Log as an aid to the researcher. The date and time of the contact (military), along with the number of the contacting researcher, manner of contact, and result of contact are to be recorded for each attempt. The applicable codes for the "Manner" column are the element values of Question 10; the codes for the last contact attempt in the "Result" Column are element values of Question 11, and the codes for a contact other than the last contact are listed under 11a. The final attempt (whether successful or not) should be coded in Questions 10 through 13 of the log. If multiple interviews are obtained, the researcher may use the INTERVIEWEE CONTACT RECORD to document them, yet only the contact of the principle interviewee should be documented in Questions 10 through 13. Questions 1 through 8 are the same as Variable 001 through 008 on the same Occupant Form. Question 9 records if the occupant was also the driver of the vehicle. Question 10, Manner of Last Contact Attempt, is coded with the method used in the last attempt to obtain an interview. Question 11, Result of Last Contact Attempt, records the degree of success in obtaining an interview. Responses "01" through "05" and "10" reflect no personal contact. Responses "06" through "08" reflect unsatisfactory contact attempts. Response "09" reflects unsuccessful attempts to obtain an interview for reasons other than that which is documented in the other codes, and responses "11" and "12" reflect a completed interview. Question 12, Date Interview Completed, is coded with the month and date a successful interview was conducted. If no interview is obtained (i.e., Question 11 = "01" - "10"), then this question and Question 13 are coded "0's". Question 13, Completing Person, is the Investigator's I.D. Number who completed the interview. Question 14, Source of Interview Data, tells us the source of the occupant data obtained during the interview. The objective in NASS is to interview the occupant him/herself -- response "2" (Same person). If an interview cannot be obtained with the occupant him/herself, certain surrogates may provide all the data necessary to complete the form. For example, Question 14 also identifies other persons who may provide this information if the occupant is fatally injured, incapacitated, or for other reasons cannot be or refused to be interviewed.

Question 15, Reasons Medical Data Not Obtainable, describes not only the disposition of medical data, but also if the researcher was not able to obtain the data. Codes "01" through "06" provide reasons why, vehicle code "09" reflects a large lag time (greater than 96 days from the date sampled) in obtaining the record. Code "06", Private physician would not release information, whenever a nonhospital health care provider refused to release medical records, even if they required a medical release or other patient approval which was not obtained. Use code "02", Medical release required not obtained, only for hospital refusals. If the official medical injury data are requested but not received at the time of initial case submission and Question 15 is coded as "08" (To be updated), then the researcher completes an Occupant Update Record Form.

Completeness, code "10" versus code "11", of medical records is assessed with respect to record acquisition, not with respect to the physical quality of the records themselves. Records are complete (code "10") if the researcher obtained enough official information to have a clear idea of the injuries recorded. Records are partial (code "11") if (1) it is unclear what injuries the victim sustained, or (2) there is conflicting information regarding the injuries and additional medical records would probably have clarified the questions. Records are not partial because they cannot be read, or because they contain insufficient information regarding the person's injuries, and no other records are available that might enhance the clarity of the descriptions. Admission records or discharge face sheets are not acceptable substitutes for discharge summaries where they exist. Records should be considered partial if complete discharge summaries would have enhanced data.

Assessing transcribed records is difficult. Transcribed records are not preferred and should be considered partial if (1) no transcription was made of a record that (a) was relevant to the person's injuries, and (b) probably was available or (2) there is a firm residual belief that not all of this person's injuries have been completely identified. On the other hand, transcribed records are complete if (1) all relevant records have been transcribed, and (2) you believe you know what this person's injuries are considering the interviewee's description when it has been obtained. This completes the information required from the team. The remaining Occupant Log questions, 16-19, are completed by the Zone Center.

Question 16, Date Medical Record Update Received, is filled in with the date the medical update record arrives at the Zone Center. Question 17, Reviewed By, is filled in with the I.D. number/initials of the persons who completes the medical update review. The remaining questions, 18 and 19, are completed by the Zone Center using the criteria indicated for each data code for that question. If the review process involves reviewing a given percentage of the researcher's cases, Questions 18 and 19 are not completed for cases coded "2" under Accident Log Question 17, Type of Review.

For non-light vehicles only one Occupant Form is submitted. Complete the Occupant Form log questions as follows:

Question	Code	Question	Code	Question	Code
-----	----	-----	----	-----	----
9	1	13	0	17	Blank
10	4	14	1	18	4
11	09	15	00	19	4
12	0s	16	Blank		

#### 4.5 NASS Criteria for Acceptable Data Completion

The data completion criteria are used as a standard among all PSUs when determining the minimum acceptable data for completion of a case.

Scene Inspection: The Accident Collision Diagram and slides are required. No excuse is acceptable. If the photo slides did not turn out, a return visit to the scene is required.

Where no evidence of the accident is present, provide a sketch (not scaled) which includes:

1. Approximate vehicle orientation at impact and final rest;
2. Applicable road/roadway delineation (e.g., curbs/edge lines, lane markings, median markings, pavement markings);
3. Applicable traffic controls;
4. Roadway Surface Type and Condition for all applicable roadways;
5. Grade measurements for all applicable roadways; and
6. North arrow placed on diagram.

Where physical evidence of the accident is present, in addition to points two through six above, the following detail must be incorporated in the scene diagram:

1. Documented reference point and reference line relative to physical features present at the scene;
2. Scaled documentation of all accident induced physical scene evidence;
3. Scaled documentation of all roadside objects contacted; and
4. Scaled representations of the vehicle(s) at pre-impact, impact, and final rest based upon either:
  - (a) physical evidence, or
  - (b) reconstructed accident dynamics.

Vehicle Inspections: To be credited as "inspected", at a minimum, slides of the damaged vehicle must be submitted along with the completed form. If the vehicle has been repaired prior to the inspection, photo slides of the repaired vehicle and damaged components (where circumstances permit) along with a completed form are required. Crush dimensions and a CDC must be provided when data permit. If there is no measureable damage slides of the vehicle and a completed Vehicle Form will suffice. Non-light vehicles are not inspected.

Driver Interviews: If the driver was contacted and the driver interview section of the Driver Form completed (i.e., the information provided is sufficient enough to support that a partial or complete interview was obtained) and submitted, then it is recorded as an interview. An interview with the driver is desired; however, if an interview cannot be obtained because the driver is

fatally injured or incapacitated, the accident circumstances must be provided by another occupant of the same vehicle or an eyewitness (including occupants of uninvolved vehicles).

Occupant Interviews: If the occupant was contacted and the occupant interview section of the Occupant Form completed (i.e., the information provided is sufficient enough to support that a partial or complete interview was obtained) and submitted, then it is recorded as an interview. An interview with either a driver, occupant, relative, or friend is acceptable as a surrogate interview for other occupants. Police officers, occupants of other involved vehicles, and witnesses, who know the occupant under consideration only because of the accident, cannot be considered as surrogates and, therefore, no partial or complete interview credit can be assigned to researchers.

Official Medical Data: A copy of a hospital records department or other clinical institute final discharge medical summary is required. Copies of an emergency room or other abbreviated and advanced medical reports are acceptable with prior Zone Center approval only if established relations dictate (i.e., hospital will not or does not provide a more comprehensive medical report). Copies of physician reports are acceptable when appropriate (i.e., PAR reports victim as injured but driven to private physician). Substitute procedures, including handwritten or transcribed information, are acceptable only with the prior approval of the Zone Center with COTR concurrence. Only official copies of autopsy reports are acceptable. Reports from lay coroners and certificates of death are not considered official medical records.

Finally, before alternative methods for acquiring official records (i.e., handwritten copies or telephone transcripts of medical data and driver records) are authorized, all avenues for obtaining the hard copy must be exhausted. Therefore, establishment of PSU relations will be closely monitored by each Zone Center to ensure that teams do not default to alternative methods because they are easier to establish.

#### 4.6 Special Procedures for Non-Light Vehicles

<u>Vehicle Form</u>	<u>Code</u>	<u>Vehicle Form</u>	<u>Code</u>
V07-V14	Actual value	V29-V39	0s, if V17 <del>30-39</del> or if V17 <del>70-78</del> ;
V15	9		9s, otherwise
V16	9	V40, V41	Actual value
V17	Actual value (PAR source)	V42-V47	Blanks
V18	0, if no trailer; 9, if trailer is present	V48-V50	Actual value
V19	71, if V17=74; 99, otherwise	V51-V56	Blanks
V20-V23	0s, if V17=80; 9s, otherwise	V57	Actual value
V24-V27	9s	V58-V64	Blanks
V28	0, if V17 <del>30-39</del> or if V17 <del>70-78</del> ; 8, if V17=30-39; 9, if V17=70-78	V65, V66	9s
		V67-V77	0s, if V17=20-29; 9s, otherwise
		V78-V82	Actual value
		V83-V86	9s
		V87	6
		V88-V91	9s
		V92	Actual value

<u>Driver Form</u>	<u>Cod</u>	<u>Occupant Form</u>	<u>Cod</u>
D07-D09	Actual valu	009-014	9s
D10-D33	9s, if D09=1; Blanks, if D09=2	015-019	0s, if V17-20-29; 9s, otherwise
D34-D52	9s	020-028	9s
D53	Actual value	029,030	9s, if V17=01=08 and V12 >=72;
D54-D58	9s		9s otherwise
		031-038	0s
		039-078	Blanks
		079	9
		080	00

## 5.0 SUBMISSION INSTRUCTIONS

### 5.1 Quality Control Checks for PSU Teams

Please find below a list of quality control checks to be made by PSU teams.

#### 5.1.1 Quality Control Checks Prior to Microcomputer Data Entry

Each case should be reviewed by a person other than the originating researcher prior to entering the case via MDE. This effort tends to minimize ncoding errors resulting from values which are either illegal or legal but incorrect. The noncoded items in the case should also be checked. The primary researcher is to be informed (preferably in writing) of any problems detected during this review and that researcher is to assume the responsibility for their resolution. Some suggested areas where problems may occur are as follows:

- Has the case passed in-house review?
- Are all official records and slides present?
- Check slides and official records to make sure they correspond to the case submitted (slides and police report shouldn't be placed next to each other because the photocopied police report tends to "bleed" on the slide folders).
- Have portions of update record forms been filled out where needed?
- Do the control charts properly reflect how much of the case report has been completed?
- Make sure medical reports are properly sanitized.
- Are all data collection forms present?
- Include forms for all persons and vehicles, even if they have not been interviewed or inspected.
- Are the logs properly completed on the forms?
- Make sure case materials are sequenced properly and the case report envelope is stamped and properly identified.
- Check noncoded data for correctness and its interface with coded data.
- Check to make sure that the coded data are properly and legibly entered on the data collection forms.
- Have "+"s or "-"s been circled for V60, V63, V89, and V90 on the Vehicle Form?

#### 5.1.2 Quality Control Checks Resulting from Microcomputer Data Entry

Inconsistencies, out-of-range values, and other error diagnostics encountered during the MDE are explained in version 10, CDS MDE error checks and Tables A-1 through A-9. All errors detected by the computer edits are corrected by the PSU before the case is forwarded to the Zone Center--unless the Zone Center is notified and suggests shipment of an incompletely entered case.

### 5.1.3 Check to Make Sure Administrative Procedures Are Being Followed

- Are control charts and activity logs (when used) updated weekly?
- Are monthly reports and sampling materials sent to the Zone Center?
- Are manuals up-to-date and properly displayed?
- Are needed supplies in stock (e.g., film, etc.)?

### 5.1.4 Check Sampling Procedures

- Periodically review sampling procedures in team meetings.
- Document any problems in the monthly report.

### 5.1.5 Check Data Collection Procedures

- Periodically review procedures. Document when meetings are held and any problems discovered with the data collection procedures or forms. Indicate problems in the monthly report or over the Message System to your Zone Center. Keep a file of problems encountered and go over them with a Zone Center representative during the next Zone Center site visit.

### 5.1.6 Check to Make Sure Updates Are Being Processed Properly

- Are the medical update records filed by case number?
- Do Zone Center and PSU records agree (see Zone Center list of outstanding updates)?

### 5.1.7 Check Individual Effort and Accuracy in Collecting Evidence and Skill in Interpretation

- Discuss data collection procedures and efficient ways to execute them in team meetings. Discuss how much follow-up effort is needed for obtaining interviews and think about methods other than the phone and personal contact for obtaining more interviews (e.g., letters).

## 5.2 Case Submission

The final date for the remaining submission of December 1986 cases (exclusive of updates) is February 20, 1987. All remaining updates for 1986 cases are to be submitted by March 6, 1987. This will allow the Zone Centers approximately three weeks to review and enter this new information (updates) on the 1986 version of MDE before it becomes inaccessible to them, as well as the PSUs, on March 27, 1987.

Cases acquired in 1987 shall be submitted to the Zone Centers on an approximately bi-weekly basis. The materials for each case are to be ordered in the recommended format discussed in Section 4.1; each case is to be packaged in a separate envelope with the appropriate identification and account of contents on the front of the envelope. These procedures will provide uniformity across teams and, in turn, reduce the variation encountered by the Zone Center upon receipt of the cases. Furthermore, the bi-weekly submission will minimize the peaks and valleys in the Zone Center case review workload.

Submission Schedule--Cases shall be submitted on an approximately bi-weekly basis beginning 6 February 1987, according to the schedule (Table 5-1). Essentially, there will be at least one month to make the initial submission of any case. All cases are to be submitted within five weeks following the date on which they were sampled. This means that the maximum time available to submit a case will be thirty-five days from the date of sample. Interviews, vehicle inspections, and scenes not completed in the allowed time period will not be updated.

Those variables which are allowed updates, but have not been completed within the time available for the initial case submission, should be documented on the appropriate record and submitted as updates in accordance with the schedule.

Cases which are completed (i.e., no updates needed) prior to elapsing of the available time period should be submitted on the next, earliest case submission.

Case Envelope--PSUs should consult with their Zone Centers as to the correct envelope size. The case envelope belongs inside the shipping envelope. The information below belongs on the case envelope, not on the covering shipping material. The PSU number, case number, accounting of case materials, and the status of the case at the time of submission, as shown below, are to be entered in the upper right hand corner of the envelope when the envelope is positioned with its flap on the underside and to the right.

PSU# _____	CASE# _____	
___ CASE COMPLETE	___ CASE TO BE UPDATED	
FORMS: Police _____		
	<u>Required</u>	<u>Included</u>
Accident . . . . .	_____ . . . . .	_____ . . . . .
Collision Diagram . . . . .	_____ . . . . .	_____ . . . . .
Non-Occupant . . . . .	_____ . . . . .	_____ . . . . .
Vehicle . . . . .	_____ . . . . .	_____ . . . . .
Driver . . . . .	_____ . . . . .	_____ . . . . .
Occupants . . . . .	_____ . . . . .	_____ . . . . .
Medicals . . . . .	_____ . . . . .	_____ . . . . .
CRASH . . . . .	_____ . . . . .	_____ . . . . .
Slides (Number) . . . . .	_____ . . . . .	_____ . . . . .

A rubber stamp, ink pad, and ink have been provided. This information will help the Zone Center effectively sort the case at the inception of the quality control process; the standardized envelopes will facilitate storage and retrieval.

Case update records should be submitted in the same type of envelope. Identify the PSU, and boldly mark the front of the envelope: UPDATES. The updates will be removed from the envelope and collated with the original forms in their respective cases by the Zone Center.

Shipment of Cases--The envelopes containing the individual cases which are eligible for shipment, according to the schedule shown in Table 5-1, should be packaged in a box or other suitable container and mailed to the Zone Center. The PSU should provide an acknowledgement of delivery card, return receipt, or similar confirmation to ensure the shipment was received by the Zone Center.



Table 5-1: NASS 1987 Cas Submissi ns Sch dule  
(Dates Batch s of Material Must Be Submitted By)

CASES SAMPLED ON OR BEFORE	MUST BE SUBMITTED ON OR BEFORE  + 4 WKS	MUST BE RECEIVED ON OR BEFORE  + 5 WKS	MUST BE RECEIVED ON OR BEFORE  + 7 WKS	UPDATES MUST BE RECEIVED ON OR BEFORE  + 12 WKS
12/12/1986	1/ 9/1987	1/16/1987	1/30/1987	3/ 6/1987
12/26/1986	1/23/1987	1/30/1987	2/13/1987	3/20/1987
12/31/1986	1/28/1987	2/ 4/1987	2/18/1987	3/25/1987
1/ 9/1987	2/ 6/1987	2/13/1987	2/27/1987	4/ 3/1987
1/23/1987	2/20/1987	2/27/1987	3/13/1987	4/17/1987
2/ 6/1987	3/ 6/1987	3/13/1987	3/27/1987	5/ 1/1987
2/20/1987	3/20/1987	3/27/1987	4/10/1987	5/15/1987
3/ 6/1987	4/ 3/1987	4/10/1987	4/24/1987	5/29/1987
3/20/1987	4/17/1987	4/24/1987	5/ 8/1987	6/12/1987
4/ 3/1987	5/ 1/1987	5/ 8/1987	5/22/1987	6/26/1987
4/17/1987	5/15/1987	5/22/1987	6/ 5/1987	7/10/1987
5/ 1/1987	5/29/1987	6/ 5/1987	6/19/1987	7/24/1987
5/15/1987	6/12/1987	6/19/1987	7/ 3/1987	8/ 7/1987
5/29/1987	6/26/1987	7/ 3/1987	7/17/1987	8/21/1987
6/12/1987	7/10/1987	7/17/1987	7/31/1987	9/ 4/1987
6/26/1987	7/24/1987	7/31/1987	8/14/1987	9/18/1987
7/10/1987	8/ 7/1987	8/14/1987	8/28/1987	10/ 2/1987
7/24/1987	8/21/1987	8/28/1987	9/11/1987	10/16/1987
8/ 7/1987	9/ 4/1987	9/11/1987	9/25/1987	10/30/1987
8/21/1987	9/18/1987	9/25/1987	10/ 9/1987	11/13/1987
9/ 4/1987	10/ 2/1987	10/ 9/1987	10/23/1987	11/27/1987
9/18/1987	10/16/1987	10/23/1987	11/ 6/1987	12/11/1987
10/ 2/1987	10/30/1987	11/ 6/1987	11/20/1987	12/25/1987
10/16/1987	11/13/1987	11/20/1987	12/ 4/1987	1/ 8/1988
10/30/1987	11/27/1987	12/ 4/1987	12/18/1987	1/22/1988
11/13/1987	12/11/1987	12/18/1987	1/ 1/1988	2/ 5/1988
11/27/1987	12/25/1987	1/ 1/1988	1/15/1988	2/19/1988
12/11/1987	1/ 8/1988	1/15/1988	1/29/1988	3/ 4/1988
12/25/1987	1/22/1988	1/29/1988	2/12/1988	3/18/1988
12/31/1987	1/28/1988	2/ 4/1988	2/18/1988	3/24/1988
1/ 8/1988	2/ 5/1988	2/12/1988	2/26/1988	4/ 1/1988
1/22/1988	2/19/1988	2/26/1988	3/11/1988	4/15/1988

Table 5-2: NASS 1987 File Closeout Schedule

CASES SAMPLED ON OR BEFORE	MUST BE APPROVED ON OR BEFORE	QUARTERLY FILE MUST BE CLOSED OUT ON OR BEFORE	QUARTERLY REPORT DUE ON OR BEFORE	ANNUAL REPORT DUE ON OR BEFORE
	+ 13 WKS	+ 14 WKS	+ 16 WKS	
12/12/1986	3/13/1987			
12/26/1986	3/27/1987			
12/31/1986	3/27/1987	3/27/1987	4/ 8/1987	4/22/1987
1/ 9/1987	4/10/1987			
1/23/1987	4/24/1987			
2/ 6/1987	5/ 8/1987			
2/20/1987	5/22/1987			
3/ 6/1987	6/ 5/1987			
3/20/1987	6/19/1987			
4/ 3/1987	7/ 3/1987	7/ 3/1987	7/10/1987	
4/17/1987	7/17/1987			
5/ 1/1987	7/31/1987			
5/15/1987	8/14/1987			
5/29/1987	8/28/1987			
6/12/1987	9/11/1987			
6/26/1987	9/25/1987			
7/10/1987	10/ 9/1987	10/ 9/1987	10/16/1987	
7/24/1987	10/23/1987			
8/ 7/1987	11/ 6/1987			
8/21/1987	11/20/1987			
9/ 4/1987	12/ 4/1987			
9/18/1987	12/18/1987			
10/ 2/1987	1/ 1/1988	1/ 1/1988	1/ 8/1988	
10/16/1987	1/15/1988			
10/30/1987	1/29/1988			
11/13/1987	2/12/1988			
11/27/1987	2/26/1988			
12/11/1987	3/11/1988			
12/25/1987	3/25/1988			
12/31/1987	4/ 1/1988	4/ 1/1988	4/ 7/1988	4/21/1988
1/ 8/1988	4/ 8/1988			
1/22/1988	4/22/1988			

The mailing addresses for the Zone Centers are as follows:

ZOA, Central            Transportation Research Center  
 Attention: NASS Receiving  
 SPEA Building, Room 430  
 Indiana University  
 Bloomington, Indiana 47405

ZOB, Northern         Donald Neff  
 Calspan Corporation  
 Post Office Box 400  
 Buffalo, New York 14225

ZOC, Southern        NASS Southern Zone Center  
 Southwest Research Institute  
 Post Office Drawer 28510  
 San Antonio, Texas 78284

ZOD, Western         Dynamic Science, Inc.  
 8531 East Florence Avenue  
 Downey, California 90240

5.3 Case Dropping Procedures

The following procedure for dropping cases should be adhered to for all NASS cases:

1. Call your Zone Center for approval. Let it be known that a case is being dropped and give the reason why.
2. Send a follow-up message informing the Zone Center and NHTSA (HDQ) of the case to be dropped. Include in the message the case number and the reason the case is being dropped, the date of approval, and the person who approved the case for dropping.
3. The case must be MDE'd by the PSU and subsequently released to the Zone Center. To MDE the case, complete the Accident Form, one Vehicle Form, one Driver Form, and one Occupant Form. This may differ from the components of the case but is required for the case to be released. Data fields are to be completed as follows:

<u>Accident Level</u>	<u>Valid Codes</u>
A06	1-9
A07	1-3
A10	01
A11	00
A12-A23	\$ in first data field of each variable
A24-A29	0
AL10-AL12	\$ in first data field of each variable
AL14	3

<u>Vehicle Level</u>	<u>Valid Codes</u>
V06	1-9
V08	00, 01
V09-V19	\$ in first data field of each variable

<u>Vehicle Level</u>	<u>Valid Codes</u>
V20-V23	\$ in the 3 data fields of V20 only
V24-V92	\$ in first data field of each variable
VL08-VL16	\$ in first data field of each variable

<u>Driver Level</u>	<u>Valid Codes</u>
D06	1-9
D08	00, 01, 99
D09	1, 2
D10-D58	\$ in first data field of each variable
DL08	00-01 (Code independent of seating position)
DL09-DL14	\$ in first data field of each variable

<u>Occupant Level</u>	<u>Valid Codes</u>
O06	1-9
O09-O80	\$ in first data field of each variable
OL09-OL15	\$ in first data field of each variable

4. Send the dropped hardcopy case report to the Zone Center. Each dropped case is to be sent to the Zone Center in a separate standard envelope.
- A. The outside of the envelope should be labeled as follows:
- PSU stamp, on the upper right-hand corner, filled out with the PSU number and case number.
  - Written in large letters is: DROPPED (under the PSU stamp).
  - The date of the Zone Center approval to drop the case.
  - The person(s) who gave Zone Center approval to drop the case.
- B. Inside the envelope should be:
- PAR
  - Accident Form with the following variables filled out:
    - Accident Data
      - A01, Primary Sampling Unit Number
      - A02, Case Number-Stratification
      - A06, Investigator I.D. Number
      - A07, Type of Case
      - A08, Date
      - A15, Time
    - Accident Log
      - A1, Primary Sampling Unit Number
      - A2, Case Number-Stratification
      - A4, Transaction Code
      - A6, Investigator I.D. Number

A7, Type of Case  
A8, Date of Accident  
Accident Log (Continued)  
A9, Date Sampled  
A11, Completing Person  
A14, Case Status

- A14 Must be coded 3 (Case Dropped - Reason:): Give a detailed explanation of the reason the case was dropped.
- General, any other materials completed prior to dropping the case (i.e., slides).

#### Zone Centers

The case will be deleted from the Zone Center's active case file at a later date after the Zone Center reviews the hardcopy case report and agrees that the case should be dropped.

Below are instructions followed by the Zone Centers.

1. List the case number and reason why the case was dropped in your monthly, quarterly, and annual reports.
2. The COTR will use the monthly report as a record for advising Information Management Division (IMD) of cases to be deleted from the file.
3. Disposition (e.g., shipped to NHTSA for review or destroyed at the Zone Center) of the dropped case report will be determined by the COTR.

## 6.0 CODING INSTRUCTIONS

This section provides the general instructions for collecting and coding the data called for in the field forms. Documentation for each data element includes variable name, element values (attributes), definitions where needed, data sources, collection methodology, reference materials (if needed), and remarks.



**Accident Data**

<p>1 Primary Sampling Unit Number <span style="float:right">1 2</span></p> <p>2 Case Number-Stratification <span style="float:right">3 4 5 6</span></p> <p>3 Record Number <span style="float:right">7</span></p> <p>4 Transaction Code <span style="float:right">8</span></p> <p>5 Version Number <span style="float:right">0 9</span></p> <p>6 Investigator I D Number <span style="float:right">10</span></p>	<p>12. First Harmful Event</p> <p>Non-collision</p> <p>___ (01) Fire or explosion</p> <p>___ (02) Immersion</p> <p>___ (03) Gas inhalation</p> <p>___ (04) Fell from vehicle</p> <p>___ (05) Injured in vehicle</p> <p>___ (06) Other noncollision (specify) _____</p> <p>___ (07) Overturn</p> <p>___ (08) Jackknife with intraunit damage</p> <p>Collision With</p> <p>___ (09) Pedestrian</p> <p>___ (10) Pedalcyclist</p> <p>___ (11) Railway train</p> <p>___ (12) Animal</p> <p>___ (13) Motor vehicle in transport (same roadway)</p> <p>___ (14) Motor vehicle in transport (other roadway)</p> <p>___ (15) Parked motor vehicle</p> <p>___ (16) Other type nonmotorist (specify) _____</p> <p>___ (17) Thrown or falling object</p> <p>___ (18) Boulder</p> <p>___ (19) Other object (not fixed) (specify) _____</p> <p>Collision with Fixed Object</p> <p>___ (20) Building</p> <p>___ (21) Impact attenuator/crash cushion</p> <p>___ (22) Bridge pier or abutment</p> <p>___ (23) Bridge parapet end</p> <p>___ (24) Bridge rail</p> <p>___ (25) Guardrail</p> <p>___ (26) Concrete traffic barrier</p> <p>___ (27) Median barrier</p> <p>___ (28) Other longitudinal barrier (specify) _____</p> <p>___ (29) Highway/Traffic sign post</p> <p>___ (30) Overhead sign support</p> <p>___ (31) Luminaire/Light support</p> <p>___ (32) Utility pole</p> <p>___ (33) Other post, pole, or support (specify) _____</p> <p>___ (34) Culvert</p> <p>___ (35) Curb</p> <p>___ (36) Ditch</p> <p>___ (37) Embankment-earth</p> <p>___ (38) Embankment-rock, stone or concrete</p> <p>___ (39) Fence (wooden, wire, chain link, etc.)</p> <p>___ (40) Wall (stone, rock, metal, etc.)</p> <p>___ (41) Fire hydrant</p> <p>___ (42) Shrubbery</p> <p>___ (43) Tree</p> <p>___ (44) Other fixed object (specify) _____</p> <p>___ (45) Pavement surface irregularity (pothole, grooved, grates)</p> <p>___ (99) Unknown</p>
<b>IDENTIFICATION</b>	
<p>7 Type of Case</p> <p>___ (1) Full data collection</p> <p>___ (2) Nontowaway (Stratum E) (Reduced data collection)</p> <p>___ (3) Source document only</p> <p style="text-align:right">11</p> <p>8 Date (Month, Day, Year) <span style="float:right">12 13 / 14 15 / 8 7 16 17</span></p> <p>9 Blank (This variable is left blank so that numbering consistency can be maintained with the 1986 CSS)</p> <p style="text-align:right">X 18</p> <p>10 Number of Vehicle Forms Submitted</p> <p>Code the number of motor vehicles in transport for which a VEHICLE FORM was submitted <span style="float:right">19 20</span></p> <p>11 Number of Pedestrian &amp; Nonmotorist Forms Submitted</p> <p>Code the number of pedestrians and/or non-motorists for which a PEDESTRIAN &amp; NON-MOTORIST FORM was submitted <span style="float:right">21 22</span></p>	
23 24	

13 Manner of Collision (Based on First Harmful Event)

(0) Not collision with vehicle in transport

(1) Rear-end

(2) Head-on

(3) Rear-to-rear

(4) Angle

(5) Sideswipe, same direction

(6) Sideswipe, opposite direction

(9) Unknown

25

14 Relation to Roadway (location of first harmful event)

(1) On roadway

(2) On shoulder

(3) In median

(4) On roadside

(5) Outside right-of-way

(6) Off roadway - location unknown

(7) In parking lane

(8) Gore or channel island

(9) Unknown

26

**AMBIENT CONDITIONS**

15 Time

Code reported military time of accident  
(NOTE midnight = 2400)

(9999) Unknown

27 28 29 30

16 Light Conditions

(1) Daylight

(2) Dark

(3) Dark, but lighted

(4) Dawn

(5) Dusk

(9) Unknown

31

17 Atmospheric Conditions

(1) No adverse atmosphere related driving conditions

(2) Rain

(3) Sleet

(4) Snow

(5) Fog

(6) Rain and fog

(7) Sleet and fog

(8) Other (e g . smog, smoke, blowing sand or dust, etc ) (specify) \_\_\_\_\_

(9) Unknown

32

**ADMINISTRATIVE ITEMS**

18 Relation to Junction

(01) Non-junction

(02) Three leg intersection

(03) Four leg intersection

(04) More than four leg intersection

(05) Rotary or traffic circle

(06) Intersection related

(07) Channel

(08) Area of mergence related

(09) Area of divergence related

(10) Entrance ramp

(11) Exit ramp

(12) Driveway, alley access related

(13) Railroad grade crossing related

(14) Crossover related

(99) Unknown

33 34

19 Interchange Geometry

(0) No interchange

(1) Full diamond

(2) Partial diamond

(3) Full cloverleaf

(4) Partial cloverleaf

(5) Trumpet

(6) Directional

(8) Other (specify): \_\_\_\_\_

(9) Unknown

35

20 Accident Occurrence in School Zone

(0) No

(1) Yes

(9) Unknown

36

21 School Bus Related

(0) No

(1) Yes

37

22 Right or Left Turn on Red Related

(0) No

Right turn related

(1) Yes - turn permitted

(2) Yes - turn prohibited

Left turn related

(3) Yes - turn permitted

(4) Yes - turn prohibited

(9) Unknown

38



ENVIRONMENTAL DATA	SPECIAL STUDIES - INDICATORS
<p>23 Driver Level Environmental Data That Is Most Representative of this Accident Location</p> <p>_____ Code the driver level number (the vehicle number coded in variable D07) that best describes the accident's environmental conditions</p> <p style="text-align: right;">39 40</p>	<p>Information Collected From This Accident As A Part of the Special Studies Subsystem</p> <p><input type="radio"/> NO - Code 0 for each of questions 24 through 29</p> <p>If YES - Check (✓) each of the studies from the list below that were indicated. code 1 for the checked studies and 0 for the studies not checked</p> <p>24 _ SS8-Longitudinal Barrier <span style="float: right;">41</span></p> <p>25 _ SS9-Crash Cushion <span style="float: right;">42</span></p> <p>26 _ SS12 <span style="float: right;">43</span></p> <p>27 _ SS13 <span style="float: right;">44</span></p> <p>28 _ SS14 <span style="float: right;">45</span></p> <p>29 _ SS15 <span style="float: right;">46</span></p>
Empty section for additional data	

FORMS: For Team Use

Police _____	Accident _____	Collision Diagram _____	Pedestrian & Nonmotorist _____	Vehicle _____	Driver _____	Occupant _____	Medical _____	Reconstruction Program Summary _____	Slides (Number) _____
Required	1	_____	_____	_____	_____	_____	_____	_____	_____
Included	_____	_____	_____	_____	_____	_____	_____	_____	_____

COMPLETED BY TEAM

COMPLETED BY ZONE CENTER

1 Primary Sampling Unit Number \_\_\_\_\_ 1 \_\_\_\_\_ 2

2 Case Number-Stratification \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6

3 Record Number \_\_\_\_\_ 1 \_\_\_\_\_ 7

4 Transaction Code \_\_\_\_\_ 8

5 Version Number \_\_\_\_\_ 0 \_\_\_\_\_ 9

6 Investigator I.D. Number \_\_\_\_\_ 10

7 Type of Case  
 \_\_\_\_\_ (1) Full data collection  
 \_\_\_\_\_ (2) Nontowaway (stratum F) (Reduced data collection)  
 \_\_\_\_\_ (3) Source document only \_\_\_\_\_ 11

8 Date of Accident \_\_\_\_\_ 12 \_\_\_\_\_ 13 \_\_\_\_\_ 14 \_\_\_\_\_ 15 \_\_\_\_\_ 8 \_\_\_\_\_ 7 \_\_\_\_\_ 16 \_\_\_\_\_ 17

9 Date Sampled (Listed) \_\_\_\_\_ 18 \_\_\_\_\_ 19 \_\_\_\_\_ 20 \_\_\_\_\_ 21 \_\_\_\_\_ 8 \_\_\_\_\_ 22 \_\_\_\_\_ 23

10 Date Scene Field Work Completed \_\_\_\_\_ 24 \_\_\_\_\_ 25 \_\_\_\_\_ 26 \_\_\_\_\_ 27 \_\_\_\_\_ 8 \_\_\_\_\_ 28 \_\_\_\_\_ 29

11 Completing Person \_\_\_\_\_ 30

12 Status of Accident Diagram  
 \_\_\_\_\_ (0) Scene not located (specify reason) \_\_\_\_\_  
 Scene Located  
 \_\_\_\_\_ (1) Sufficient data (i.e. physical evidence) to complete a scaled diagram  
 \_\_\_\_\_ (2) Insufficient data to complete a scaled diagram but area mapped (with dimensions) and dynamics estimated  
 \_\_\_\_\_ (3) No scaled diagram or sketch required (i.e. SDO) \_\_\_\_\_ 31

13 Date Case Released to Zone Center \_\_\_\_\_ 32 \_\_\_\_\_ 33 \_\_\_\_\_ 34 \_\_\_\_\_ 35 \_\_\_\_\_ 8 \_\_\_\_\_ 36 \_\_\_\_\_ 37

14 Case Status  
 \_\_\_\_\_ (1) Case complete - No updates required  
 \_\_\_\_\_ (2) Case to be updated  
 \_\_\_\_\_ (3) Case Dropped Reason \_\_\_\_\_ 38

15 Are Special Studies Included?  
 (if No, code 0. If Yes, code 1.)  
 SS8 SS9 SS10 SS11 SS12 SS13 SS14 SS15  
 \_\_\_\_\_ 39 \_\_\_\_\_ 40 \_\_\_\_\_ 41 \_\_\_\_\_ 42 \_\_\_\_\_ 43 \_\_\_\_\_ 44 \_\_\_\_\_ 45 \_\_\_\_\_ 46

16 Date Hardcopy Received at Zone Center \_\_\_\_\_ 47 \_\_\_\_\_ 48 \_\_\_\_\_ 49 \_\_\_\_\_ 50 \_\_\_\_\_ 8 \_\_\_\_\_ 51 \_\_\_\_\_ 52

17 Type of Review  
 \_\_\_\_\_ (1) Reviewed  
 \_\_\_\_\_ (2) Not reviewed \_\_\_\_\_ 53

18 Date Review Completed \_\_\_\_\_ 54 \_\_\_\_\_ 55 \_\_\_\_\_ 56 \_\_\_\_\_ 57 \_\_\_\_\_ 8 \_\_\_\_\_ 58 \_\_\_\_\_ 59

19 Reviewed By \_\_\_\_\_ 60 \_\_\_\_\_ 61

20 Case Review Status  
 \_\_\_\_\_ (1) Complete  
 \_\_\_\_\_ (2) Not complete \_\_\_\_\_ 62

21 Date Case Release to Master File \_\_\_\_\_ 63 \_\_\_\_\_ 64 \_\_\_\_\_ 65 \_\_\_\_\_ 66 \_\_\_\_\_ 8 \_\_\_\_\_ 67 \_\_\_\_\_ 68

22 Subject Quality - Scene Slides  
 \_\_\_\_\_ (0) No slides  
 \_\_\_\_\_ (1) Good - Slides show all necessary roadways and physical evidence including all objects contacted  
 \_\_\_\_\_ (2) Fair - Slides show general area of accident site and objects contacted - additional pictures would have been helpful  
 \_\_\_\_\_ (3) Poor - Slides do not adequately show area of impact or path of travel off-road or at least one object definitely contacted was omitted \_\_\_\_\_ 69

23 Slide Quality - Scene Slides  
 (See next page for codes) \_\_\_\_\_ 70

24 Subject Quality - Vehicle Interior Slides  
 \_\_\_\_\_ (0) No slides  
 \_\_\_\_\_ (1) Good - Slides show all areas of contact - probable contact and or possible occupant contact areas - all intrusions - probable intrusion and or possible intrusion areas - vehicle interior components (instrument panel, headers, roof areas, seat belts, etc.) and all occupant seated positions  
 \_\_\_\_\_ (2) Fair - Slides show only contact and intrusion areas or an overall view of the vehicle interior - probable areas of contact and or intrusion - relevant vehicle interior components and relevant occupant seated positions are omitted for at least one vehicle  
 \_\_\_\_\_ (3) Poor - Obvious and or probable contact and intrusion areas are not photographed for at least one vehicle \_\_\_\_\_ 71

25 Slide Quality - Vehicle Interior Slides  
 (See next page for codes) \_\_\_\_\_ 72







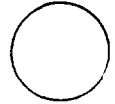
NCI

PSU No. \_\_\_\_\_

### ACCIDENT COLLISION DIAGRAM

Case Number \_\_\_\_\_

Indicate



North

Delete Street Names After Case Review

Variable Name: Primary Sampling Unit Number

Format: 2 columns - numeric

Beginning  
Column 01

Element Values:

PRIMARY SAMPLING UNIT (PSU) CODES AND DESCRIPTION

VALUES =====	STRATA =====	DESCRIPTION =====
01, 31, 34	1	Central City, one of the 10 largest 1970 SMSA's
51, 63, 78, 85	2	Central city, one of the 11th - 60th largest 1970 SMSA's
09, 28, 32, 79	3	Suburban, one of the 17 largest 1970 SMSA's; low gas sales
06, 37, 38, 61	4	Suburban, one of the 17 largest 1970 SMSA's; high gas sales
10, 33, 52, 56, 80	5	Suburban, one of the 18th - 60 largest 1970 SMSA's, or PSU within 61st - 119th largest SMSA's not containing a central city
04, 57, 87	6	PSU within 61th - 119th largest SMSA's containing a central city
02, 30, 55, 58	7	PSU containing towns with 1977 population over 19,718; low gas sales
11, 26, 81	8	PSU containing towns with 1977 population over 19,718; high gas sales
54	9	PSU with no town with 1977 population over 19,718; low gas sales

Variable Name: Case Number--Stratification

Format: 4 columns - alphanumeric

Beginning  
Column 3

Element Values:

Range: Case Number--001 through 999  
PAR Sampling Stratification--A, B, C, D, E

Source: Assigned by Auto Case Selection System

Remarks:

In 1987 NASS will focus on passenger cars and light trucks and vans. For a motor vehicle traffic accident to be selected as part of the Crashworthiness Data Subsystem (CDS) at least one in-transport passenger car or light truck or van [V17 (Body Type) equal 01-13, 40-69] must have been towed from the scene as a result of damage sustained during its collision sequence.

In-transport vehicles which meet the Body Type (V17) and towed criteria are to be considered as "towed light vehicles". The remaining in-transport vehicles involved in the collision sequence are to be considered as either "non-light vehicles" or "nontowed light vehicles". Non-light vehicles are vehicles whose Body Type (V17) equals: 20-29, 30-39, 70-79, 80-89, and 99--independent of towed status; nontowed light vehicles are vehicles whose Body Type (V17) equals: 01-13, 40-69 and who were not towed as a result of damage.

Unfortunately PARs do not identify with one-hundred percent certainty which towed vehicles were towed as a result of damage. Therefore, when a vehicle is towed the default assumption is that the vehicle was towed due to damage.

In addition, the PAR may be blank or unclear as to whether the vehicle was towed at all. If so, use the default assumption that the vehicle was not towed.

Where Body Type (V17) is not distinguishable on the PAR for light vehicle identification purposes (e.g., "pickup", "truck", "van"), refer to your VIN reference materials to decode the VIN if the VIN is present or refer to other sections (i.e., diagram, narrative, etc.) of the PAR that may provide identifying information.

If the VIN is not present and V17 is still unknown, consider the V17 code to be "49", "59", or "69" and consider the vehicle in question to be a light vehicle.

Variable Name: Case Number Stratification (cont'd)

The Case Number--Stratification is assigned by the Automated Case Selection System and is composed of two parts: the first three digits are a number ranging from 001 to 999; the last digit is the letter identifying from which PAR sampling stratum the case was selected (A, B, C, D, E). The PAR sample strata are:

Stratum A - At least one occupant of a towed light vehicle involved in the accident was killed ("K" injury).

Stratum B - No occupant of a towed light vehicle involved in the accident was killed, but at least one occupant of a towed light vehicle had an "A" injury.

Stratum C - The accident did not have any fatals or "A" injuries to occupants of towed light vehicles, but at least one occupant of a towed light vehicle was transported directly from the scene to a treatment facility.

Stratum D - The accident did not have any fatals, "A" injuries, or transported occupants from any towed light vehicles, but at least one towed light vehicle is present in the accident.

Stratum E - The accident did not have any towed light vehicles independent of the severity of injury received by other persons (i.e., occupants of nontowed light vehicles, occupants of non-light vehicles, pedestrians, or nonmotorists) involved in the accident.

Except as noted below, no numbers will be skipped. If a case must be dropped, the number will not be reused.

Case Numbers 001-500 are reserved for cases selected under the Crashworthiness Data Subsystem.

Case Numbers 501-999 are reserved for those cases identified solely for special studies.

This variable is a mandatory variable and cannot be changed.



Variable Name: Transaction Code

Format: 1 column - numeric

Beginning  
Column 8

Element Values:

- 1 Original case
- 2 Change to existing case
- 3 Delete existing case

Source: Microcomputer Data Entry instructions.

Remarks:

Use code "1" (Original case) for initial submission. MDE (Microcomputer Data Entry) automatically updates the code thereafter.

This variable is a mandatory variable and cannot be changed.

Variable Name: Investigator I.D. Number

Format: 1 column - numeric

Beginning  
Column 10

Element Values:

Range: 1 through 9

Source: Zone center.

Remarks:

The person to whom the case has been assigned is to enter his/her unique number. Subsequent forms will reflect the unique number for the person completing the specific forms.

It is preferred that the person to whom the case has been assigned should also complete this information on the Accident Form and assume responsibility for the quality of the entire case.

Each researcher's unique number is assigned by the PSU's Zone Center.

This variable is a mandatory variable and cannot be changed.

Variable Name: Type of Case

Format: 1 column - numeric

Beginning  
Column 11

Element Values:

1 Full data collection

Source: Assigned by the Automated Case Selection System or team according to sampling procedures.

Remarks:

Code "1" (Full data collection) is used.

Variable Name: Date (Month, Day, Year)

Format: 6 columns - numeric

Beginning  
Column 12

Element Values:

Month

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

Day

Range: 01 through 31

Year

87 1987 (precoded value)

Source : Police Report.

Remarks:

This variable is a mandatory variable and cannot be changed.

If the PAR indicates (usually a hit-and-run) that the accident occurred between some p.m. and a.m. time (e.g., 8:00 p.m. and 6:00 a.m.) on either a preceding or following day, code the accident as occurring on the following day. If a range of days is indicated (e.g., between Sunday and Friday) code the last date of the range (e.g., Friday).

If the month and year of accident occurrence is unknown: Code the sample month, unknown day (99) and sample year.

A09. Omitted (This variable is left blank so that numbering consistency can be maintained with the 1985 and 1986 CSS.)

Variable Name: Number of Vehicle Forms Submitted

Format: 2 columns - numeric

Beginning  
Column 19

Element Values:

Range: 01 through 30

Source : Researcher determined--inputs include police report, scene inspection, driver interviews, and other interviewees.

Remarks:

Each accident must have at least one Vehicle Form submitted. For every Vehicle Form there must be one Driver Form. The value recorded must equal the number of Vehicle Forms present in the case.

This variable is a mandatory variable and cannot be changed.

A form must be submitted for each in-transport motor vehicle involved in the accident. For example, one vehicle is towing another by a nonfixed linkage (e.g., rope, chain, etc.). Both vehicles are involved in the accident. A form is required for both vehicles. Whereas, if the linkage was fixed (see V07, Vehicle Number, for a definition of "fixed linkage"), only the power unit would be considered in-transport.

Hit-and-run accidents (see Variable V11, Hit and Run, for the meaning of this phrase for NASS purposes) occasionally cause some confusion on this variable. A Vehicle Form is filled out for each in-transport vehicle involved in the accident independent of the amount of information collected on the vehicles by the police. Parked vehicles may or may not require a form depending on whether or not they were in-transport. A thorough discussion of the sampling frame is found in section 2.0 of the Introduction (pages 4 through 23).

Variable Name: Number of Pedestrian & Nonmotorist Forms Submitted

Format: 2 columns - numeric

Beginning  
Column 21

Element Values:

Range: 00 through 25

Source: Researcher determined--inputs include police report, scene inspection, driver interviews, and other interviewees.

Remarks:

A Pedestrian and Nonmotorist Form must be completed for each pedestrian or nonmotorist present in the accident. The value recorded must equal the number of pedestrians and/or nonmotorists for which a form was submitted.

This variable is a mandatory variable and cannot be changed.

Variable Name: First Harmful Event

Format: 2 columns - numeric

Beginning  
Column 23

Element Values:

Non-Collision

- 01 Fire or explosion
- 02 Immersion
- 03 Gas inhalation
- 04 Fell from vehicle
- 05 Injured in vehicle
- 06 Other non-collision (specify)
  
- 07 Overturn
- 08 Jackknife with intraunit damage

Collision with

- 09 Pedestrian
- 10 Pedalcyclist
- 11 Railway train
- 12 Animal
- 13 Motor vehicle in transport - same roadway
- 14 Motor vehicle in transport - other roadway
- 15 Parked motor vehicle
- 16 Other type nonmotorist (specify)
- 17 Thrown or falling object
- 18 Boulder
- 19 Other object (not fixed) specify

Collision with Fixed Object

- 20 Building
- 21 Impact attenuator/crash cushion
- 22 Bridge pier or abutment
- 23 Bridge parapet end
- 24 Bridge rail
- 25 Guardrail
- 26 Concrete traffic barrier
- 27 Median barrier
- 28 Other longitudinal barrier (specify)
- 29 Highway/Traffic sign post
- 30 Overhead sign support
- 31 Luminaire/Light support
- 32 Utility pole
- 33 Other post, pole, or support (specify)
- 34 Culvert
- 35 Curb



Variable Name: First Harmful Event (cont'd.)

- 36 Ditch
- 37 Embankment - earth
- 38 Embankment - rock, stone or concrete
- 39 Fence (wooden, wire, chain link, etc.)
- 40 Wall (stone, rock, metal, etc.)
- 41 Fire hydrant
- 42 Shrubbery
- 43 Tree
- 44 Other (specify)
- 45 Pavement surface irregularity (pothole, grooved, grates)
- 99 Unknown

Source: Researcher determined--inputs include the police report, scene inspection, vehicle inspections, and driver interviews.

Remarks:

Definitions: see ANSI D16.1-1983, sections 2.3.1, 2.3.6, and 2.4.1 through 2.4.6, pages 10, 11, and 13-15. These sections define: injury, damage, harmful event, unstabilized situation, cataclysm, and accident, respectively.

Every motor vehicle traffic accident consists of a series of events. In classification by type, one of the events must be selected before further classification can be made. For uniformity in classification, the "First Harmful Event" is the first property damage or injury-producing event that can be determined to have happened in the accident.

The basis of this classification is the information acquired (scene inspection, interview, etc.) during the NASS research. Police reports may prove helpful in selecting the appropriate code, but are not the sole determinant for code selection (i.e., the researcher may select a code which is different from the one indicated by the police report, given the discovery of additional data).

Code "06" (Other noncollision) is used when a vehicle sets an object in motion that strikes or is struck by a vehicle before the object stabilizes. Examples include dislodged cargo, spewed gravel, etc. It may be used in other situations subject to consultation with the Zone Centers.

Code "07" (Overturn) includes uncontrolled motorcycles which first contact the ground or pavement surface. Motorcycles which first impact pedestrians, nonmotorists, vehicles, animals, trains, or other objects, are coded "09" through "45". Although a motorcycle can overturn, it cannot be coded (as defined in NASS) as a rollover. For a motorcycle whose First Harmful Event is overturn (A12 equals 07), V81 (Rollover) must be coded "0" (No rollover).

## Variable Name: First Harmful Event (cont'd.)

Code "08" (Jackknife with intraunit damage) is used whenever there is sufficient rotation (articulation) between any two units such that they contact each other and leave any visible damage irrespective of the magnitude of the damage. Jackknife is not restricted to truck-tractor combinations; it may occur with any passenger vehicle, van, motorcycle, etc. which is pulling a trailing unit, and the trailing unit and pulling vehicle are capable of rotating (articulating) with respect to each other.

Code "09" (Pedestrian) refers to any person who is on a trafficway or on a sidewalk or path contiguous with a trafficway, and who is not in or on a nonmotorist conveyance. A nonmotorist conveyance is defined as any human-powered device by which a nonmotorist may move, or by which a pedestrian or nonmotorist may move another nonmotorist, other than by pedaling. A nonmotorist conveyance includes the following: baby carriage, coaster wagon, ice skates, roller skates, push cart, scooter, skate board, skis, sled, wheel chair, rickshaw, etc. Excluded are pedalcyclists.

Code "10" (Pedalcyclist) refers to any occupant of a pedalcycle (see ANSI D16.1-1976, section 2.2.16, page 6).

Code "13" [Motor vehicle in transport (same roadway)] includes all initial impacts between two motor vehicles in-transport which occur: (1) in a junction, or (2) not in a junction but on the same roadway. In the latter instance, neither vehicle departed its roadway prior to impact.

A vehicle parked in a mid-block bus stop, fire hydrant, etc., should be considered as in-transport if the vehicle should not be parked in the location (i.e., parked buses, fire trucks, etc., are considered not in-transport while a passenger car, motorcycle, etc., are considered in-transport).

Code "14" [Motor vehicle in transport (other roadway)] includes only those initial impacts when two motor vehicles in-transport collide because one of the vehicles departed its roadway and entered, without previous harm, another roadway. One example of this phenomena occurs when a vehicle crosses through a median and strikes a vehicle in the opposing roadway. A second example involves the situation where a vehicle leaves the roadway and enters an intersecting roadway outside of the junction. This category is to be distinguished from the situation where a motor vehicle in-transport leaves its roadway and strikes a motor vehicle not in-transport. This latter situation is coded as "15" (Parked motor vehicle).

Code "15" (Parked motor vehicle) includes all initial impacts between a motor vehicle in-transport and a motor vehicle neither on a roadway nor in motion.

Variable Name: First Harmful Event (cont'd.)

Code "16" (Other type nonmotorist) refers to a person who is not a pedestrian or a pedalcyclist. See variable P08 (Pedestrian or Nonmotorist's Type), attributes "4" and "8". [NOTE: If the first harmful event occurs with a motor vehicle not in-transport which contains a nonmotorist (P08 = 4, Occupant of vehicle not in-transport), use code "15" (Parked motor vehicle) above.]

Code "17" (Thrown or falling object) refers to any object which (1) is thrown [intentionally (subject to the malicious mischief exception to the deliberate intent exclusion--page 6) or unintentionally] and impacts an in-transport vehicle, or (2) falls onto, into, or in the path of an in-transport motor vehicle. However, objects set in motion by an in-transport vehicle are to be coded under code "06" (Other non-collision). If a tree limb falls from a tree and is contacted by a car, use this code. If a tree limb falls from a tree trimming truck and is struck before it stabilizes, use code "06". If a boy maliciously throws a tree limb off of an overpass into traffic below, use this code.

Code "18" (Boulder) is used when an in-transport motor vehicle contacts any large (not defined but at least larger than gravel) stationary rock.

Code "19" [Other object (not fixed)] refers to an initial impact between a motor vehicle in-transport and any other object that is moving or not anchored prior to the accident. Included in this category is an initial collision between a motor vehicle in-transport, which leaves its roadway, and a motor vehicle in motion off any trafficway. An example of this situation is where a vehicle loses control and contacts a snowmobile in motion off the trafficway.

Code "21" (Impact attenuator/crash cushion) should be used when the first harmful event is with any of the devices included on continuation pages (8) and (9).

Code "22" (Bridge pier or abutment) is used when the initial contact was with any part of a structural member of the bridge that supports the overpass structure (this includes side walls used to retain earth). See continuation page (10), Figure 2.

For contact to the "front face" of an overpass structure (e.g., the top of the cargo area of a truck strikes the front of a bridge with a low clearance) code "44" (Other fixed object).

Code "23" (Bridge parapet end) is used when the initial contact was with the end structure of the bridge rail (including the end structure of concrete type railings). See continuation page (10), Figure 2.

Variable Name: First Harmful Event (cont'd.)

Code "24" (Bridge rail) is used when the initial contact was with any portion of the bridge rail except for the parapet end. See continuation page (10), Figure 2.

If the initial impact was with an impact attenuator protecting a bridge support, then code "21" (Impact attenuator/crash cushion) should be used. Contact with the underside of the bridge deck is coded "44" (Other fixed object).

Included within the meaning of bridge structure are supports for railway underpasses, including those for mass transit type trains.

Codes "25", "26", "27", and "28" are coded by design and composition. Location is not considered when coding First Harmful Event (A12).

Code "25" (Guardrail) is used whenever the initial impact occurs with any longitudinal barrier types 1-9 regardless of its location, included on continuation page (11), Figure 3.

Code "26" (Concrete Traffic Barrier) is used whenever the initial impact occurs with a safety shaped, 1 or 2 sided, concrete barrier (commonly referred to as a GM or New Jersey barrier) regardless of its location. Use this code for temporary (e.g., construction sites) and permanent installations. Concrete traffic barriers located on a bridge with a closed median are not considered bridge rails. Concrete traffic barriers located on the outer road edges of a bridge are considered bridge rails. A concrete traffic barrier takes precedence over all longitudinal barriers. Concrete traffic barriers are shown on continuation pages (11) and (12), Figure 3, types 10 and 16.

Code "27" (Median Barrier) is used whenever the initial impact occurs with any non-concrete longitudinal barrier types 11-15, 17-20 regardless of its location, included on continuation page (12), Figure 3.

Code "28" (Other longitudinal barrier) is used whenever an impact occurs with a longitudinal barrier that does not meet the criteria for codes "24" (bridge rail), "25" (guardrail), "26" (concrete traffic barriers), or "27" (median barrier).

Codes "29" (Highway/Traffic sign post), "30" (Overhead sign support), "31" (Luminaire/Light support), and "32" (Utility pole) are distinguished by the nature of the object supported. Use code "29" if the impact occurs to a support for a highway or traffic sign. Use code "30" if the impact occurs with anything that supports a sign under which vehicles travel. Use code "31" if the pole's primary function is to support a street light. Use code "32" if the pole's primary function is to support utility lines.

Variable Name: First Harmful Event (cont'd.)

Code "33" (Other post, pole, or support) if the impact occurs with (1) a traffic signal pole, (2) any non-highway or non-traffic sign (e.g., a private sign), (3) a mail box post, (4) a delineator post, or (5) any other type post, pole, or support. Code "33" should not be used when the initial impact was with any supporting structure of a bridge (see codes "22" through "24" above).

Code "34" (Culvert) is a man made structure that allows passage over a drainage area and is that part of the structure which is intended to channel flow through the structure and maintain the stability/integrity of the road bed. If the structure has a portion above the road surface which is of sufficient height to engage above the wheels of an errant passenger vehicle and redirect it, that part of the structure is considered a bridge rail (code "24"). A ditch (code "36") ends where a culvert begins and resumes on the opposite side of the culvert.

Code "36" (Ditch) is a man made structure for drainage purposes. When the sides of the ditch are approximately of equal height it makes no difference which side of the ditch was struck; however, if the struck side is substantially higher than the other side, code the impact with the struck side as an embankment (codes "37" or "38"). Substantial means that an embankment existed had the ditch not been present.

Codes "37" (Embankment - earth) and "38" (Embankment - rock, stone or concrete) should be used only when damage or injury results from impacting the embankment. For example, the first harmful event for a motorcyclist who travels up an embankment, loses control, and falls over should be coded ground (code "44" Other fixed object). These codes are used if, for example, the motorcyclist, car, etc., sustains direct damage from impacting the embankment.

Code "44" (Other fixed object) refers to any fixed object which is anchored and not moving and not specifically mentioned above. This includes ground and pavement; however, ground or pavement are not to be coded when the first event is an overturn ("07"). All motor vehicles (including motorcycles) may overturn. For Object Contacted (V41, V50), ground (pavement) (V41, V50 - 69) could be coded for an overturned vehicle, but not on this variable (A12). Collisions which may be classified using this code include (but are not limited to): (1) vehicles which sustain undercarriage damage by straddling the pavement and shoulder and impacting a prominent pavement lip, or (2) free falls or vaults from the road surface to the ground or pavement without excessive roll action prior to impact.

Variable Name: First Harmful Event (cont'd.)

Medians are handled as follows. If the median contains a physical barrier, code by design "25" (Guardrail), "26" (Concrete traffic barrier), "27" (Median Barrier), or "28" (Other longitudinal barrier). However, to use these codes the barrier type fixed object must have been the cause of the initial harm. Commonly encountered types are illustrated on continuation pages (11) and (12), Figure 3.

Where the median is curbed, paved, gravel, or grass only, then do not use these codes. If the median is depressed and the impact occurs with the ground, then code "37" (Embankment - earth), "38" (Embankment - rock, stone or concrete) or "44" (Other fixed object), whichever is most appropriate.

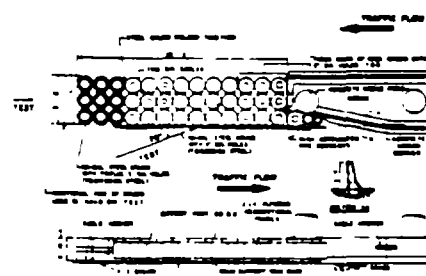
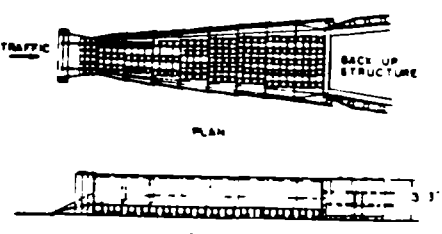
If the initial harmful event is with a raised, paved area (concrete or bituminous), then code "35" (Curb), should be used. This is true even if a barrier is anchored in the raised, paved area.

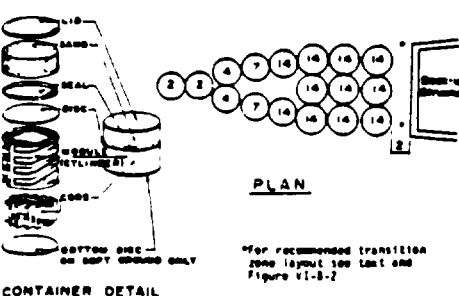
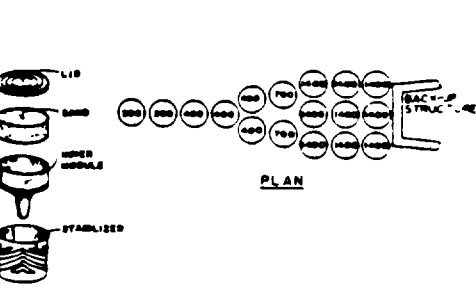
Tunnels are handled according to the following rules. If the impact is external (i.e., the impact is to the hill or mountainside), code embankment (codes "37" or "38"). If the impact is to the tunnel entrance (i.e., not protected by guardrails or bridge rails that lead into a tunnel or impact attenuators), then code "44" (Other fixed object). Code "40" (Wall) should be used if the plane of the tunnel is broad or wide enough that the tunnel entrance functions as a wall, and contact is made with this wall. External impacts to impact attenuators should be coded "21".

Internal or external impacts to: (a) median barriers should be coded either "25" (Guardrail), "26" (Concrete traffic barrier), "27" (Median Barrier) or "28" (Other longitudinal barrier); (b) curbs (raised, paved medians) or walks should be coded "35" (Curb); or (c) the tunnel wall should be coded "40" [Wall (stone, rock, metal, etc.)]. If contact is made with a bridge that leads into a tunnel, code "23" (Bridge parapet end) or "24" (Bridge rail).

FIGURE 1  
IMPACT ATTENUATOR/CRASH CUSHION

A12  
(8)

		
<p>SYSTEM</p>	<p>C1 Steel Drums</p>	<p>C2 Hi-Dro Cell Sandwich</p>
<p>BARRIER DESCRIPTION</p>	<p>55 gallon light head drum arranged in modular clusters, fender panels or "fish scales" fastened to sides for side impact restriction. 3/4" cable used to secure drums for side impacts. "U" bolt chains used to ensure uniform sliding of drums.</p>	<p>4" diameter, polyvinyl chloride plastic cells filled with water. Fender panels ("fish scales") are provided for re-direction.</p>

		
<p>SYSTEM</p>	<p>C3 Fitch Inertial Barrier</p>	<p>C4 Energit Inertial Barrier</p>
<p>BARRIER DESCRIPTION</p>	<p>Specially manufactured plastic containers (36" in diameter and height) filled with sand. Standard weights are 200, 400, 700, 1400 and 2100 lb. Volume and density of sand may vary.</p>	<p>Specially manufactured plastic containers filled with sand. Standard size of container is 36" diameter top, 32" diameter base and 35 1/4" height. Standard weights of modules are 200, 400, 700 and 1400 lb.</p>

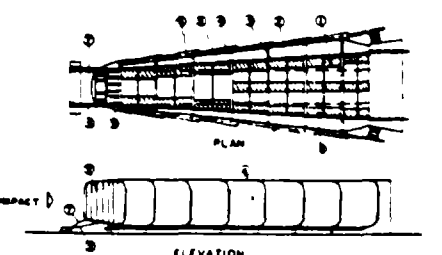
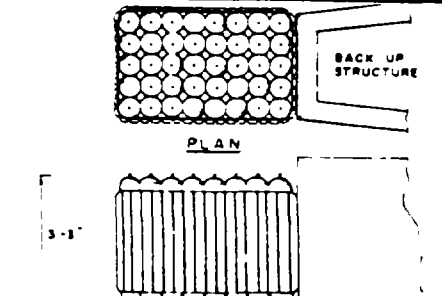
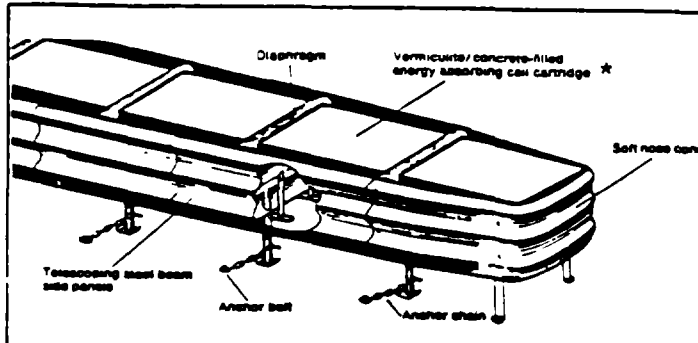
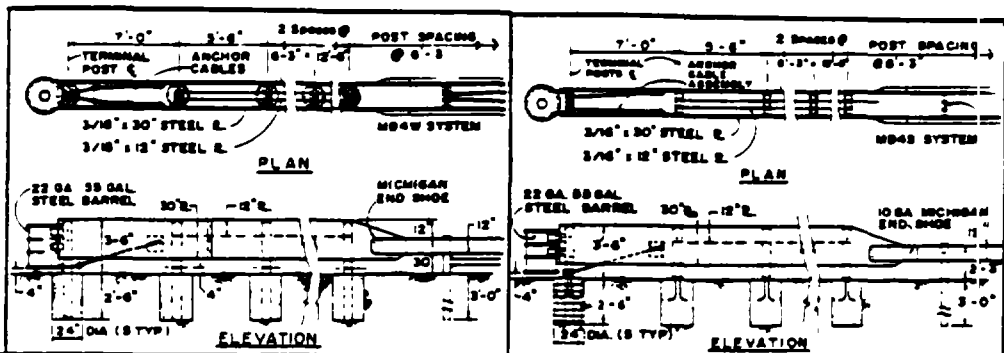
		
<p>SYSTEM</p>	<p>C5 Hi-Dro Cell Sandwich</p>	<p>C6 Hi-Dro Cell Cluster</p>
<p>BARRIER DESCRIPTION</p>	<p>Hi-Dro cell cartridges are arranged in a cluster along with fender panels ("fish scales") to provide capabilities for head on and side impacts.</p>	<p>6" diameter, polyvinyl chloride plastic cells arranged in a cluster and filled with water.</p>

FIGURE 1 (cont'd.)



SYSTEM	Guard Rail Energy Absorbing Terminal (G.R.E.A.T.)
BARRIER DESCRIPTION	<p>Minimum width at the bottom 20"</p> <p>Maximum width at the bottom 30" 28" unit size available.</p> <p>Weight 2,500 lbs. (typical 8-bar unit)</p> <p>Length 15' to 22' 14 bays to 10 bays</p>

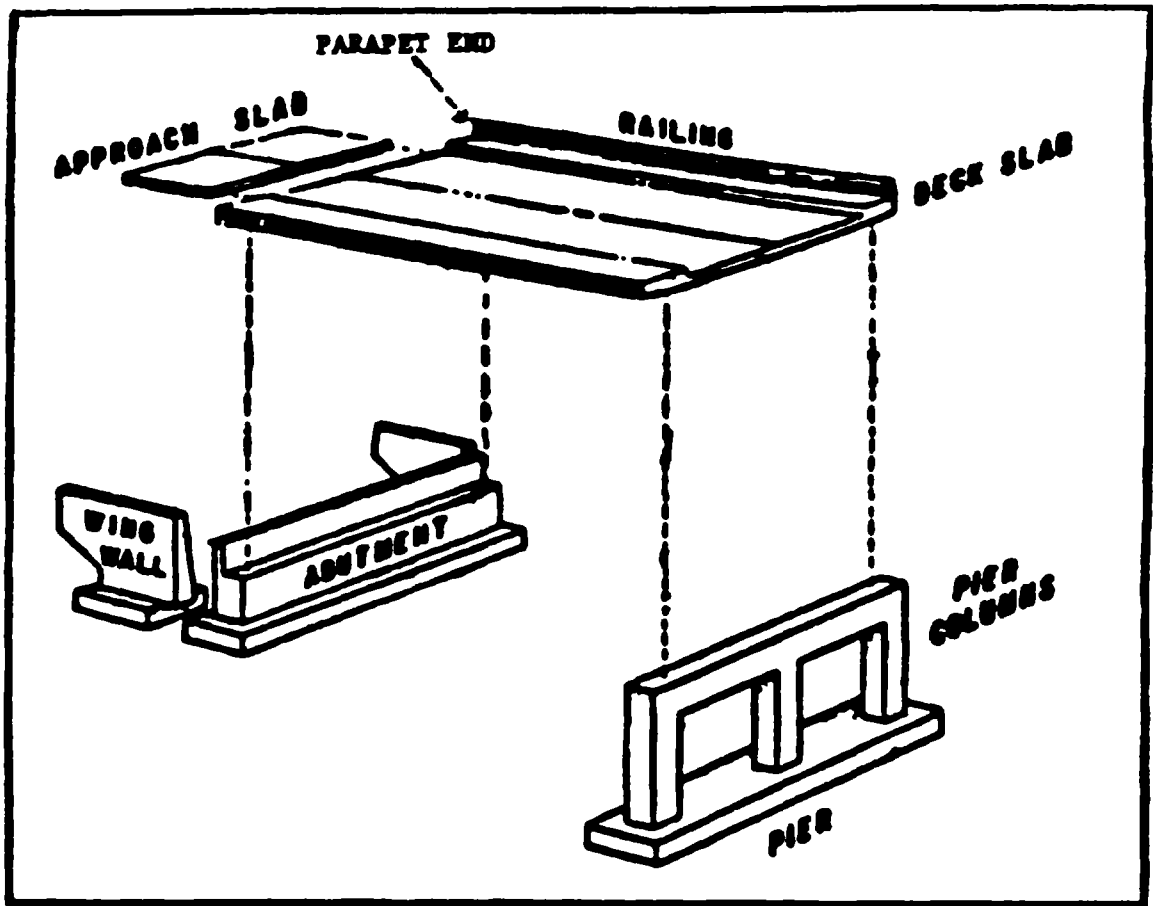


SYSTEM	PART 1 Median Barrier Breakaway Cable Terminal (Steel Post)	PART 2 Median Barrier Breakaway Cable Terminal (Steel Post)
BARRIER DESCRIPTION	<p>TYPICAL POST - 6"x8" Douglas Fir. TERMINAL POST - 6"x8" Southern Pine with 2 3/8" diameter hole drilled through neutral axis. ANCHORAGE - Cable assembly (see sketch). FOOTING - 24" diameter, 30" deep concrete for terminal posts, other posts require none. TYPICAL RAIL - steel "H" section, 12 GA. TERMINAL RAIL - 3/16"x30" steel plate. OFFSET BRACKETS - 6"x8" Southern Pine block.</p>	<p>TYPICAL POST - M848 S steel. TERMINAL POST - T86"x6"x0 1875" steel breakaway design. ANCHORAGE - Cable assembly (see sketch). FOOTING - 24" diameter, 30" deep concrete for terminal posts, other posts require none. TYPICAL RAIL - steel "H" section, 12 GA. TERMINAL RAIL - 3/16"x30" steel plate. OFFSET BRACKETS - 6"x8" steel blocks.</p>

\*The cartridge may also be filled with Hex-Foam which is a matrix of hex-shaped cardboard honeycomb filled with polyurethane foam. The cardboard is stacked in one-inch layers in a cross-hatched fashion.



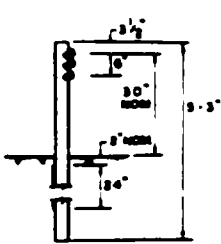
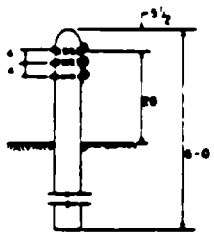
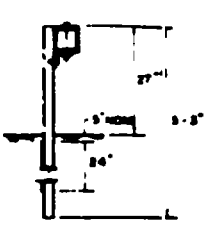
FIGURE 2  
BRIDGE COMPONENTS

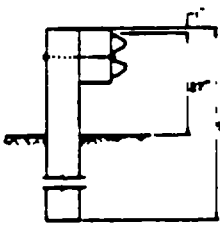
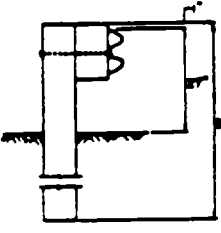
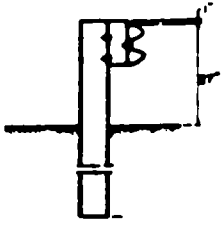
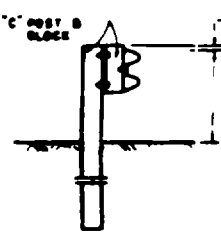


\* INDIVIDUAL components of a bridge collectively become the bridge.

FIGURE 3  
BARRIERS

A12  
(11)

	CODE 01	CODE 02	CODE 03
			
<b>SYSTEM</b>	G1 Cable Guardrail	G1 6" x 8 Wood Post, Cable Guardrail (Wood Post)	G2 7" Beam (Steel Wood Post)
<b>BARRIER DESCRIPTION</b>	16' 0" 3x5 7 steel Three 3/4" diameter steel cables None 5/16" diameter steel head bolts 1/4"x24" steel plate welded to post	12' 6" 3/4" dia. id treated wood posts Three 3/8" diameter cables, steel head bolts, steel 5/16" diameter head bolts, steel 6"x10"x18" precast concrete base- ing block	12' 6" nominal 3x5 7 steel Steel "C" section, 12 GA None 5/16" diameter steel bolt 1/4"x24" steel plate welded to post
<b>POST SPACING</b>	16' 0"	12' 6"	12' 6"
<b>POST TYPE</b>	3x5 7 steel	3/4" dia. id treated wood posts	3x5 7 steel
<b>BEAM TYPE</b>	Three 3/4" diameter steel cables	6" x 8" wood post	7" beam (steel wood post)
<b>CONNECT BRACKETS</b>	None	None	None
<b>INSTALLATION</b>	5/16" diameter steel head bolts	5/16" diameter head bolts, steel	5/16" diameter steel bolt
<b>POSTING</b>	1/4"x24" steel plate welded to post	6"x10"x18" precast concrete base- ing block	1/4"x24" steel plate welded to post

	CODE 04	CODE 05	CODE 06	CODE 07
				
<b>SYSTEM</b>	G4(10) Blocked-Out "3" Beam (Wood Post)	G4(20) Blocked-Out "4" Beam (Wood Post)	G4(15) Blocked-Out "4" Beam (Steel Post)	G4(25) Blocked-Out "4" Beam (Steel "C" Posts)
<b>BARRIER DESCRIPTION</b>	6' 3" 6"x6" Douglas Fir Steel "C" section, 12 GA 6"x8"x14" Douglas Fir Block 5/8" diameter carriage bolts None	6' 3" 6' x 8" Douglas Fir Steel "C" section, 12 GA 6' x 8' x 14" Douglas Fir Block 5/8" diameter carriage bolts None	6' 3" Wood 5 steel post Steel "C" section, 12 GA Wood 5x14 long steel block 5/8" diameter bolt None	6' 3" 4 1/2"x5 5/8"x3/16" "C" steel post Steel "C" section, 12 GA 4 1/2' x 5 5/8"x3/16" "C" steel post 5/8" diameter bolt None
<b>POST SPACING</b>	6' 3"	6' 3"	6' 3"	6' 3"
<b>POST TYPE</b>	6"x6" Douglas Fir	6' x 8" Douglas Fir	Wood 5 steel post	4 1/2"x5 5/8"x3/16" "C" steel post
<b>BEAM TYPE</b>	Steel "C" section, 12 GA	Steel "C" section, 12 GA	Steel "C" section, 12 GA	Steel "C" section, 12 GA
<b>CONNECT BRACKETS</b>	6"x8"x14" Douglas Fir Block	6' x 8' x 14" Douglas Fir Block	Wood 5x14 long steel block	4 1/2' x 5 5/8"x3/16" "C" steel post
<b>INSTALLATION</b>	5/8" diameter carriage bolts	5/8" diameter carriage bolts	5/8" diameter bolt	5/8" diameter bolt
<b>POSTING</b>	None	None	None	None

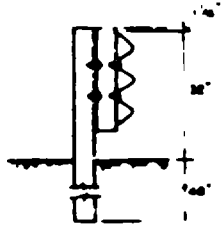
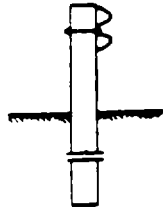
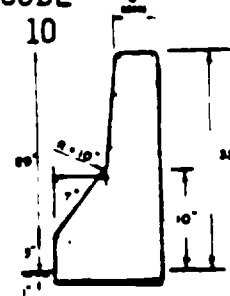
	CODE 08	CODE 09	CODE 10
			
<b>SYSTEM</b>	G4(10) Blocked-Out "4" Beam (Steel Post)	U-beam (Strong Post)	Concrete Safety Shape
<b>BARRIER DESCRIPTION</b>	6' 3" Wood 5 steel 4x6 beam steel Wood 5 and steel 7 steel 2 5/8" diameter steel bolts None		
<b>POST SPACING</b>	6' 3"		
<b>POST TYPE</b>	Wood 5 steel		
<b>BEAM TYPE</b>	4x6 beam steel		
<b>CONNECT BRACKETS</b>	Wood 5 and steel 7 steel		
<b>INSTALLATION</b>	2 5/8" diameter steel bolts		
<b>POSTING</b>	None		

FIGURE 3 (cont'd.)

	CODE 11	CODE 12	CODE 13	CODE 14
<b>SYSTEM</b>	#B1 Cable	#B2 "W" Section (Steel Wood Post)	#B3 Box Beam	#B4 Blocked-Out "W" Beam (Wood Post)
<b>BARRIER DESCRIPTION</b>	8' 0" #2-6"x4 1/2" Two 3/4" diameter steel cables	12' 4" S3x5.7 Two steel "W" sections None	6' 0" S3x5.7 6"x6"x6" steel tube None	6' 3" #8"x8" Douglas Fir # Two "W" sections, one C6x8.2 Two #8"x14" Douglas Fir Blocks # 5/8" diameter bolts None
<b>POST SPACING</b>	27'-0" 42' 7 1/2'	33' 03'	30' 00'	30'
<b>POST TYPE</b>	None	24"	24"	None
<b>BEAM TYPE</b>	None	None	None	None
<b>UPSET BRACKETS</b>	None	None	None	None
<b>HEIGHTS</b>	None	None	None	None
<b>FOOTINGS</b>	None	None	None	None

	CODE 15	CODE 16	CODE 17	CODE 18
<b>SYSTEM</b>	#B5 Blocked-Out "W" Beam (Steel Posts)	#B6 Concrete Median Barrier	#B7 Aluminum Slotted Beam	#B8 Aluminum Slotted Beam
<b>BARRIER DESCRIPTION</b>	6' 3" #6x8.5 Two steel "W" sections Two #6x8.5 5/8" diameter steel bolts None	Continuously poured, reinforced, sloped face, concrete section. Barrier can be anchored by dowels or an asphalt key	6' 3" Aluminum I or steel S3x5.7 Aluminum extrusions None	12' 6" 5 1/2"x7 1/2" H section aluminum 5 1/2"x7 1/2" H section aluminum Four standard aluminum extrusions None
<b>POST SPACING</b>	None	None	None	None
<b>POST TYPE</b>	None	None	None	None
<b>BEAM TYPE</b>	None	None	None	None
<b>UPSET BRACKETS</b>	None	None	None	None
<b>HEIGHTS</b>	None	None	None	None
<b>FOOTINGS</b>	None	None	None	None

	CODE 19	CODE 20
<b>SYSTEM</b>	#B9 Blocked-Out Triple Beam (Steel Post)	#B10 Metal Beam Guard Fence (Steel Spikes, Steel Post)
<b>BARRIER DESCRIPTION</b>	6' 3" #6x8.5 Two Triple Beams #6x8.5 5/8" diameter steel bolts None	6' 3" #6x8.5 steel Two steel "W" sections None
<b>POST SPACING</b>	None	None
<b>POST TYPE</b>	None	None
<b>BEAM TYPE</b>	None	None
<b>UPSET BRACKETS</b>	None	None
<b>HEIGHTS</b>	None	None
<b>FOOTINGS</b>	None	None

\* Note. The use of 6" x 8" instead of 8" x 8" cross section is also acceptable.

\*\* Note. The use of 4 1/3" x 5 3/8" x 3/16" "C" steel post instead of #6 x 8.5 steel post is also acceptable.

Variable Name: Manner of Collision (Based on First Harmful Event)

Format: 1 column - numeric

Beginning  
Column 25

Element Values:

- 0 Not collision with vehicle in transport
- 1 Rear-end
- 2 Head-on
- 3 Rear-to-rear
- 4 Angle
- 5 Sideswipe, same direction
- 6 Sideswipe, opposite direction
- 9 Unknown

Source: Researcher determined -- inputs include the police report, scene inspection, vehicle inspections, and driver interviews.

Remarks:

Code "0" (Not collision with vehicle in transport) means First Harmful Event (A12) was not coded as "13" or "14".

Code "1" (Rear-end) refers to a collision between the rear of one vehicle and the front of another vehicle.

Code "2" (Head-on) refers to a collision where the front end of one vehicle collides with the front end of another vehicle.

Code "3" (Rear-to-rear) refers to a collision where the rear of one vehicle collides with the rear of another vehicle.

Code "4" (Angle) refers to those collisions which are known but cannot be classified with any other code. Included here, also, are endswipes.

Code "5" (Sideswipes, same direction) refers to collisions where the primary direction of force for the two motor vehicles is such that there is minimal side engagement of the two vehicles travelling in the same direction. The resulting damage is primarily restricted to sheet metal involvement with no significant structural engagement (i.e., no frame or A, B, C, etc., pillar engagement which halts the sideswipe). At least one vehicle must be contacted in the side (L or R in column 3 of CDC) and column 6 of the same CDC must equal S.

Variable Name: Manner of Collision (Based on First Harmful Event) (cont'd.)

Code "6" (Sideswipe, opposite direction) refers to collisions where the primary direction of force for the motor vehicles is such that there is minimal side engagement of the two vehicles traveling in opposite directions. The resulting damage is primarily restricted to sheet metal involvement with no significant structural engagement (i.e., no frame or A, B, C, etc., pillar engagement which halts the sideswipe). At least one vehicle must be contacted in the side (L or R in column 3 of the CDC) and column 6 of the same CDC must equal S.

Variable Name: Relation to Roadway (Location of First Harmful Event)

Format: 1 column - numeric

Beginning  
Column 26

Element Values:

- 1 On roadway
- 2 On shoulder
- 3 In median
- 4 On roadside
- 5 Outside right-of-way
- 6 Off roadway - location unknown
- 7 In parking lane
- 8 Gore or channel island
- 9 Unknown

Source: Researcher determined -- inputs include the police report, scene inspection, vehicle inspections, and driver interviews.

Remarks:

Code the attribute that best describes the location of the First Harmful Event (A12).

Code "1" (On roadway) refers to that part of the trafficway designated, improved and ordinarily used for motor vehicle travel (Definition: ANSI D16.1-1983, section 2.2.17, page 9). In addition, code on roadway ("1") if the impact occurs with a bridge structure (see remarks section for A12, First Harmful Event, codes "22"- "24") that is on a roadway and was designed to allow motor vehicles to move in (change lanes) between the supporting piers. Note: This code may not be used when a vehicle in-transport on a roadway impacts another vehicle (not in-transport) or its cargo where it protrudes onto the roadway (e.g., side mirrors or a door opened from a parked vehicle in an implicitly designated parallel parking lane).

Signs, poles or trees can be located on a roadway (code "1") if struck. The objects should not be within an island or median, but actually protruding from the roadway surface.

Code "2" (On shoulder) refers to that part of a trafficway contiguous with the roadway for emergency use, for accommodation of stopped vehicles, and for lateral support of the roadway structure (Definition: ANSI D16.1-1983, section 2.2.18, page 9).

Code "3" (In median) refers to the area of separation between two adjacent roadways on the same trafficway and is not a "gore" (see below). More than one "median" may exist on the same trafficway. Code "3" (In median) if the First Harmful Event (A12) occurs in the separation between two roadways.

Variable Name: Relation to Roadway (Location of First Harmful Event) (cont'd).

Also, use this code if the first harmful event occurs with a curb which is part of a curbed median (see also the discussion of medians in the remarks section for A12, First Harmful Event). In addition, code in median ("3") if the impact occurs with a bridge structure (see note above) that was designed to separate (or has the same secondary effect) opposing lanes of travel or prevent motor vehicles from changing lanes.

Code "4" (On roadside) refers to a location off the road, but inside the right-of-way (Definition: ANSI D16.1-1983, section 2.2.19, page 9). For example, a guardrail, tree, mailbox, etc., could be coded "4" (On roadside) since the shoulder is assumed to end where the object begins. Code "4" (On roadside) is used when a vehicle strikes a curb which is contiguous with either the roadway or a parking lane at the location of the impact.

Code "6" (Off roadway - location unknown) refers to a location off the roadway, but its relationship to the right-of-way is not known.

Code "7" (In parking lane) is used when an in-transport vehicle enters a designated, implicit or explicit, parallel parking lane area on the road prior to impacting another vehicle, pedestrian or nonmotorist, or object in that same area [e.g., if you have determined that a struck motor vehicle was in a parking lane and, therefore, not in-transport, code "7" (In parking lane) should be used.] Also use this code whenever a pedestrian or nonmotorist is struck within 7 feet of the curb or edgeline on roads where there is parking but there is no explicitly delineated parking lane width. If a collision occurs on the road in a nonparallel designated parking area (e.g., angular parking), then this code should be used.

A gore is an area of land where two roadways diverge or converge. (Definition: ANSI D16.1-1983, section 2.5.20, pages 21 and 22.) 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 of these roadways. The area includes shoulders or marked pavement, if any, between the roadways. The third side is 60 meters (approximately 200 feet) beyond where the "roads" separate measured along the "roadways" from the point of divergence or convergence or, if any other "road" is within 70 meters (230 feet) of the apex of this triangulated area, a line 10 meters (33 feet) from the nearest edge of such road. Inclusions are: areas at rest area entry or exit ramps, areas at truck weigh station entry or exit ramps, areas where two main roadways diverge or converge, areas where a ramp and another roadway, or two ramps, diverge or converge, and areas where a frontage road and another roadway, or two frontage roads, diverge or converge. Normally one of the roadways will be a ramp.

A14

(3)

Variable Name: Relation to Roadway (Location of First Harmful Event (cont'd.))

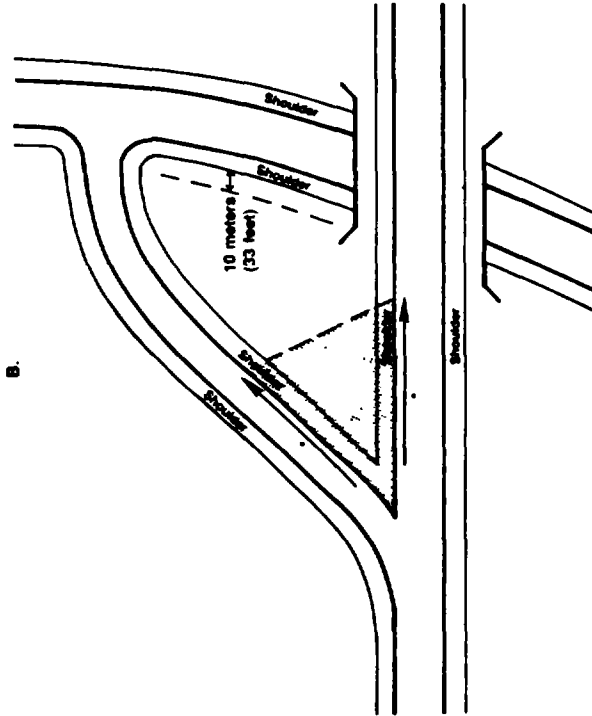
Code "8" (Gore or channel island) is used if the First Harmful Event (A12) occurs in the triangulated type area formed by the boundaries of the "roadways", measuring along them from the beginning of their separation (if painted lines are present at separation, begin measuring at apex of lines) to a point 200 feet on each "roadway" beyond the separation of the "roads", and a line between these two points. See continuation page (4), Figure 1 for an example gore (shaded) area where the distance measured along each of the roadways is 200 feet beyond the separation of the roads.

Channel island is the defined area between traffic lanes for control and guidance of vehicle movement. Islands may be provided for separation and special control of turning movements. Islands can separate opposing traffic or traffic in the same direction. An island may be designated by paint, curbs or pavement edge and can be paved or have a low growing plant cover.

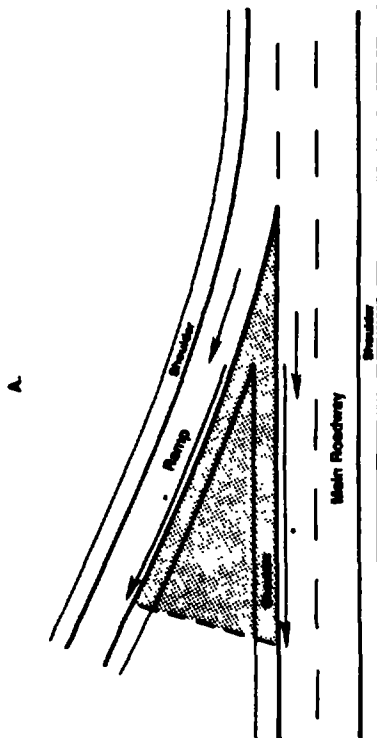
Code "8" (Gore or channel island) is used if the First Harmful Event (A12) occurs in an island (directional or channelizing).

Gore or channel island takes precedence over On shoulder, On roadside, Outside right-of-way, or Off roadway--location unknown (codes "2" and "4" through "6"). But, if a vehicle departs the roadway into the gore area but does not have its first harmful event until after it passes through the gore area, but before it enters any other roadway, then one of the codes "2" (On shoulder), "4" (On roadside), "5" (Outside right-of-way), or "6" (Off roadway-location unknown) should be used.



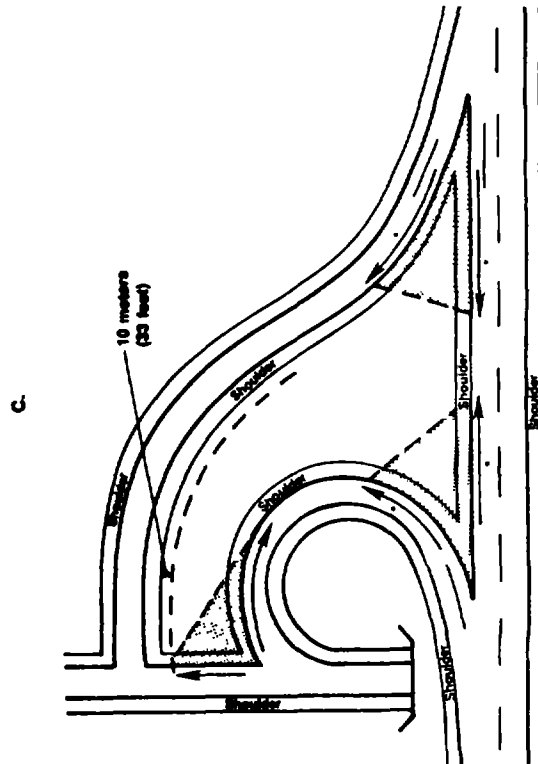


\* Distance is 60 meters (approximately 200 feet) measured along the roadway from where the roads separate.

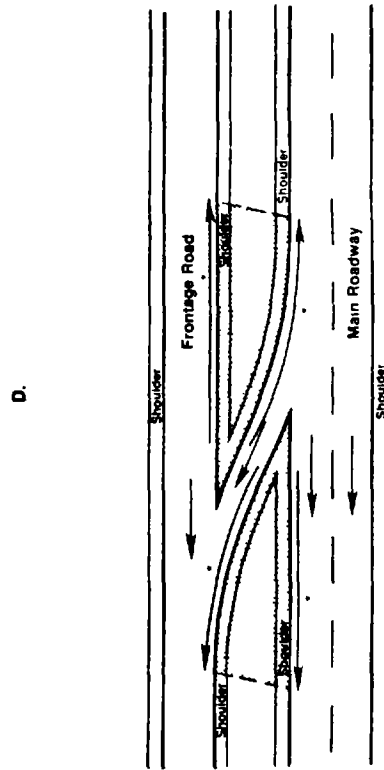


\* Distance is 60 meters (approximately 200 feet) measured along the roadway from where the roads separate.

FIGURE 1  
GORE



\* Distance is 60 meters (approximately 200 feet) measured along the roadway from where the roads separate.



\* Distance is 60 meters (approximately 200 feet) measured along the roadway from where the roads separate.

Variable Name: Time

Format: 4 columns - numeric

Beginning  
Column 27

Element Values:

Code reported military time of accident.

For example: 1200 - Noon

2400 - Midnight

9999 Unknown

Source: Police report.

Remarks:

Code to the nearest minute (e.g., 10:19 p.m. - 2219 hours). The time coded is taken from the "accident time" block on the PAR (usually at the top of the first page). If this block is left blank, then 9999 (Unknown) is coded.

If the block is coded "midnight" (i.e., 12:00 a.m., 0000, or 2400) a determination must be made for sampling purposes as to whether the police consider this accident to be the first or last accident on the date indicated on the PAR. Because of variability among police jurisdictions in how they handle midnight, researchers must look at the PAR date, day-of-week, and PAR number (if available) or question police personnel and make a determination regarding whether the particular jurisdiction considers the accident being sampled to be the first or last accident on the date indicated on the PAR. Technically, midnight (i.e., 12:00 a.m.) begins a new day, but not all jurisdictions treat midnight as such. If the jurisdiction considers the accident as the last (or one of the last) on the "date" indicated, code this variable as "2400" (Midnight); however, if the jurisdiction considers the accident as the first (or one of the first) on the "date" indicated, code this variable as "0001". Code "0000" is not allowed! Thus, 12:00 a.m. (0000, 2400) can be coded either "2400" or "0001" depending on how the particular jurisdiction handles midnight.

If the PAR indicates the accident occurred during some time interval (e.g., 8:00 p.m. to 6:00 a.m., or 8:00 a.m. to 5:00 p.m.), code "9999" (Unknown). However, if the interval was one hour or less, code the midpoint of the interval, e.g., 8:00 p.m. to 9:00 p.m., code "2030."

Variable Name: Light Condition

Format: 1 column - numeric

Beginning  
Column 31

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Atmospheric Condition

Format: 1 column - numeric

Beginning  
Column 32

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Relation to Junction

Format: 2 columns - numeric

Beginning  
Column 33

Element Values:

13 Railroad grade crossing related  
99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown); however, so as to enable the 1986 consistency checks to be used, code A18 equal to "13" (Railroad grade crossing related) if A12, First Harmful Event, equals "11" (Railway train).

Variable Name: Interchange Geometry

Format: 1 column - numeric

Beginning  
Column 35

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Accident Occurrence In School Zone

Format: 1 column - numeric

Beginning  
Column 36

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: School Bus Related

F rmat: 1 column - numeric

Beginning  
Column 37

Element Values:

0 No  
1 Yes

Source:

Remarks:

This variable applies to accidents in which a school bus (V17, Body Type, need not equal "30") was directly or indirectly involved, such as an accident involving children alighting from a school bus. The school bus does not have to be involved in the accident. If it cannot be determined that a school bus was involved, code "0" (No).

For the purpose of this variable, a school bus refers to a motor vehicle which satisfies the following criteria:

- \* externally identifiable to other traffic units as a school/pupil transport vehicle, the vehicle may be equipped with flashing lights, may have a sway stop arm and traffic may be required to stop for the vehicle when occupants enter or exit;
- \* operated, leased, or owned by a public or private school-type institution;
- \* where the institution's students may range from pre-school through high school;
- \* whose occupants, if any, are associated with the institution; and
- \* the vehicle is in operation at the time of the accident to and from the school or on a school-sponsored activity or trip.



Variable Name: Right or Left Turn on Red Related

Format: 1 column - numeric

Beginning  
Column 38

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Driver Level Environmental Data that is  
Most Representative of this Accident  
Location

Format: 2 columns - numeric

Beginning  
Column 39

Element Values:

01 1987 default value

Source:

Remarks:

This variable is not collected in 1987. Code "01".

Variable Name: SS8 - Longitudinal Barrier

Format: 1 column - numeric

Beginning  
Column 41

Element Values:

0 No

Source:

Remarks:

Code "0" (No) means there is no longitudinal barrier special study associated with this accident.

Variable Name: SS9 -- Crash Cushion

Format: 1 column - numeric

Beginning  
Column 42

Element Values:

0 No  
1 Yes

Source: Special study procedures.

Remarks:

There is no crash cushion special study in 1987. However, this variable will be used as the case flag for the CDS computerized file to indicate that a special study existed in 1987, independent of the nature or name of the special study. This variable is used to enable the 1986 MDE software to be used in 1987.

Code "0" (No) means there is no special study associated with this accident.

Code "1" (Yes) means there is a special study associated with this accident.

Variable Name: SS12

Format: 1 column - numeric

Beginning  
Column 43

Element Values:

0 No

Source:

Remarks:

Code "0" (No) means there is no special study associated with this accident.

Variable Name: SS13

Format: 1 column - numeric

Beginning  
Column 44

Element Values:

0 No

Source:

Remarks:

Code "0" (No) means there is no special study associated with this accident.

Variable Name: SS14

Format: 1 column - numeric

Beginning  
Column 45

Element Values:

0 No

Source:

Remarks:

Code "0" (No) means there is no special study associated with this accident.

Variable Name: SS15

Format: 1 column - numeric

Beginning  
Column 46

Element Values:

0 No

Source:

Remarks:

Code "0" (No) means there is no special study associated with this accident.





**PEDESTRIAN AND NONMOTORIST**

NATIONAL ACCIDENT SAMPLING SYSTEM  
CONTINUOUS SAMPLING SUBSYSTEM

<p>1. Primary Sampling Unit Number <span style="float:right">1 2</span></p> <p>2. Case Number – Stratification <span style="float:right">3 4 5 6</span></p> <p>3. Record Number <span style="float:right">7</span></p> <p>4. Transaction Code <span style="float:right">8</span></p> <p>5. Version Number <span style="float:right">9</span></p> <p>6. Investigator I.D. Number <span style="float:right">10</span></p>	<p>11. Pedestrian or Nonmotorist's Height</p> <p>___ inches – Code actual height to the nearest inch.</p> <p>___ (99) Unknown <span style="float:right">17 18</span></p>
<b>IDENTIFICATION</b>	
<p>7. Pedestrian or Nonmotorist's Number <span style="float:right">11 12</span></p> <p>8. Pedestrian or Nonmotorist's Type</p> <p>___ (1) Pedestrian</p> <p>___ (2) Bicyclist</p> <p>___ (3) Other cyclist (<i>specify</i>): _____</p> <p>___ (4) Occupant of vehicle not in transport</p> <p>___ (8) Other nonmotorist (<i>specify</i>): _____ _____</p> <p>___ (9) Unknown <span style="float:right">13</span></p>	<p>12. Pedestrian or Nonmotorist's Weight</p> <p>___ pounds – Code actual weight to the nearest pound.</p> <p>___ (999) Unknown <span style="float:right">19 20 21</span></p> <p>13. Pedestrian or Nonmotorist's Location</p> <p>___ (01) Intersection related – in crosswalk</p> <p>___ (02) Intersection related – on roadway, not in crosswalk</p> <p>___ (03) Intersection related – on roadway, crosswalk not available</p> <p>___ (04) Intersection related – on roadway, crosswalk availability unknown</p> <p>___ (05) Intersection related – on sidewalk</p> <p>___ (06) Intersection related – not on roadway or sidewalk</p> <p>___ (09) Intersection related – unknown</p> <p>___ (10) Nonintersection – in crosswalk</p> <p>___ (11) Nonintersection – on roadway, not in crosswalk</p> <p>___ (12) Nonintersection – on roadway, crosswalk not available</p> <p>___ (13) Nonintersection – on roadway, crosswalk availability unknown</p> <p>___ (14) Nonintersection – in parking lane</p> <p>___ (15) Nonintersection – on road shoulder</p> <p>___ (16) Nonintersection – on sidewalk</p> <p>___ (17) Nonintersection – bike path</p> <p>___ (18) Nonintersection – other, not on roadway (<i>specify</i>): _____</p> <p>___ (19) Nonintersection – outside trafficway</p> <p>___ (20) Nonintersection – unknown</p> <p>___ (99) Unknown <span style="float:right">22 23</span></p>
<b>PEDESTRIAN OR NONMOTORIST INTERVIEW</b>	
<p>9. Pedestrian or Nonmotorist's Age</p> <p>___ year(s) – Code actual age at time of accident</p> <p>___ (00) Less than one year old</p> <p>___ (97) 97 years and older</p> <p>___ (99) Unknown <span style="float:right">14 15</span></p> <p>10. Pedestrian or Nonmotorist's Sex</p> <p>___ (1) Male</p> <p>___ (2) Female</p> <p>___ (9) Unknown <span style="float:right">16</span></p>	<p>14. Distance From Intersection</p> <p>___ (0) Not on roadway</p> <p>On roadway</p> <p>___ (1) Impact within 50 feet of intersection</p> <p>___ (2) Impact between 51 and 500 feet of intersection</p> <p>___ (3) Impact more than 500 feet from intersection</p> <p>___ (9) Unknown <span style="float:right">24</span></p>



<p>15. Pedestrian Activity</p> <p>___ (00) Not a pedestrian</p> <p>___ (01) Near a motor vehicle (<i>specify</i>): _____</p> <p>___ (02) Near a bus stop or mass transit entrance (<i>specify</i>): _____</p> <p>___ (03) Near a mobile vendor (<i>specify</i>): _____</p> <p>___ (04) Near an entrance (<i>specify</i>): _____</p> <p>___ (05) Darting or running into roadway</p> <p>___ (06) Crossing or attempting to cross roadway</p> <p>___ (07) Walking in the same direction as traffic</p> <p>___ (08) Walking in the opposite direction of traffic</p> <p>___ (09) Walking, direction unknown</p> <p>___ (10) Jogging or running in the same direction as traffic</p> <p>___ (11) Jogging or running in the opposite direction of traffic</p> <p>___ (12) Jogging or running, direction unknown</p> <p>___ (13) Playing</p> <p>___ (14) Working</p> <p>___ (15) Stationary (<i>specify</i>): _____</p> <p>___ (98) Other (<i>specify</i>): _____</p> <p>___ (99) Unknown</p> <p style="text-align: right;">___ 25 ___ 26</p> <p>16.–19. Omitted (<i>These variables are omitted so that numbering consistency can be maintained with compatible variables on the Occupant Data Form.</i>)</p>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Inter- viewee</th> <th style="text-align: left; border-bottom: 1px solid black;">Official Sources</th> </tr> </thead> <tbody> <tr> <td colspan="2">21. Hospital Stay</td> </tr> <tr> <td>___ (00) Not hospitalized</td> <td>___</td> </tr> <tr> <td>___ day(s) – Code the number of days (up through 60) that the pedestrian/nonmotorist stayed in hospital.</td> <td>___</td> </tr> <tr> <td>___ (61) 61 days or more</td> <td>___</td> </tr> <tr> <td>___ (99) Unknown</td> <td>___</td> </tr> <tr> <td></td> <td style="text-align: right;">___ 28 ___ 29</td> </tr> <tr> <td colspan="2">22. Working Days Lost</td> </tr> <tr> <td>___ (00) No working days lost</td> <td></td> </tr> <tr> <td>___ day(s) – Code the number of days (up through 60) that the pedestrian/nonmotorist lost from work due to the accident.</td> <td></td> </tr> <tr> <td>___ (61) 61 days or more</td> <td></td> </tr> <tr> <td>___ (62) Fatally injured</td> <td></td> </tr> <tr> <td>___ (97) Not working prior to accident</td> <td></td> </tr> <tr> <td>___ (99) Unknown</td> <td></td> </tr> <tr> <td></td> <td style="text-align: right;">___ 30 ___ 31</td> </tr> <tr> <td colspan="2">23. Vehicle Which Contacted Pedestrian or Nonmotorist</td> </tr> <tr> <td>___ (0) No injury</td> <td></td> </tr> <tr> <td>___ (1) Vehicle number 01</td> <td></td> </tr> <tr> <td>___ (2) Vehicle number 02</td> <td></td> </tr> <tr> <td>___ (3) Vehicle number 03</td> <td></td> </tr> <tr> <td>___ (4) Vehicle number 04</td> <td></td> </tr> <tr> <td>___ (5) Vehicle number 05</td> <td></td> </tr> <tr> <td>___ (6) Vehicle number 06</td> <td></td> </tr> <tr> <td>___ (7) Multivehicle contact</td> <td></td> </tr> <tr> <td>___ (8) Other vehicle number (<i>specify</i>): _____</td> <td></td> </tr> <tr> <td>___ (9) Unknown</td> <td></td> </tr> <tr> <td></td> <td style="text-align: right;">___ 32</td> </tr> <tr> <td colspan="2">24.–30. Omitted (<i>These variables are omitted so that numbering consistency can be maintained with compatible variables on the Occupant Data Form.</i>)</td> </tr> </tbody> </table>	Inter- viewee	Official Sources	21. Hospital Stay		___ (00) Not hospitalized	___	___ day(s) – Code the number of days (up through 60) that the pedestrian/nonmotorist stayed in hospital.	___	___ (61) 61 days or more	___	___ (99) Unknown	___		___ 28 ___ 29	22. Working Days Lost		___ (00) No working days lost		___ day(s) – Code the number of days (up through 60) that the pedestrian/nonmotorist lost from work due to the accident.		___ (61) 61 days or more		___ (62) Fatally injured		___ (97) Not working prior to accident		___ (99) Unknown			___ 30 ___ 31	23. Vehicle Which Contacted Pedestrian or Nonmotorist		___ (0) No injury		___ (1) Vehicle number 01		___ (2) Vehicle number 02		___ (3) Vehicle number 03		___ (4) Vehicle number 04		___ (5) Vehicle number 05		___ (6) Vehicle number 06		___ (7) Multivehicle contact		___ (8) Other vehicle number ( <i>specify</i> ): _____		___ (9) Unknown			___ 32	24.–30. Omitted ( <i>These variables are omitted so that numbering consistency can be maintained with compatible variables on the Occupant Data Form.</i> )	
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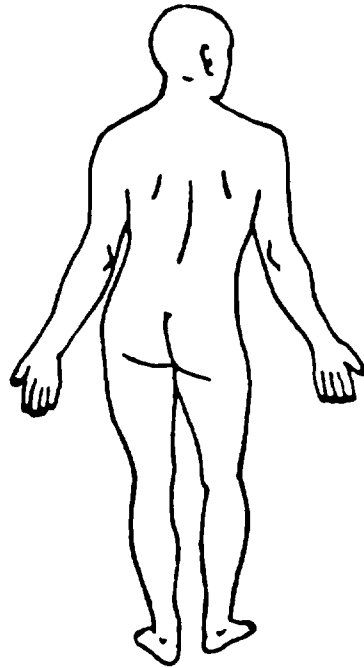
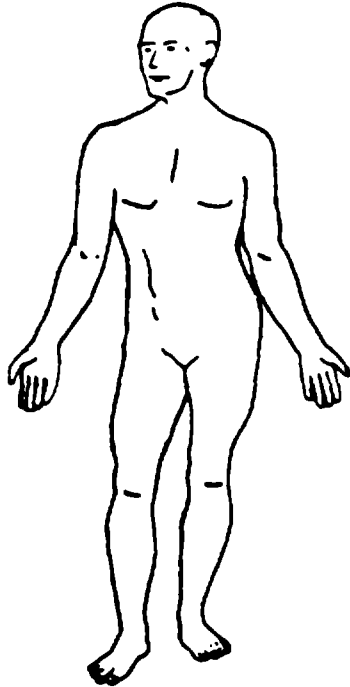
NCI

### INJURY DATA FROM INTERVIEWEE OR UNOFFICIAL SOURCE

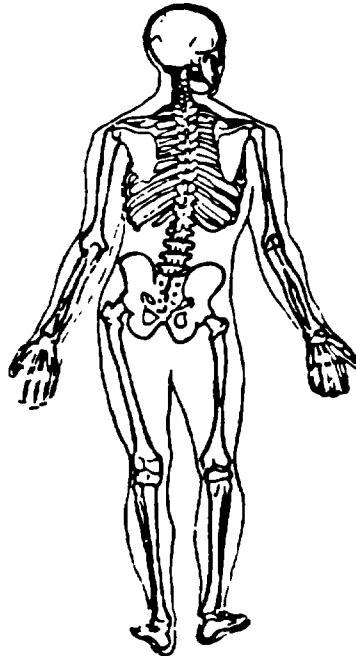
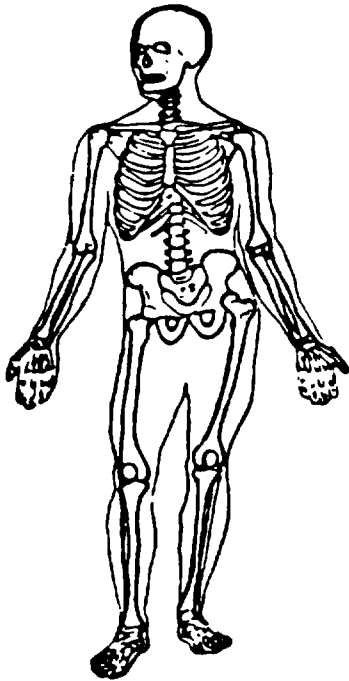
Indicate the *Nature, Location, and injury Source* of all injuries.

Specify Source: \_\_\_\_\_

#### Soft Tissue Injuries



#### Skeletal Injuries



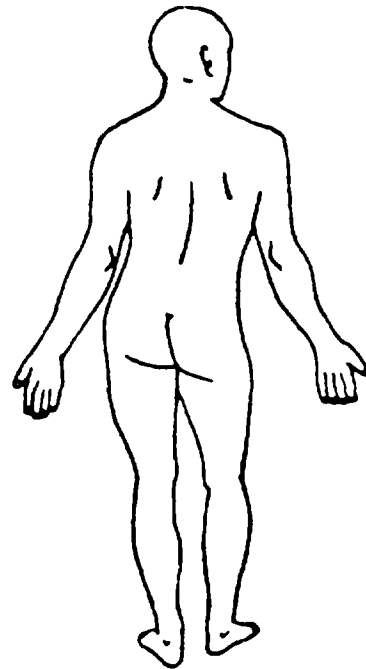
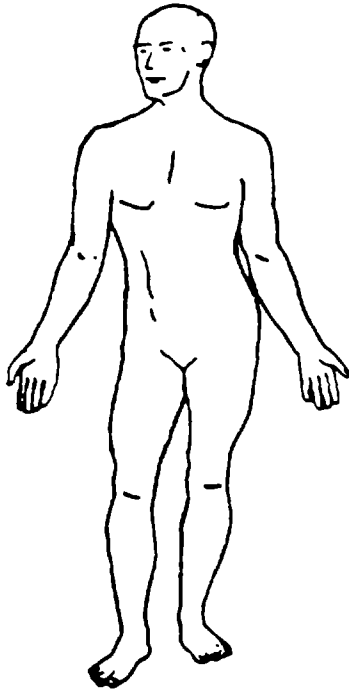
Collection Section

NCI

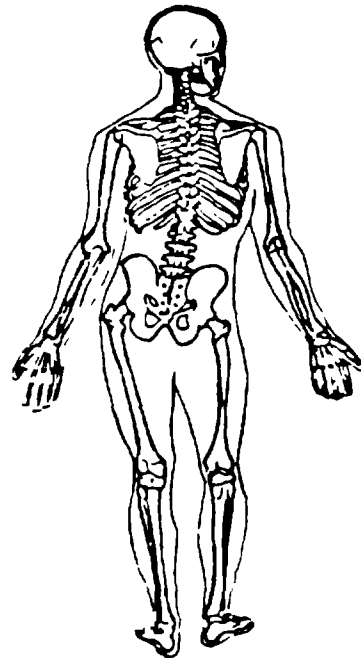
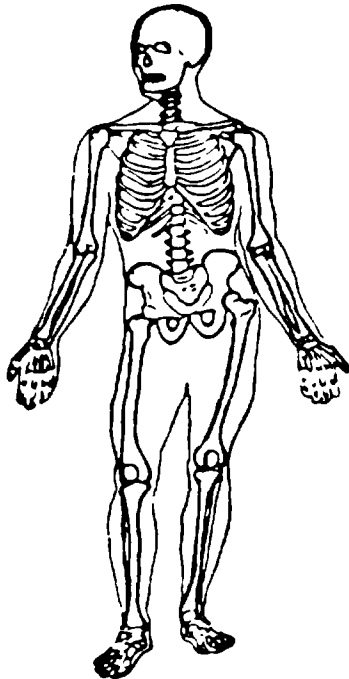
### OFFICIAL INJURY DATA

Indicate the *Nature*, *Location*, and injury *Source* of all injuries.

#### Soft Tissue Injuries



#### Skeletal Injuries



Write additional medical record injury data on reverse of this page

Collection Section



NCI

### OCCUPANT INJURY CLASSIFICATION (FOR PEDESTRIAN AND NONMOTORIST)

Consider all injuries which are reported from both *unofficial* and *official* sources. The information from official sources takes precedence over similar injuries reported by any other source. In other words, do not list the same injury twice, supercede the interview data with official data in the case of similar injuries. List all injuries by official medical sources first. Police reported injuries may be used, but only when *no* other source of injury information is available.

Were more than ten (10) injuries sustained? \_\_\_\_\_ Unknown, \_\_\_\_\_ No, \_\_\_\_\_ Yes - If more than ten dissimilar injuries were identified during the interview, from collection of official data, and from other unofficial sources (*excluding police*), list those from the official records first, exhausting that level of data before listing those from the interviewee or other sources

	I.S.S. Body Region	O.I.C. Body Region	Aspect	Lesion	System/ Organ	A.I.S. Severity	Injury Source	Direct/ Indirect Injury	Source of Data
1	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—

**Source of Data**

*Official*

- (01) Autopsy records with or without hospital/medical records
- (02) Hospital medical records other than emergency room (e.g., discharge summary)
- (03) Emergency room records only (including associated x-rays or other lab reports)
- (04) Private physician, walk-in or emergency clinic

*Unofficial*

- (05) Lay coroner report
- (06) E.M.S. personnel
- (07) Interviewee
- (08) Other source

---

- (09) Police
- (99) Unknown if injured
- (00) Not injured

Reduction Section

**I.S.S. Body Region**

- (1) Head or neck
- (2) Face
- (3) Chest
- (4) Abdominal or pelvic contents
- (5) Extremities or pelvic girdle
- (6) General (*external*)
- (0) Not injured
- (9) Unknown

**O.I.C. Body Region**

- (M) Abdomen
- (Q) Ankle-foot
- (A) Arm (upper)
- (B) Back -- thoracolumbar spine
- (C) Chest
- (E) Elbow
- (F) Face
- (R) Forearm
- (H) Head -- skull
- (U) Injured, unknown region
- (K) Knee
- (L) Leg (lower)
- (Y) Lower limb(s) (whole or unknown part)
- (N) Neck -- cervical spine
- (P) Pelvic -- hip
- (S) Shoulder
- (T) Thigh
- (X) Upper limb(s) (whole or unknown part)
- (O) Whole body
- (W) Wrist -- hand
- (0) Not injured
- (9) Unknown if injured

**Aspect of Injury**

- (A) Anterior -- front
- (C) Central
- (I) Inferior -- lower
- (U) Injured, unknown aspect
- (L) Left
- (P) Posterior -- back
- (R) Right
- (S) Superior -- upper
- (W) Whole region
- (0) Not injured
- (9) Unknown if injured

**Lesion**

- (A) Abrasion
- (M) Amputation
- (V) Avulsion
- (B) Burn
- (K) Concussion
- (C) Contusion
- (N) Crush
- (G) Detachment, separation
- (D) Dislocation
- (F) Fracture
- (Z) Fracture and dislocation
- (U) Injured, unknown lesion
- (L) Laceration
- (O) Other
- (P) Perforation, puncture
- (R) Rupture
- (S) Sprain
- (T) Strain
- (L) Total severence, transection
- (0) Not injured
- (9) Unknown if injured

**System/Organ**

- (W) All systems in region
- (A) Arteries -- veins
- (B) Brain
- (D) Digestive
- (E) Ears
- (O) Eye
- (H) Heart
- (U) Injured, unknown system
- (I) Integumentary
- (J) Joints
- (K) Kidneys
- (L) Liver
- (M) Muscles
- (N) Nervous system
- (P) Pulmonary -- lungs
- (R) Respiratory
- (S) Skeletal
- (C) Spinal cord
- (Q) Spleen
- (T) Thyroid, other endocrine gland
- (G) Urogenital
- (V) Vertebrae
- (0) Not injured
- (9) Unknown if injured

**Abbreviated Injury Scale**

- (1) Minor injury
- (2) Moderate injury
- (3) Serious injury
- (4) Severe injury
- (5) Critical injury
- (6) Maximum (*untreatable*)
- (7) Injured, unknown severity
- (0) Not injured
- (9) Unknown if injured

<b>Injury Source</b> (00) No injury	<b>ROOF</b> (31) Front header (32) Rear header (33) Roof side rails (34) Roof or convertible top	<b>EXTERIOR of STRIKING MOTOR VEHICLE</b> (71) Front bumper (72) Hood edge (73) Other front of vehicle (specify)
<b>FRONT</b> (01) Windshield (02) Mirror (03) Sunvisor (04) Steering wheel rim (05) Steering wheel hub/spoke (06) Steering wheel (combination of codes 04 and 05) (07) Steering column, transmission selector lever, other attachment (08) Add on equipment (e.g. CB tape deck, air conditioner)	<b>FLOOR</b> (41) Floor (42) Floor or console mounted transmission lever, including console (43) Parking brake handle (44) Foot controls including parking brake	(74) Hood (75) Hood ornament (76) Windshield, roof rail, A pillar (77) Side surface (78) Side mirrors (79) Other side protrusions (specify)
(09) Left instrument panel and below (10) Center instrument panel and below (11) Right instrument panel and below (12) Other front object (specify)	<b>REAR</b> (45) Backlight (rear window) (46) Backlight storage rack, door, etc. (49) Other rear object (specify)	(80) Rear surface (81) Undercarriage (82) Tires and wheels (83) Other exterior of striking motor vehicle (specify)
<b>SIDE</b> (13) Side interior surface, excluding hardware or armrests (14) Side hardware or armrest (15) A pillar (16) B pillar (17) Other pillar (specify)	<b>EXTERIOR of NONMOTORIST'S VEHICLE</b> <i>Noncycle</i> (51) Hood (52) Outside hardware (e.g., outside mirror antenna) (53) Other exterior surface or tires (specify) (59) Unknown exterior objects	(84) Unknown exterior of striking motor vehicle <b>OTHER VEHICLE or OBJECT in the ENVIRONMENT</b> (86) Ground (87) Other vehicle or object (specify)
(18) Window glass or frame (19) Other side object (specify)	<i>Cycle</i> (61) Handle bars or attachments (62) Frame or suspension component or fender (63) Seat (64) Foot pedal, foot rest, foot pegs (65) Wheel or tire (66) Engine or transmission (67) Gas tank, gas tank filler cap or neck (69) Other cycle part (specify)	(89) Unknown vehicle or object <b>NONCONTACT INJURY</b> (90) Noncontact injury source (97) Injured, unknown source (99) Unknown if injured
<b>INTERIOR</b> (21) Seat, back support (22) Belt restraint system (23) Head restraint system (24) Air cushion (25) Other occupants (specify)		<b>DIRECT/INDIRECT INJURY</b> (0) No injury (1) Direct contact injury (2) Indirect contact injury (3) Noncontact injury (7) Injured, unknown source (9) Unknown if injured
(26) Interior loose objects (29) Other interior object (specify)		

**OCCUPANT INJURY CLASSIFICATION (FOR PEDESTRIAN AND NONMOTORIST)**

If there are six or less injuries listed in the O I C reduction section, code all of the injuries ordered by Source of Data (1st-autopsy, 2nd-hospital/medical, 3rd-emergency room, 4th-private physician, or 5th-unofficial sources) and by A I S severity within source

If there are more than six injuries, order the injuries by source and by A I S severity within source. Code this ordering, injury by injury. If a group of ordered injuries has the same source, the same A I S, and the group includes at least the sixth and seventh injuries in the ordering, then a choice must be made as to which injury or injuries to code

Choose the injury or injuries that will enable the maximum number of different I.S.S. body regions to be represented in the coded data. If no new I.S.S. body region can be added then simply code in accordance with the original ordering.

If the pedestrian or nonmotorist has less than six injuries, then the number of rows required to be completed is equal to the number of injuries plus one (e.g., no injuries requires one row, i.e., columns 33 to 42). In the additional row "No injury" will be coded for all variables, including A I S severity

If you cannot increase the number of different I.S.S. body regions or if you can choose between two or more injuries of the same source and A I S severity any of which would constitute an additional I.S.S. region, then choose the injury that has a known injury source.

I.S.S. Body Region	O I C. Body Region	Aspect	Lesion	System/ Organ	A.I.S. Severity	Injury Source	Update Candidate	
							Direct/ Indirect Injury	Source of Data
1st	31.	32.	33.	34.	35.	36.	37.	38
	<u>33</u>	<u>34</u>	<u>35</u>	<u>36</u>	<u>37</u>	<u>38</u> <u>39</u>	<u>40</u>	<u>41</u> <u>42</u>
2nd	39.	40.	41.	42.	43.	44.	45.	46
	<u>43</u>	<u>44</u>	<u>45</u>	<u>46</u>	<u>47</u>	<u>48</u> <u>49</u>	<u>50</u>	<u>51</u> <u>52</u>
3rd	47.	48.	49.	50.	51.	52.	53.	54
	<u>53</u>	<u>54</u>	<u>55</u>	<u>56</u>	<u>57</u>	<u>58</u> <u>59</u>	<u>60</u>	<u>61</u> <u>62</u>
4th	55.	56.	57.	58.	59.	60.	61.	62.
	<u>63</u>	<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u> <u>69</u>	<u>70</u>	<u>71</u> <u>72</u>
5th	63.	64.	65.	66.	67.	68.	69.	70.
	<u>73</u>	<u>74</u>	<u>75</u>	<u>76</u>	<u>77</u>	<u>78</u> <u>79</u>	<u>80</u>	<u>81</u> <u>82</u>
6th	71.	72.	73.	74.	75.	76.	77.	78.
	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u> <u>89</u>	<u>90</u>	<u>91</u> <u>92</u>

Coding Section



OFFICIAL RECORDS	INVESTIGATOR DETERMINED
79. Injury Severity ( <i>Police Rating</i> ) <input type="checkbox"/> (0) No injury ( <i>O</i> ) <input type="checkbox"/> (1) Possible injury ( <i>C</i> ) <input type="checkbox"/> (2) Nonincapacitating injury ( <i>B</i> ) <input type="checkbox"/> (3) Incapacitating injury ( <i>A</i> ) <input type="checkbox"/> (4) Killed ( <i>K</i> ) <input type="checkbox"/> (5) Injury, severity unknown <input type="checkbox"/> (6) Died prior to accident <input type="checkbox"/> (9) Unknown <div style="text-align: right;">93</div>	84. Pedestrian/Nonmotorist Related Factors <input type="checkbox"/> (00) No pedestrian/nonmotorist related factors <input type="checkbox"/> (01) Non-physical ( <i>i.e., mental or emotional factor</i> )  Physical impairments <input type="checkbox"/> (02) Blind <input type="checkbox"/> (03) Restricted sight <input type="checkbox"/> (04) Walking cane/crutches required <input type="checkbox"/> (05) Deaf <input type="checkbox"/> (06) Restricted to wheelchair <input type="checkbox"/> (07) Paraplegic <input type="checkbox"/> (08) Previous injury <input type="checkbox"/> (09) Other physical impairments ( <i>specify</i> ) <hr/> Drug Impairments <input type="checkbox"/> (10) Drugs - medication ( <i>prescription, over-the-counter</i> ) <input type="checkbox"/> (11) Other drugs ( <i>excludes alcohol, includes uncontrolled substances</i> ) ( <i>specify</i> ) <hr/> Pedalcyclist Related ( <i>Includes Animal Related</i> ) <input type="checkbox"/> (12) Inattention <input type="checkbox"/> (13) Interference with operator by other passenger <input type="checkbox"/> (14) Operator inexperience <input type="checkbox"/> (15) Erratic lane changing - cutting in and out of traffic <input type="checkbox"/> (16) Not yielding right-of-way <input type="checkbox"/> (17) Failure to yield to an emergency vehicle <input type="checkbox"/> (18) Disobeying stop sign <input type="checkbox"/> (19) Disobeying traffic signal <input type="checkbox"/> (20) Failure to obey other traffic sign or signal ( <i>specify</i> ) <hr/> <input type="checkbox"/> (21) Riding over or on the centerline <input type="checkbox"/> (22) Riding over or on the median <input type="checkbox"/> (23) Riding wrong way on 1-way street or entrance/exit ramp <input type="checkbox"/> (24) Pulling in front of traffic from a roadway or driveway <input type="checkbox"/> (25) Turning left or U-turning in front of oncoming traffic <input type="checkbox"/> (26) Making right turn from left lane, or left turn from right lane <input type="checkbox"/> (27) Making other improper turn ( <i>specify</i> ) <hr/> <input type="checkbox"/> (28) Proceeding despite view obstruction <input type="checkbox"/> (29) Wrong signal given for maneuver executed <input type="checkbox"/> (30) Turning without giving a turn signal <input type="checkbox"/> (31) Hazard lights not used when appropriate or required <input type="checkbox"/> (32) Operator unfamiliar with roadway <input type="checkbox"/> (33) Overloading or improper loading of passengers and/or cargo <input type="checkbox"/> (38) Other pedalcyclist related factors ( <i>specify</i> ) <hr/> <input type="checkbox"/> (99) Unknown
80. Time to Death <input type="checkbox"/> (00) Not fatal <input type="checkbox"/> Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. ( <i>Note 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60</i> ) <input type="checkbox"/> (96) Fatal - ruled disease <input type="checkbox"/> (99) Unknown <div style="text-align: right;">94 95</div>	
81. Traffic Violation Charged Against This Pedestrian or Nonmotorist <input type="checkbox"/> (0) No <input type="checkbox"/> (1) Yes ( <i>specify</i> ) _____ <input type="checkbox"/> (9) Unknown <div style="text-align: right;">96</div>	
82. Police Reported Alcohol Presence <input type="checkbox"/> (0) No ( <i>alcohol not present</i> ) <input type="checkbox"/> (1) Yes ( <i>alcohol present</i> ) <input type="checkbox"/> (8) Not reported <input type="checkbox"/> (9) Unknown <div style="text-align: right;">97</div>	
83. Alcohol Test Result <input type="checkbox"/> Actual value ( <i>decimal implied before first digit</i> ) ( <i>0 xx</i> ) <input type="checkbox"/> (95) Test refused <input type="checkbox"/> (96) None given <input type="checkbox"/> (97) AC test performed, results unknown <input type="checkbox"/> (99) Unknown <div style="text-align: right;">98 99</div>	<div style="text-align: right;">100 101</div>

NATIONAL ACCIDENT SAMPLING SYSTEM PEDESTRIAN AND NONMOTORIST LOG CONTINUOUS SAMPLING SUBSYSTEM

COMPLETED BY TEAM										
1 Primary Sampling Unit Number										
	1	2								
2 Case Number - Stratification	3	4	5	6						
3 Record Number				2						
				7						
4 Transaction Code				8						
5 Version Number				0						
				9						
6 Investigator ID Number				10						
<b>PEDESTRIAN AND NONMOTORIST INTERVIEW</b>										
7 Pedestrian or Nonmotorist Number			11	12						
8 Manner of Last Contact Attempt										
___ (1) Telephone										
___ (2) Personal visit to home, work, etc										
___ (3) Letter (questionnaire)										
___ (4) Other (specify) _____										
				13						
9 Results of Last Contact Attempt										
___ (01) Unable to contact or locate										
___ (02) Hit and run										
___ (03) Fatal - surrogate not available										
___ (04) In intensive care - surrogate not available										
___ (05) Out-of-state resident										
___ (06) Refused interview for other than on advice of attorney or insurance company (specify) _____										
___ (07) Insurance company refusal										
___ (08) Attorney refusal or litigation										
___ (09) Other (specify) _____										
___ (10) No return of letter questionnaire										
___ (11) Return of letter questionnaire (completed)										
___ (12) Partial or complete interview										
				14	15					
<b>Used in Coding the Interview Contact Record Only</b>										
9a Result of Contact Attempt Other than Last Contact Attempt										
___ (13) No answer (to phone call, no one at home, etc )										
___ (14) Other person at home, work etc - Interviewee to contact investigator										
___ (15) Other person at home, work etc - Investigator to repeat call, visit, leave questionnaire, or try elsewhere.										
___ (16) Must obtain permission of attorney or insurance company.										
___ (17) Attorney or insurance company provided permission										
___ (18) Other (specify) _____										
10 Date Interview Completed			8							
	16	17	18	19	20	21				
11 Completing person										
				22						
12 Source of Interview Data										
___ (1) No data obtained										
___ (2) Same person										
___ (3) Other accident involved person										
___ (4) Relative or friend										
___ (5) Eyewitness										
___ (6) Combination of 3, 4 or 5										
___ (7) Other (specify) _____										
				23						
13 Reasons Medical Data Not Obtainable										
___ (00) Not medically treated										
___ (01) No record of treatment at medical facility										
___ (02) Medical release required - not obtained										
___ (03) Nonaccident related injury										
___ (04) Noncooperative hospital										
___ (05) Hospital out of study area										
___ (06) Private physician would not release information										
___ (07) Unknown if medically treated										
___ (08) To be updated										
___ (09) Record not received before file closed										
___ (10) Complete record obtained (autopsy, hospital discharge summary, other complete medical)										
___ (11) Partial record obtained (i.e., some records exists but was not acquired or released)										
				24	25					

INTERVIEW CONTACT RECORD							
(See Variables 9 and 9a above)							
Contact Sequence	Month	Day	Year	Time of Contact	Contacting Person	Manner	Result
1st	---	---	8	---	---	---	---
2nd	---	---	8	---	---	---	---
3rd	---	---	8	---	---	---	---
4th	---	---	8	---	---	---	---
5th	---	---	8	---	---	---	---
6th	---	---	8	---	---	---	---
7th	---	---	8	---	---	---	---
8th	---	---	8	---	---	---	---
9th	---	---	8	---	---	---	---

COMPLETED BY ZONE CENTER

<p>14 Date Medical Record Update Received</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:12.5%;"></td> <td style="width:12.5%; text-align: center;">26</td> <td style="width:12.5%; text-align: center;">27</td> <td style="width:12.5%; text-align: center;">28</td> <td style="width:12.5%; text-align: center;">29</td> <td style="width:12.5%; text-align: center;">8 30</td> <td style="width:12.5%; text-align: center;">31</td> </tr> </table> <p>15 Reviewed By</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:80%;"></td> <td style="width:10%; text-align: center;">32</td> <td style="width:10%; text-align: center;">33</td> </tr> </table> <p>16 Interviewee or Unofficial Injury Documentation</p> <p>___ (1) Complete - Injury descriptions are annotated in sufficient detail to enable independent OIC/AIS coding. The protocol for completing the injury diagram has been used and a contact mechanism or "unknown" is indicated</p> <p>___ (2) Partial - All coded injuries are described in adequate detail however, additional annotation would have been helpful for independent OIC/AIS coding. Contact mechanism omitted for some injuries</p> <p>___ (3) Incomplete - Generally inadequate description of injuries or the coded injury does not correspond to the annotated injury</p> <p>___ (4) Not applicable - No interviewee reported injuries</p> <p style="text-align: right;">34</p>		26	27	28	29	8 30	31		32	33	<p>17 Official Injury Documentation</p> <p>___ (1) Complete - All injuries reported in the medical data are annotated with sufficient detail to enable independent OIC/AIS coding. The protocol for completing the injury diagram has been used</p> <p>___ (2) Partial - All coded injuries are described in adequate detail, however, additional annotation would have been helpful for independent OIC/AIS coding. Some minor injuries described in the medical data may be omitted</p> <p>___ (3) Incomplete - Generally inadequate or erroneous description of injuries and/or omitted major injuries described in the medical data</p> <p>___ (4) Not applicable - No official medical data</p> <p style="text-align: right;">35</p>
	26	27	28	29	8 30	31					
	32	33									

ERROR TALLY  
(COMPLETED BY ZONE CENTER)

<p>Blank - Not in error and not missing</p> <p>0 - RDE system error</p> <p>2 - Error (not correctable)</p> <p>3 - Error (correctable)</p> <p>6 - Sequencing errors in CDC's or injury data</p> <p>8 - Data entry error</p> <p>9 - Unknown coded on field form</p> <p>A - Hardcopy change with no error - not automated</p>	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Response	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
	Variable	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
	Response	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
	Variable	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
	Response	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
	Variable	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
	Response	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
	Variable	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
	Response	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120

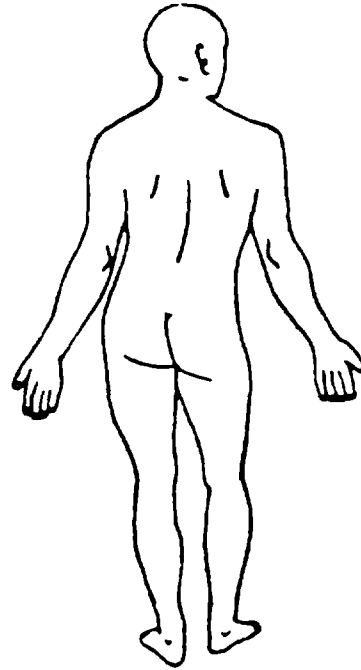
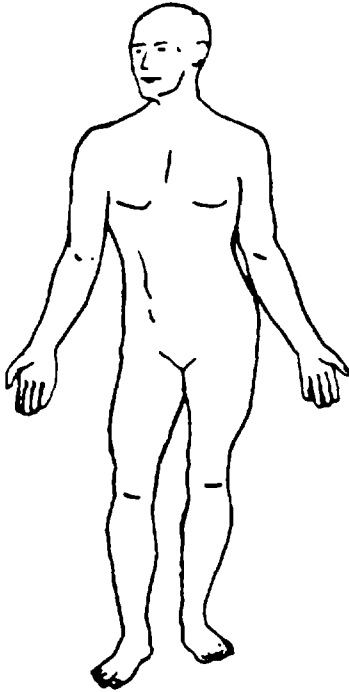


N/C

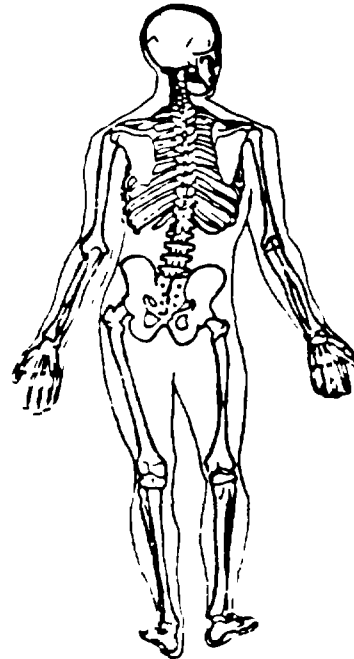
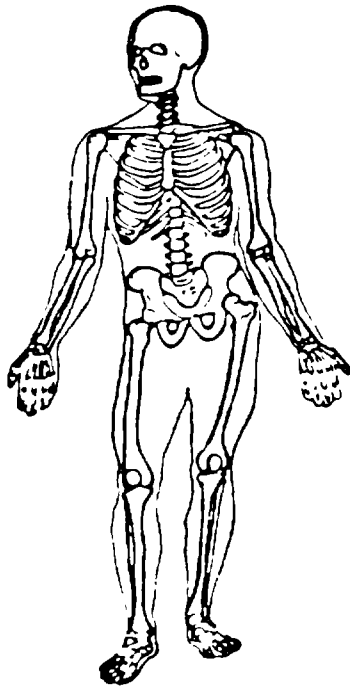
**OFFICIAL INJURY DATA**

Indicate the Nature, Location, and Injury Source of all injuries

**Soft Tissue Injuries**



**Skeletal Injuries**



Variable Name: Investigator I.D. Number

Format: 1 column - numeric

Beginning  
Column 10

Element Values:

Range: 1 through 9

Source: Zone Center.

Remarks:

The person who was primarily responsible for the completion of this Pedestrian and Nonmotorist Form shall enter his/her unique number.

Each researcher's unique number is assigned by the PSU's Zone Center.

This variable is a mandatory variable and cannot be changed.

Variable Name: Pedestrian or Nonmotorist's Number

Format: 2 columns - numeric

Beginning  
Column 11

Element Values:

Range: 01 through 25

Source: Researcher assigned.

Remarks:

Numbers assigned to pedestrians or nonmotorists must be consecutive starting with "01"; no numbers may be skipped. Where two or more pedestrians or nonmotorists can be associated with a vehicle [motor or other (see ANSI D16.1-1983, section 2.2.8, page 7)], pedalcycle, or nonmotorist conveyance (any human-powered device designed for transporting people) assign their numbers in sequence.

The driver (person with steering control) of a pedalcycle is assigned the lowest number sequentially of any of the pedalcyclists specific to that unit (e.g., a pedalcycle for two). The pedalcyclist in front has steering control and therefore is the driver with Pedestrian or Nonmotorist's Number (P07) "01"; the other pedalcyclist in the rear is the passenger with Pedestrian or Nonmotorist's Number (P07) "02".

Numbers assigned to nonmotorists in motor vehicles not in-transport are assigned sequentially left to right and front to back beginning in the enclosed area. Assign numbers last to those persons in or on unenclosed areas.

This variable is a mandatory variable and cannot be changed.

Variable Name: Pedestrian or Nonmotorist's Type

Format: 1 column - numeric

Beginning  
Column 13

Element Values:

- 1 Pedestrian
- 2 Bicyclist
- 3 Other cyclist (specify)
- 4 Occupant of vehicle not in transport
- 8 Other nonmotorist (specify)
- 9 Unknown

Source: Researcher determined--inputs include the vehicle inspection, interviewee, and the police report.

Remarks:

A Pedestrian ("1") is defined as any person who is on a trafficway or on a sidewalk or path contiguous with a trafficway, and who is not in or on a nonmotorist conveyance. This includes persons who are in contact with the ground, roadway, etc., but who are holding onto a vehicle.

A nonmotorist conveyance is defined as any human-powered device by which a nonmotorist may move, or by which a pedestrian or nonmotorist may move another nonmotorist, other than by pedaling. A nonmotorist conveyance includes the following: baby carriage, coaster wagon, ice skates, roller skates, push cart, scooter, skate board, skis, sled, wheel chair, rickshaw, etc. This includes those persons in a nonmotorist conveyance who hold onto a motor vehicle in motion. Excluded are pedalcyclists.

Bicyclist ("2") refers to only those pedalcyclists who were either a driver or passenger on a bicycle. This includes those bicyclists who hold onto a motor vehicle in motion.

Code "3" (Other cyclist) refers to all other pedalcyclists. This includes those pedalcyclists who hold onto a motor vehicle in motion.

Code "4" (Occupant of vehicle not in-transport) represents those persons in or on a motor vehicle which is not in-transport when struck.

Other nonmotorist ("8") includes any other person not included under the above definitions of a pedestrian, bicyclist, other cyclist, or occupant of a motor vehicle not in-transport. Persons riding on an animal or in an animal powered conveyance are one example. Any person outside a trafficway or outside a sidewalk or path contiguous with a trafficway is another. Annotate in the space provided a description of the nonmotorist type.



Variable Name: Pedestrian or Nonmotorist's Age

Format: 2 columns - numeric

Beginning  
Column 14

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).

Variable Name: Pedestrian or Nonmotorist's Sex

Format: 1 column - numeric

Beginning  
Column 16

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Pedestrian or Nonmotorist's Height

Format: 2 columns - numeric

Beginning  
Column 17

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).

Variable Name: Pedestrian or Nonmotorist's Weight

Format: 3 columns - numeric

Beginning  
Column 19

Element Values:

999 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "999" (Unknown).

Variable Name: Pedestrian or Nonmotorist's Location

Format: 2 columns - numeric

Beginning  
Column 22

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).

Variable Name: Distance From Intersection

Format: 1 column - Numeric

Beginning  
Column 24

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Pedestrian Activity

(Note: code the first attribute that applies)

Format: 2 columns - numeric

Beginning  
Column 25

Element Values:

00 Not a pedestrian  
99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown) if P08 (Pedestrian or Nonmotorist's Type) equals "1" (Pedestrian). If P08 does not equal "1", code "00" (Not a pedestrian).

PEDESTRIAN & NONMOTORIST FORM

P16-P19

16. - 19. Omitted (These variables are omitted so that numbering consistency can be maintained with compatible variables on the Occupant Data Form.)



Variable Name: Treatment - Mortality

Format: 1 column - numeric

Beginning  
Column 27

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Hospital Stay

Format: 2 columns - numeric

Beginning  
Column 28

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).

Variable Name: Working Days Lost

Format: 2 columns - numeric

Beginning  
Column 30

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).

Variable Name: Vehicle Which Contacted Pedestrian or Nonmotorist

Format: 1 column - numeric

Beginning  
Column 32

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

PEDESTRIAN & NONMOTORIST FORM

P24 - P30

24. - 30. Omitted (These variables are omitted so that numbering consistency can be maintained with compatible variables on the Occupant Data Form.)

PEDESTRIAN & NONMOTORIST FORM

P31  
P39  
P47  
P55  
P63  
P71

Variable Name: 1st O.I.C. - Body Region  
2nd O.I.C. - Body Region  
3rd O.I.C. - Body Region  
4th O.I.C. - Body Region  
5th O.I.C. - Body Region  
6th O.I.C. - Body Region

Format: 1 column - alphanumeric

Beginning  
Column 33  
43  
53  
63  
73  
83

Element Values:

0 Close out

Source:

Remarks:

These variables are not collected in 1987. Code P31 "0" (Close out), and leave P39, P47, P55, P63, and P71 "Blank".

PEDESTRIAN & NONMOTORIST FORM

P32  
P40  
P48  
P56  
P64  
P72

Variable Name: 1st O.I.C. - Aspect of Injury  
2nd O.I.C. - Aspect of Injury  
3rd O.I.C. - Aspect of Injury  
4th O.I.C. - Aspect of Injury  
5th O.I.C. - Aspect of Injury  
6th O.I.C. - Aspect of Injury

Format: 1 column - alphanumeric

Beginning  
Column 34  
44  
54  
64  
74  
84

Element Values:

0 Close out

Source:

Remarks:

These variables are not collected in 1987. Code P32 "0" (Close out), and leave P40, P48, P56, P64, and P72 "Blank".

PEDESTRIAN & NONMOTORIST FORM

P33  
P41  
P49  
P57  
P65  
P73

Variable Name: 1st O.I.C. - Lesion  
2nd O.I.C. - Lesion  
3rd O.I.C. - Lesion  
4th O.I.C. - Lesion  
5th O.I.C. - Lesion  
6th O.I.C. - Lesion

Format: 1 column - alphanumeric

Beginning  
Column 35  
45  
55  
65  
75  
85

Element Values:

0 Close out

Source:

Remarks:

These variables are not collected in 1987. Code P33 "0" (Close out), and leave P41, P49, P57, P65, and P73 "Blank".



PEDESTRIAN & NONMOTORIST FORM

P34  
P42  
P50  
P58  
P66  
P74

Variable Name: 1st O.I.C. - System/Organ  
2nd O.I.C. - System/Organ  
3rd O.I.C. - System/Organ  
4th O.I.C. - System/Organ  
5th O.I.C. - System/Organ  
6th O.I.C. - System/Organ

Format: 1 column - alphanumeric

Beginning  
Column 36  
46  
56  
66  
76  
86

Element Values:

0 Close out

Source:

Remarks:

These variables are not collected in 1987. Code P34 "0" (Close out), and leave P42, P50, P58, P66, and P74 "Blank".

PEDESTRIAN & NONMOTORIST FORM

P35  
P43  
P51  
P59  
P67  
P75

Variable Name: 1st O.I.C. - Abbreviated Injury Scale  
2nd O.I.C. - Abbreviated Injury Scale  
3rd O.I.C. - Abbreviated Injury Scale  
4th O.I.C. - Abbreviated Injury Scale  
5th O.I.C. - Abbreviated Injury Scale  
6th O.I.C. - Abbreviated Injury Scale

Format: 1 column - numeric

Beginning  
Column 37  
47  
57  
67  
77  
87

Element Values:

0 Close out

Source:

Remarks:

These variables are not collected in 1987. Code P35 "0" (Close out), and leave P43, P51, P59, P67, and P75 "Blank".

PEDESTRIAN & NONMOTORIST FORM

P36  
P44  
P52  
P60  
P68  
P76

Variable Name: 1st O.I.C. - Injury Source  
2nd O.I.C. - Injury Source  
3rd O.I.C. - Injury Source  
4th O.I.C. - Injury Source  
5th O.I.C. - Injury Source  
6th O.I.C. - Injury Source

Format: 2 Columns - numeric

Beginning  
Column 38  
48  
58  
68  
78  
88

Element Values:

00 Close out

Source:

Remarks:

These variables are not collected in 1987. Code P36 "00" (Close out), and leave P44, P52, P60, P68, and P76 "Blank".

PEDESTRIAN & NONMOTORIST FORM

P37  
P45  
P53  
P61  
P69  
P77

Variable Name: 1st O.I.C. - Direct/Indirect Injury  
2nd O.I.C. - Direct/Indirect Injury  
3rd O.I.C. - Direct/Indirect Injury  
4th O.I.C. - Direct/Indirect Injury  
5th O.I.C. - Direct/Indirect Injury  
6th O.I.C. - Direct/Indirect Injury

Format: 1 column - numeric

Beginning  
Column 40  
50  
60  
70  
80  
90

Element Values:

0 Close out

Source:

Remarks:

These variable are not collected in 1987. Code P37 "0" (Close out), and leave P45, P53, P61, P69, and P77 "Blank".

PEDESTRIAN & NONMOTORIST FORM

P3  
P4  
P54  
P62  
P70  
P78

Variable Name: 1st O.I.C. - Source of Data  
2nd O.I.C. - Source of Data  
3rd O.I.C. - Source of Data  
4th O.I.C. - Source of Data  
5th O.I.C. - Source of Data  
6th O.I.C. - Source of Data

Format: 2 columns - numeric

Beginning  
Column 41  
51  
61  
71  
81  
91

Element Values:

00 Close out

Source:

Remarks:

These variables are not collected in 1987. Code P38 "00" (Close out), and leave P46, P54, P62, P70, and P78 "Blank".

Variable Name: Injury Severity (Police Rating)

Format: 1 column - numeric

Beginning  
Column 93

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Time to Death

Format: 2 column - numeric

Beginning  
Column 94

Element Values:

00 1987 default value

Source:

Remarks:

This variable is not collected in 1987. Code "00".

Variable Name: Traffic Violation Charged Against This Pedestrian or  
Nonmotorist

Format: 1 column - numeric

Beginning  
Column 96

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).



**Variable Name:** Police Reported Alcohol Presence

**Format:** 1 column - numeric

**Beginning  
Column** 97

**Element Values:**

9 Unknown

**Source:**

**Remarks:**

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Alcohol Test Result

Format: 2 columns - numeric

Beginning  
Column 98

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).

Variable Name: Pedestrian/Nonmotorist Related Factors

Format: 2 columns - numeric

Beginning  
Column 100

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).



Vehicle Data

<p>1. Primary Sampling Unit Number <span style="float: right;">1 2</span></p> <p>2. Case Number-Stratification <span style="float: right;">3 4 5 6</span></p> <p>3. Record Number <span style="float: right;">3 7</span></p> <p>4. Transaction Code <span style="float: right;">8</span></p> <p>5. Version Number <span style="float: right;">0 9</span></p> <p>6. Investigator I D Number <span style="float: right;">10</span></p>	<p>11. Hit and Run Involvement  <input type="checkbox"/> (0) No hit-and-run  <input type="checkbox"/> (1) Yes - hit-and-run involved vehicle <span style="float: right;">17</span></p>
<b>IDENTIFICATION</b>	
<p>7. Vehicle Number <span style="float: right;">11 12</span></p> <p>8. Number of Occupant Forms Submitted  <input type="checkbox"/> Code only the number of occupants in this vehicle for which an OCCUPANT FORM was submitted.  <input type="checkbox"/> (97) 97 or more <span style="float: right;">13 14</span></p> <p>9. Vehicle Role <span style="float: right;">15</span>  <input type="checkbox"/> (0) Noncollision  <input type="checkbox"/> (1) Striking unit  <input type="checkbox"/> (2) Struck unit  <input type="checkbox"/> (3) Both striking and struck  <input type="checkbox"/> (9) Unknown</p> <p>10. Manner of Leaving Scene (Determined by Investigator) <span style="float: right;">16</span>  <input type="checkbox"/> (1) Driven  <input type="checkbox"/> (2) Towed - due to vehicle damage  <input type="checkbox"/> (3) Towed - not due to vehicle damage  <input type="checkbox"/> (4) Towed - details unknown  <input type="checkbox"/> (5) Abandoned  <input type="checkbox"/> (9) Unknown</p>	<p style="text-align: center;"><b>EXTERIOR ITEMS</b></p> <p>12. Vehicle Model Year  <input type="checkbox"/> Code the last two digits of the model year  <input type="checkbox"/> (99) Unknown <span style="float: right;">18 19</span></p> <p>13. Vehicle Make (specify) _____          Applicable codes are found in your NASS Data Collection, Coding and Editing Manual  <input type="checkbox"/> (99) Unknown <span style="float: right;">20 21</span></p> <p>14. Vehicle Model (specify) _____          Applicable codes are found in your NASS Data Collection, Coding and Editing Manual.  <input type="checkbox"/> (99) Unknown <span style="float: right;">22 23</span></p> <p>15. Registration of Vehicle <span style="float: right;">24</span>  <input type="checkbox"/> (0) Not registered  <input type="checkbox"/> (1) In-state (at least)  <input type="checkbox"/> (2) Out-of-state (only)  <input type="checkbox"/> (8) Other registration (e.g., federal, foreign, military) (specify): _____  <input type="checkbox"/> (9) Unknown</p>
<p>16. Vehicle Identification Number</p> <p><input type="checkbox"/> No VIN - Code all Zeros</p> <p><input type="checkbox"/> Unknown - Code all nines</p> <p>Left justify: Slash zeros. 0</p>	
<p>25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41</p>	

## National Accident Sampling System—Continuous Sampling Subsystem: Vehicle Data

<p>17 Body Type</p> <p>Automobiles</p> <p>___ (01) Convertible (excludes sun-roof, t-bar)</p> <p>___ (02) 2-door sedan, hardtop, coupe</p> <p>___ (03) 3-door/2-door hatchback</p> <p>___ (04) 4-door sedan, hardtop</p> <p>___ (05) 5-door/4-door hatchback</p> <p>___ (06) Station wagon (excluding van and truck based)</p> <p>___ (08) Other automobile type (specify) _____</p> <p>___ (09) Unknown automobile type</p> <p>Automobile Derivatives and Short Utility Vehicles</p> <p>___ (10) Auto based pickup (includes El Camino, Caballero, Ranchero and Brat)</p> <p>___ (11) Auto based panel (cargo station wagon, includes auto based ambulance/hearse)</p> <p>___ (12) Short utility - not truck based (includes Jeep CJ-5, Jeep CJ-7, Renegade, Landrover, Pre-78 Bronco, Landcruiser, Thing)</p> <p>___ (13) Large limousine - more than four side doors or stretched chassis</p> <p>Motorcycles</p> <p>___ (20) Motorcycle</p> <p>___ (21) Mopeds (motorized bicycles)</p> <p>___ (28) Other motorcycle (minibikes, motorscooters) (specify) _____</p> <p>___ (29) Unknown motorcycle type</p> <p>Bus (excludes van based)</p> <p>___ (30) School bus (designed to carry students, not cross country or transit)</p> <p>___ (31) Cross country/intercity (designed for long distance)</p> <p>___ (32) Transit bus (includes short ride city bus and medium range suburban bus)</p> <p>___ (38) Other bus (e.g., bus based motorhome) (specify) _____</p> <p>___ (39) Unknown bus type</p> <p>Van Based Light Truck (<math>\leq 10,000</math> lbs GVWR)</p> <p>___ (40) Van (includes VW bus, Vanagon, Kombi, Beauville, Chateau, Club Wagon, Sportsman, excludes moving van)</p> <p>___ (41) Van-commercial cutaway (includes box van, multi-stop, parcel, van pickups)</p> <p>___ (42) Van based motorhome</p> <p>___ (48) Other van type (specify) _____</p> <p>___ (49) Unknown van type</p>	<p>Light Conventional Truck (Pickup style cab, <math>\leq 10,000</math> lbs GVWR)</p> <p>___ (50) Pickup (includes open box and caps)</p> <p>___ (51) Pickup with slide-in camper</p> <p>___ (52) Pickup based motorhome (chassis mounted)</p> <p>___ (53) Cab chassis based (includes rescue vehicles, light stake, dump, and tow trucks)</p> <p>___ (54) Truck based panel</p> <p>___ (55) Truck based station wagon (4-door, includes Suburban, Travelall, Wagoneer)</p> <p>___ (56) Truck based utility (2-door, includes Blazer, Bronco - 78 on, Jimmy, Ramcharger, Cherokee, Trailduster, Scout)</p> <p>___ (58) Other light conventional truck (e.g., stretched Suburban limousine) (specify) _____</p> <p>___ (59) Unknown light conventional truck</p> <p>___ (69) Unknown light truck (van or pickup)</p> <p>Medium/Heavy Truck (<math>&gt; 10,000</math> lbs GVWR)</p> <p>___ (70) Step vans</p> <p>___ (71) Single unit straight truck (10,000 lbs <math>&lt;</math> GVWR <math>\leq</math> 26,000 lbs)</p> <p>___ (72) Single unit straight truck (<math>&gt; 26,000</math> lbs GVWR)</p> <p>___ (73) Medium/heavy truck based motorhome</p> <p>___ (74) Truck-tractor with no cargo trailer</p> <p>___ (75) Truck-tractor pulling one or more trailers</p> <p>___ (77) Truck-tractor (unknown if pulling trailer)</p> <p>___ (78) Unknown medium/heavy truck type</p> <p>___ (79) Unknown truck type (light/medium/heavy)</p> <p>Other Vehicles</p> <p>___ (80) Snowmobile</p> <p>___ (81) Farm equipment other than trucks</p> <p>___ (82) ATV, all terrain vehicle (e.g., dune/swamp buggy)</p> <p>___ (83) Construction equipment other than trucks (e.g., grader, off road)</p> <p>___ (88) Other (e.g., go-cart, fork lift, city street sweeper) (specify) _____</p> <p>___ (89) Unknown other vehicle (specify) _____</p> <p>___ (99) Unknown body type</p>
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**National Accident Sampling System -- Continous Sampling Subsystem: Vehicle Data**

<p>18 Towed Trailing Unit          ___ (0) No towed unit</p> <p>Yes.          towed trailing unit hitch type          ___ (1) Clamp on (temporary)          ___ (2) Bumper hitch (bolted)          ___ (3) Frame          ___ (4) Fifth wheel          ___ (5) Converter dolly - with 1 towbar          ___ (6) Converter dolly - with 2 towbars          ___ (8) Other (specify) _____          ___ (9) Unknown hitch type</p> <hr/> <p>19 Seating Capacity/Truck Vocation</p> <p>Passenger Vehicle by Designated Seating Capacity</p> <hr/> <p>Motorcycle/Automobile/Van/Bus (exclude pickups)          ___ (01) One seat position          ___ (02) Two seat positions          ___ (03) Three seat positions          ___ (04) Four seat positions          ___ (05) Five seat positions          ___ (06) Six seat positions          ___ (07) Seven seat positions          ___ (08) Eight seat positions          ___ (09) Nine seat positions          ___ (10) 10 to 19 seat positions          ___ (11) 20 to 49 seat positions          ___ (12) 50 or more seat positions          ___ (13) Motorhome (any light or medium truck based)          ___ (14) Ambulance/EMS (any auto or truck based)          ___ (19) Unknown passenger vehicle seating capacity</p> <hr/> <p>Cargo Vehicle by Vocation (Cargo Configuration)</p> <hr/> <p>Platform          ___ (20) Platform, flatbed          ___ (21) Platform with device (e.g., self-loader, spreader)          ___ (22) Stake          ___ (23) Drop frame, low bed, lowboy          ___ (24) Livestock carrier          ___ (28) Other platform (specify).          _____</p>	<p>Open          ___ (30) Pickup box (non-dump, includes open box and caps)          ___ (31) Pickup with slide-in camper          ___ (32) Dump (any light, medium, or heavy truck based)          ___ (33) Dump with blade (front or undercarriage)          ___ (34) Hopper (grain)          ___ (35) Auto carrier/transport (includes boat)          ___ (36) Van - open top          ___ (38) Other open (specify)          _____</p> <hr/> <p>Closed          ___ (40) Van - closed top (any light, medium or heavy truck based, e.g., multi-stop)          ___ (41) Low bed van (e.g., moving van)          ___ (42) Refrigerated or insulated          ___ (43) Mobile home          ___ (44) Beverage, bottler          ___ (45) Container (e.g., piggy back)          ___ (46) Tank - liquid and gaseous          ___ (47) Tank - dry bulk          ___ (48) Other closed (specify):          _____</p> <hr/> <p>Services/Utility          ___ (50) Garbage, refuse (including dumpster)          ___ (51) Fire apparatus          ___ (52) Concrete mixer          ___ (53) Wrecker, tow          ___ (54) Crane, aerial basket          ___ (55) Service, mobile repair (e.g., phone line truck)          ___ (56) Pole (e.g., pipe or log)          ___ (57) Armored truck          ___ (58) Other service/utility (specify)          _____</p> <hr/> <p>___ (71) Truck-tractor - no trailer          ___ (72) Chassis, incomplete vehicle          ___ (88) Other cargo vehicle (specify)          _____</p> <hr/> <p>___ (97) Other nontruck (e.g., construction paver, farm tractor) (specify)          _____</p> <hr/> <p>___ (98) Unknown cargo configuration          ___ (99) Unknown if passenger or cargo vehicle</p>
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**National Accident Sampling System – Continuous Sampling Subsystem: Vehicle Data**

20 21 22 23 Tire Condition (at time of or resulting from accident)  
Code up to four tires - front to rear, left to right See manual for tire numbering scheme

**AXLE**

- \_\_\_\_ (0) No abnormal tire condition
- \_\_\_\_ (1-7) Code actual axle number
- \_\_\_\_ (8) Axle number eight or greater (specify) \_\_\_\_\_
- \_\_\_\_ (9) Unknown axle

**TIRE**

- \_\_\_\_ (0) No abnormal tire condition
- \_\_\_\_ (1) Left outermost tire
- \_\_\_\_ (2) Left inner tire (if present)
- \_\_\_\_ (3) Right inner tire (if present)
- \_\_\_\_ (4) Right outermost tire
- \_\_\_\_ (9) Unknown tire position

**CONDITION**

- \_\_\_\_ (0) No abnormal tire condition
- \_\_\_\_ (1) Evidence of tread separation (with no sign of collision damage)
- \_\_\_\_ (2) Carcass failure
- \_\_\_\_ (3) Wear bars exposed
- \_\_\_\_ (4) Damaged as a result of the accident
- \_\_\_\_ (9) Unknown tire condition

	Axle	Tire	Condi- tion
(20)	47	48	49
(21)	50	51	52
(22)	53	54	55
(23)	56	57	58

24 25 Type of Outside Mirror

      L       R

- \_\_\_\_ \_\_\_\_ (0) Mirror not present
- \_\_\_\_ \_\_\_\_ (1) Plane mirror
- \_\_\_\_ \_\_\_\_ (2) Convex mirror
- \_\_\_\_ \_\_\_\_ (3) Plane plus stick-on convex mirror
- \_\_\_\_ \_\_\_\_ (4) Plane plus separate convex mirror
- \_\_\_\_ \_\_\_\_ (8) Other type mirror (specify) 24 25 \_\_\_\_\_

	L	R
(9) Unknown	59	60

26. Override/Underride (this vehicle)  
\_\_\_\_ (0) No override/underride or not applicable to CDC/TDC or a side impact.

Override (see specific CDC/TDC)

- \_\_\_\_ (1) 1st CDC
- \_\_\_\_ (2) 2nd CDC
- \_\_\_\_ (3) Other not automated CDC (specify) \_\_\_\_\_

Underride (see specific CDC/TDC)

- \_\_\_\_ (4) 1st CDC
- \_\_\_\_ (5) 2nd CDC
- \_\_\_\_ (6) Other not automated CDC (specify) \_\_\_\_\_

- \_\_\_\_ (7) Medium/heavy truck override/underride
- \_\_\_\_ (9) Unknown

61

27 Rear Turn Signal Color

- \_\_\_\_ (0) No turn signals
- \_\_\_\_ (1) Red
- \_\_\_\_ (2) Amber
- \_\_\_\_ (8) Other (specify) \_\_\_\_\_

- \_\_\_\_ (9) Unknown

62

**MEDIUM/HEAVY TRUCK AND BUS DATA (V17 = 30-39 OR 70-78)**

**28 Cab Configuration**

\_\_\_ (0) Not a medium/heavy truck or bus  
(V17 ≠ 30-39 or 70-78)

**Cab Over Engine (COE)**

- \_\_\_ (1) COE, high entry
- \_\_\_ (2) COE, low entry
- \_\_\_ (3) COE, unknown entry

**Conventional (CBE-Cab Behind Engine)**

- \_\_\_ (4) 2-door (standard)
- \_\_\_ (5) 2-door extended cab/4-door crew cab
- \_\_\_ (6) Unknown number of doors
- \_\_\_ (7) Cab alongside engine (CAE)
- \_\_\_ (8) Other (specify) \_\_\_\_\_
- \_\_\_ (9) Unknown

63

**29 30 31 32 Number of Axles**

Power Trailer

Unit 1st 2nd 3rd

- \_\_\_ \_\_\_ \_\_\_ \_\_\_ (0) Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ (1) One
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ (2) Two
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ (3) Three
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ (4) Four
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ (5) Five
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ (6) Six
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ (7) Seven or more
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ (8) No trailer
- \_\_\_ \_\_\_ \_\_\_ \_\_\_ (9) Unknown

P 1 2 3

64 65 66 67

**33 34 35 Length of Trailing Units**

Trailer

1st 2nd 3rd

- \_\_\_ \_\_\_ \_\_\_ (0) Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)
- \_\_\_ \_\_\_ \_\_\_ (1) Less than 26 feet
- \_\_\_ \_\_\_ \_\_\_ (2) 26 - 28 feet
- \_\_\_ \_\_\_ \_\_\_ (3) 29 - 31 feet
- \_\_\_ \_\_\_ \_\_\_ (4) 32 - 40 feet
- \_\_\_ \_\_\_ \_\_\_ (5) 41 - 45 feet
- \_\_\_ \_\_\_ \_\_\_ (6) 46 - 48 feet
- \_\_\_ \_\_\_ \_\_\_ (7) More than 48 feet
- \_\_\_ \_\_\_ \_\_\_ (8) No trailer
- \_\_\_ \_\_\_ \_\_\_ (9) Unknown

1st 2nd 3rd

68 69 70

**36. Maximum Overall Width**

- \_\_\_ (000) Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)
- \_\_\_ Code the actual value to the nearest inch
- \_\_\_ (998) 998 inches or more
- \_\_\_ (999) Unknown

71 72 73

**37. Maximum Overall Length**

- (Includes the power unit and all trailers)
- \_\_\_ (000) Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)
- \_\_\_ Code the actual value to the nearest foot
- \_\_\_ (998) 998 feet or more
- \_\_\_ (999) Unknown

74 75 76

**38. Type of Brake Actuation**

- \_\_\_ (0) Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)
- \_\_\_ (1) Air
- \_\_\_ (2) Hydraulic
- \_\_\_ (8) Other (specify) \_\_\_\_\_
- \_\_\_ (9) Unknown

77

**39. Gross Vehicle Weight Rating (GVWR)**

- \_\_\_ (0) Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)
- \_\_\_ (1) 10,001 - 14,000 lbs
- \_\_\_ (2) 14,001 - 16,000 lbs.
- \_\_\_ (3) 16,001 - 19,500 lbs
- \_\_\_ (4) 19,501 - 26,000 lbs
- \_\_\_ (5) 26,001 - 33,000 lbs
- \_\_\_ (6) 33,001 lbs and above
- \_\_\_ (9) Unknown

78

Specify GVWR \_\_\_\_\_



National Accident Sampling System – Continuous Sampling Subsystem: Vehicle Data

FIELD MEASUREMENTS

NCI	Complete When Applicable	
	End Damage	Side Damage
	Undeformed end width _____  Corner shift A1 _____  A2 _____ End shift at frame (CDC) (check one) <4 inches _____ ≥4 inches _____	Bowing B1 _____ X1 _____  B2 _____ X2 _____  Bowing constant $\frac{X1 + X2}{2} = \underline{\hspace{2cm}}$

Note Measure C1 to C6 from Driver to Passenger side in Front or Rear impacts-  
 Rear to Front in Side impacts

Specific Impact Number	Plane* of C-Measurements	Direct Damage		Field L**	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	±D
		Width** (CDC)	Max*** Crush								

\*Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, at beltline, etc.) or label adjustments (e.g., free space)

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

\*\*Measure and document on the vehicle diagram the beginning or end of the direct damage width and field L (e.g., side damage with respect to undamaged axle)

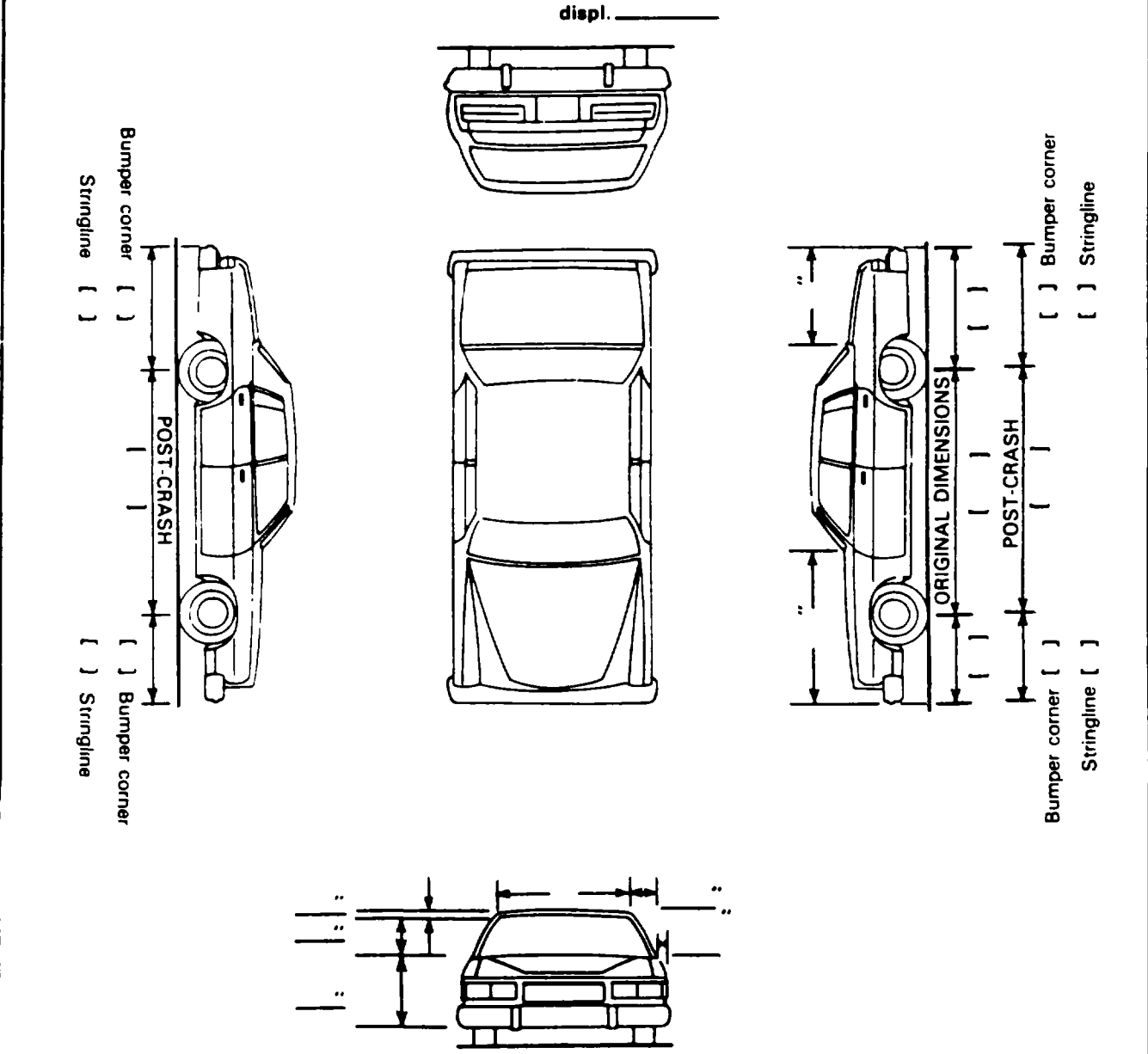
\*\*\*Measure and document on the vehicle diagram the location of the maximum crush

Note: Use as many lines/columns as necessary to describe each damage profile



NCI

<b>DAMAGE DESCRIPTION</b> <b>Tire—Wheel Damage</b> <b>a. Rotation physically restricted</b> RF _____ LF _____ RR _____ LR _____ <b>b. Tire deflated</b> RF _____ LF _____ RR _____ LR _____ (1) Yes, (2) No, (8) NA, (9) Unk.	<b>TYPE OF TRANSMISSION</b> ___ Manual ___ Automatic	<b>WHEEL STEER ANGLES</b> (For locked front wheels or displaced rear axles only) RF ± _____° LF ± _____° RR ± _____° LR ± _____° Within ±5 degrees
	Average Track: _____ Maximum Width: _____ Curb Weight: _____ Overall Length: _____ Wheel Base: _____ Engine Size: cyl. _____ displ. _____	



**Note** Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewall, etc.).  
 If pulling trailer sketch type of trailer and damage received on the back of this page  
 Annotate any damage caused by extrication such as component removal by torching, prying or hydraulic shears  
 If the vehicle contacted a pedestrian, complete page 6R.



**National Accident Sampling System – Continuous Sampling Subsystem: Vehicle Data**

**DEFORMATION CLASSIFICATION**

**HIGHEST DELTA V'**

<u>Event Number (this vehicle)</u>	<u>Object Contacted</u>	<u>(1) (2) Direction of Force</u>	<u>(3) Deformation Location</u>	<u>(4) Specific Longitudinal or Lateral Location</u>	<u>(5) Specific Vertical or Lateral Location</u>	<u>(6) Type of Damage Distribution</u>	<u>(7) Deformation Extent Guide</u>	<u>Event Number (in accident)</u>
40 <u>79</u>	41 <u>80</u> <u>81</u>	42 <u>82</u> <u>83</u>	43 <u>84</u>	44 <u>85</u>	45 <u>86</u>	46 <u>87</u>	47 <u>88</u> <u>89</u>	48 <u>90</u>

**Second Highest Delta V'**

49 <u>91</u>	50 <u>92</u> <u>93</u>	51 <u>94</u> <u>95</u>	52 <u>96</u>	53 <u>97</u>	54 <u>98</u>	55 <u>99</u>	56 <u>100</u> <u>101</u>	57 <u>102</u>
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**CRUSH PROFILE**

(The crush profile for the damage described in the CDC/TDC above should be documented in the appropriate space below.)

Highest

58 <u>L</u>	59 <u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>C5</u>	<u>C6</u>	60 <u>+ D</u>
<u>103</u> <u>104</u> <u>105</u> <u>106</u>	<u>107</u> <u>108</u> <u>109</u>	<u>110</u> <u>111</u> <u>112</u>	<u>113</u> <u>114</u> <u>115</u>	<u>116</u> <u>117</u> <u>118</u>	<u>119</u> <u>120</u> <u>121</u>	<u>122</u> <u>123</u> <u>124</u>	<u>125</u> <u>126</u> <u>127</u> <u>128</u>

Second Highest

61 <u>L</u>	62 <u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>C5</u>	<u>C6</u>	63 <u>+ D</u>
<u>129</u> <u>130</u> <u>131</u> <u>132</u>	<u>133</u> <u>134</u> <u>135</u>	<u>136</u> <u>137</u> <u>138</u>	<u>139</u> <u>140</u> <u>141</u>	<u>142</u> <u>143</u> <u>144</u>	<u>145</u> <u>146</u> <u>147</u>	<u>148</u> <u>149</u> <u>150</u>	<u>151</u> <u>152</u> <u>153</u> <u>154</u>

## CODES FOR FRONT OCCUPANT AREA INTRUSION

### Magnitude of Intrusion

- \_\_\_ (0) No passenger compartment or no intrusion
- \_\_\_ (1) Less than 2 inches
- \_\_\_ (2)  $\geq$  2 inches but  $<$  6 inches
- \_\_\_ (3)  $\geq$  6 inches but  $<$  12 inches
- \_\_\_ (4)  $\geq$  12 inches
- \_\_\_ (9) Unknown

### Intruding Component

#### Primary

- \_\_\_ (00) No passenger compartment or no intrusion
- \_\_\_ (01) Steering column
- \_\_\_ (02) Instrument panel left
- \_\_\_ (03) Instrument panel center
- \_\_\_ (04) Instrument panel right
- \_\_\_ (05) A-pillar
- \_\_\_ (06) B-pillar
- \_\_\_ (07) Door panel or side panel/kick panel
- \_\_\_ (08) Roof
- \_\_\_ (09) Roof side rail
- \_\_\_ (10) Windshield header
- \_\_\_ (11) No intrusion of primary component

#### Other

- \_\_\_ (20) Steering column and instrument panel
- \_\_\_ (21) Steering column, instrument panel, and A-pillar
- \_\_\_ (22) Instrument panel and A-pillar
- \_\_\_ (23) A-pillar and roof
- \_\_\_ (24) A-pillar and any of the following: door panel, side panel, or B-pillar
- \_\_\_ (25) A-pillar, roof, and windshield header
- \_\_\_ (26) Roof and any of the following: door panel, side panel, or B-pillar
- \_\_\_ (27) Roof and windshield header
- \_\_\_ (97) Other combination of the above components (specify):  
\_\_\_\_\_
- \_\_\_ (98) Intrusion of unlisted component(s) (specify): \_\_\_\_\_
- \_\_\_ (99) Unknown

**National Accident Sampling System - Continuous Sampling Subsystem: Vehicle Data**

64 Documentation of More Than Two CDC/TDC's  
 \_\_\_ (1) Two or less coded CDC/TDC's  
 \_\_\_ (2) More than two coded CDC/TDC's 155

65 Vehicle Special Use (this trip)  
 \_\_\_ (0) No special use  
 \_\_\_ (1) Taxi  
 \_\_\_ (2) Vehicle used as school bus  
 \_\_\_ (3) Vehicle used as other bus  
 \_\_\_ (4) Military  
 \_\_\_ (5) Police  
 \_\_\_ (6) Ambulance  
 \_\_\_ (7) Fire  
 \_\_\_ (9) Unknown 156

66 Odometer Reading  
 \_\_\_\_\_ miles - Code mileage to the nearest 1,000 miles  
 \_\_\_ (000) No odometer  
 \_\_\_ (001) Less than 1,500 miles  
 \_\_\_ (997) 996,500 miles or more  
 \_\_\_ (999) Unknown 157 158 159 . 0 0 0

67 Passenger Compartment Integrity  
 \_\_\_ (0) No passenger compartment  
 \_\_\_ (1) No integrity loss

Yes, integrity was lost through  
 \_\_\_ (2) Windshield  
 \_\_\_ (3) Door (side)  
 \_\_\_ (4) Door (rear)  
 \_\_\_ (5) Roof  
 \_\_\_ (6) Windshield and door (side)  
 \_\_\_ (7) Side or rear window breakage  
 \_\_\_ (8) Other combination of above (specify): \_\_\_\_\_  
 \_\_\_ (9) Unknown 160

**FRONT OCCUPANT AREA INTRUSION**  
 (See reverse of preceding page for list of codes)

	Intruding Component	Magnitude of Intrusion
Driver Area Primary	68 <span style="float: right;">161 162</span>	69 <span style="float: right;">163</span>
Driver Area Other	70 <span style="float: right;">164 165</span>	71 <span style="float: right;">166</span>
Passenger Area Primary	72 <span style="float: right;">167 168</span>	73 <span style="float: right;">169</span>
Passenger Area Other	74 <span style="float: right;">170 171</span>	75 <span style="float: right;">172</span>

76 Steering Column Separation  
 \_\_\_ (0) No steering column  
 \_\_\_ (1) No - steering column did not separate  
 \_\_\_ (2) Yes - steering column separated  
 \_\_\_ (9) Unknown 173

77. Steering Rim Deformation  
 \_\_\_ (0) No steering rim deformation  
 \_\_\_ (1) Yes - steering rim deformation  
 \_\_\_ (9) Unknown 174

78 Fire Occurrence  
 \_\_\_ (0) No fire

Yes, fire occurred  
 \_\_\_ (1) Started in vehicle, minor  
 \_\_\_ (2) Started in vehicle, major  
 \_\_\_ (3) Started external to vehicle, minor  
 \_\_\_ (4) Started external to vehicle, major  
 \_\_\_ (5) Origin unknown  
 \_\_\_ (9) Unknown 175

79 Type of Most Severe Impact This Vehicle  
 This Vehicle's Role  
 \_\_\_ (0) Nonimpact  
 \_\_\_ (1) Front of this vehicle  
 \_\_\_ (2) Left side of this vehicle  
 \_\_\_ (3) Right side of this vehicle  
 \_\_\_ (4) Rear of this vehicle  
 \_\_\_ (5) Other impact location (specify) \_\_\_\_\_  
 \_\_\_ (9) Unknown impact type 176

80 Role of Other Contacted Vehicle, Object or Person (for same impact as above)  
 \_\_\_ (0) Nonimpact  
 \_\_\_ (1) Front of other vehicle  
 \_\_\_ (2) Side of other vehicle  
 \_\_\_ (3) Rear of other vehicle  
 \_\_\_ (4) Intraunit damage  
 \_\_\_ (5) Other location on other vehicle (specify) \_\_\_\_\_  
 \_\_\_ (6) Object (stationary or nonstationary)  
 \_\_\_ (7) Pedestrian or nonmotorist  
 \_\_\_ (8) Motorcycle or moped  
 \_\_\_ (9) Unknown impact type 177

**National Accident Sampling System – Continuous Sampling Subsystem: Vehicle Data**

NCI

RESTRAINT SYSTEM		Front Seat Left	Front Seat Middle	Front Seat Right	Second Seat Left	Second Seat Middle	Second Seat Right	Third Seat Left	Third Seat Middle	Third Seat Right	Other Position or Unit*
MANUAL	Availability	___	___	___	___	___	___	___	___	___	___
	Indication of Usage	___	___	___	___	___	___	___	___	___	___
AUTOMATIC	Availability	___	___	___	___	___	___	___	___	___	___
	Function	___	___	___	___	___	___	___	___	___	___

**Manual Restraint System - Availability -**  
 \_\_\_ (0) None available  
 \_\_\_ (1) Shoulder belt  
 \_\_\_ (2) Lap belt  
 \_\_\_ (3) Lap and shoulder belt  
 \_\_\_ (4) Motorcycle helmet  
 \_\_\_ (5) Child safety seat (designed without tether or unknown design)  
 \_\_\_ (6) Child safety seat (designed with tether - tether not used) (specify) \_\_\_\_\_  
 \_\_\_ (7) Child safety seat (designed with tether - tether used)  
 \_\_\_ (8) Restraint available - type unknown or other (specify) \_\_\_\_\_  
 \_\_\_ (9) Unknown

**Manual Restraint System - Indication of Usage**  
 \_\_\_ (0) None used  
 \_\_\_ (1) Shoulder belt  
 \_\_\_ (2) Lap belt  
 \_\_\_ (3) Lap and shoulder belt  
 \_\_\_ (4) Motorcycle helmet  
 \_\_\_ (5) Child safety seat - car lap belt used properly  
 \_\_\_ (6) Child safety seat - car lap belt used improperly (specify) \_\_\_\_\_  
 \_\_\_ (7) Child safety seat - unknown if car lap belt used properly  
 \_\_\_ (8) Restraint used - type unknown or other (specify) \_\_\_\_\_  
 \_\_\_ (9) Unknown

**Automatic (Passive) Restraint System - Availability -**  
 \_\_\_ (0) Not equipped  
 \_\_\_ (1) Airbag  
 \_\_\_ (2) Airbag disconnected  
 \_\_\_ (3) Airbag not reinstalled  
 \_\_\_ (4) Two point automatic belts  
 \_\_\_ (5) Three point automatic belts  
 \_\_\_ (6) Automatic belts destroyed or rendered inoperable  
 \_\_\_ (9) Unknown

**Automatic (Passive) Restraint System - Function -**  
 \_\_\_ (0) Not equipped  
 \_\_\_ (1) Automatic belt in use  
 \_\_\_ (2) Automatic belt not in use  
 \_\_\_ (3) Deployed airbag  
 \_\_\_ (4) Non deployed airbag  
 \_\_\_ (9) Unknown

**Infant or Child Restraint Make/Model**  
 \_\_\_\_\_

**Type of Infant or Child Restraint**  
 \_\_\_ (0) No infant or child restraint  
 \_\_\_ (1) Infant seat  
 \_\_\_ (2) Child seat  
 \_\_\_ (3) Convertible seat  
 \_\_\_ (4) Booster seat  
 \_\_\_ (7) Other type seat (specify) \_\_\_\_\_  
 \_\_\_ (8) Unknown type restraint  
 \_\_\_ (9) Unknown if restraint available

**Infant or Child Seat Orientation**  
 \_\_\_ (0) No infant or child seat  
 \_\_\_ (1) Rear facing  
 \_\_\_ (2) Forward facing  
 \_\_\_ (7) Other orientation (specify) \_\_\_\_\_  
 \_\_\_ (8) Unknown orientation  
 \_\_\_ (9) Unknown if restraint available

**Infant or Child Restraint Harness/Shield Usage**  
 \_\_\_ (0) No infant or child restraint  
 \_\_\_ (1) Harness/shield used  
 \_\_\_ (2) Harness/shield not used  
 \_\_\_ (8) Unknown harness/shield usage  
 \_\_\_ (9) Unknown if restraint available

\*Specify the Other Position \_\_\_\_\_ or Unit referenced

**INDICATIONS OF EJECTION**

\_\_\_ No ejection

*If ejection is suspected or reported indicate the avenue for multiple avenues number them and utilize the same numbers consistently throughout*

**Ejection Area**

\_\_\_ Windshield  
 \_\_\_ Left front  
 \_\_\_ Right front  
 \_\_\_ Left rear  
 \_\_\_ Right rear  
 \_\_\_ Rear  
 \_\_\_ Roof  
 \_\_\_ Other area (e.g., sidecar back of pickup, etc.)  
 \_\_\_ Unknown

**Ejection Medium**

\_\_\_ Door (side)  
 \_\_\_ Door (rear)  
 \_\_\_ Open roof structure  
 \_\_\_ Fixed windows  
 \_\_\_ Other medium type  
 \_\_\_ Unknown  
**Operable windows**  
 \_\_\_ Roll down type  
 \_\_\_ Hinged type  
 \_\_\_ Sliding type  
 \_\_\_ Other type window

**Medium Status**

\_\_\_ Open  
 \_\_\_ Separation  
 \_\_\_ Closed, closed when damaged  
 \_\_\_ Integral structure ripped open  
 \_\_\_ Status known

**FRONT**

\_\_\_ Windshield  
 \_\_\_ Mirror  
 \_\_\_ Sunvisor  
 \_\_\_ Steering wheel rim  
 \_\_\_ Steering wheel hub spoke  
 \_\_\_ Steering wheel (combination of rim/hub/spoke)  
 \_\_\_ Steering column, transmission selector lever other attachment  
 \_\_\_ Add on equipment (e.g., CB, tape deck, air conditioner)  
 \_\_\_ Left instrument panel and below  
 \_\_\_ Center instrument panel and below  
 \_\_\_ Right instrument panel and below  
 \_\_\_ Other front object

**SIDE**

\_\_\_ Side interior surface excluding hardware or armrests  
 \_\_\_ Side hardware or armrest  
 \_\_\_ A pillar  
 \_\_\_ B pillar  
 \_\_\_ Other pillar  
 \_\_\_ Window glass or frame

**CHECK ALL AREAS OF SUSPECTED OCCUPANT CONTACT**

\_\_\_ Other side object

**INTERIOR**

\_\_\_ Seat, back support  
 \_\_\_ Belt restraint system  
 \_\_\_ Head restraint system  
 \_\_\_ Air cushion  
 \_\_\_ Other occupants  
 \_\_\_ Interior loose objects  
 \_\_\_ Other interior object

**ROOF**

\_\_\_ Front header  
 \_\_\_ Rear header  
 \_\_\_ Roof side rails  
 \_\_\_ Roof or convertible top

**FLOOR**

\_\_\_ Floor  
 \_\_\_ Floor or console mounted transmission lever, including console  
 \_\_\_ Parking brake handle  
 \_\_\_ Foot controls including parking brake

**REAR**

\_\_\_ Backlight (rear window)  
 \_\_\_ Backlight storage rack, door, etc.  
 \_\_\_ Other rear object

**EXTERIOR OF OCCUPANT'S VEHICLE**

**Noncycle**  
 \_\_\_ Hood  
 \_\_\_ Outside hardware (e.g., outside mirror antenna)  
 \_\_\_ Other exterior surface or tires  
 \_\_\_ Unknown exterior objects

**CYCLE**

\_\_\_ Handle bars or attachments  
 \_\_\_ Frame or suspension component or fender  
 \_\_\_ Seat  
 \_\_\_ Foot pedal foot rest, foot pegs  
 \_\_\_ Wheel or tire  
 \_\_\_ Engine or transmission  
 \_\_\_ Gas tank, gas tank filling cap or neck  
 \_\_\_ Other cycle part

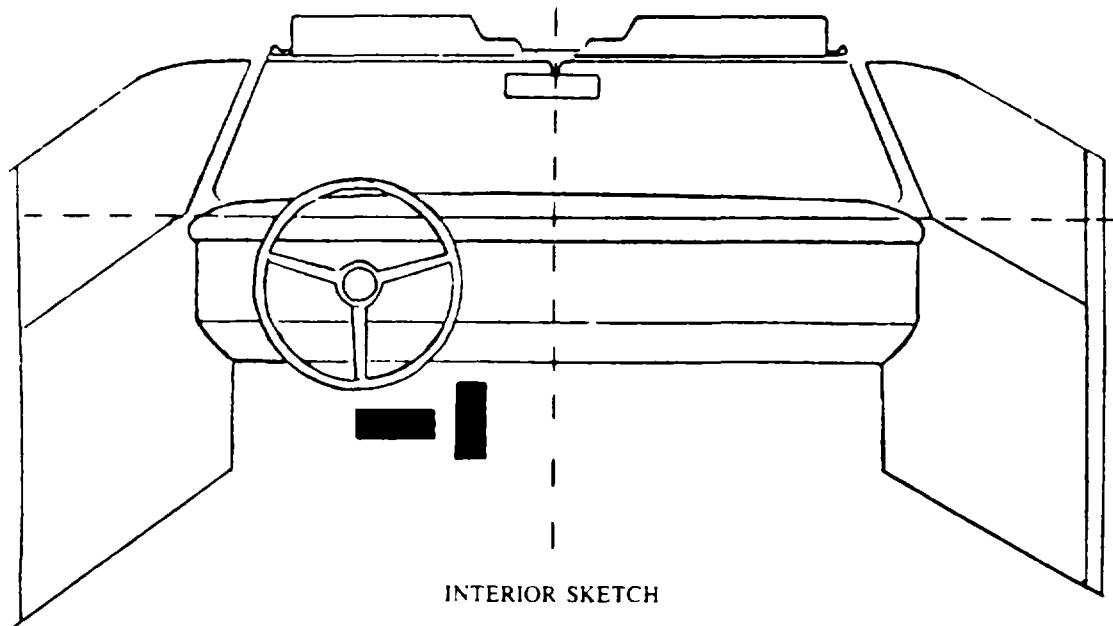
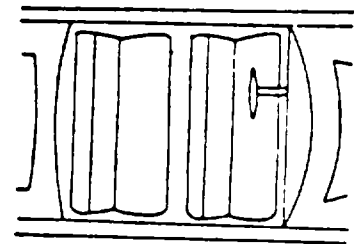
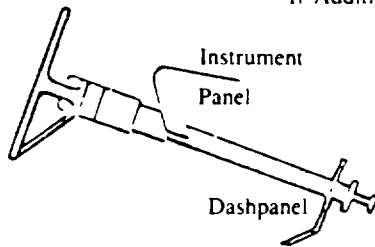
National Accident Sampling System – Continuous Sampling Subsystem: Vehicle Data

NCI

VEHICLE INTERIOR  
 POINTS OF OCCUPANT CONTACT

CONTACT	INTERIOR PART CONTACTED	SUPPORTING PHYSICAL EVIDENCE	Confidence Level of Contact Point
A			1 2
B			1 2
C			1 2
D			1 2
E			1 2
F			1 2
G			1 2
H			1 2

If Additional Contact Points, Continue on Reverse Side



INTERIOR SKETCH

Sketch controls in appropriate positions if contacted. Sketch and describe all occupant contact points (i.e., dents, skin transfer, etc.) and code on preceding page. Dash lines indicate center of instrument panel-windshield area and top of panel for reference purposes.

Codes for Confidence Level of Contact Point are: Certain - 1, and possible - 2



	VEHICLE WEIGHT ITEMS
<p><b>81 Rollover</b>                      ___ (0) No rollover (no overturning)</p> <p>Rollover primarily about the longitudinal axis                      ___ (1) Rollover, 1 quarter turn only                      ___ (2) Rollover, 2 quarter turns                      ___ (3) Rollover, 3 quarter turns                      ___ (4) Rollover, 4 or more quarter turns                      (specify) _____</p> <p>___ (5) Rollover primarily about the lateral axis                      ___ (9) Rollover (Overturn), details unknown</p> <p style="text-align: right;"><u>178</u></p> <p><b>82 Jackknife</b>                      ___ (0) Not an articulated vehicle                      ___ (1) No jackknife                      ___ (2) Yes - prior to first impact for this vehicle                      ___ (3) Yes - after first impact but prior to last impact for this vehicle                      ___ (4) Yes - details unknown</p> <p style="text-align: right;"><u>179</u></p> <p><b>83 Hazardous Cargo</b>                      ___ (0) No hazardous cargo                      ___ (1) Load of hazardous materials only                      (specify) _____                      ___ (2) Load of hazardous and nonhazardous materials (specify).                      _____                      ___ (9) Unknown</p> <p style="text-align: right;"><u>180</u></p> <p>NOTE (See coding manual for definitions and examples of hazardous materials)</p>	<p><b>84 Vehicle Curb Weight</b>                      ___ pounds - Code weight to nearest 100 pounds                      ___ (001) Less than 150 pounds                      ___ (997) 99,650 lbs or more                      ___ (999) Unknown</p> <p style="text-align: right;"><u>181</u> <u>182</u> <u>183</u> 0 0</p> <p>Source: _____</p> <p><b>85 Vehicle Cargo Weight</b>                      ___ pounds - Code weight to nearest 100 pounds                      ___ (000) Less than 50 pounds                      ___ (997) 99,650 lbs or more                      ___ (999) Unknown</p> <p style="text-align: right;"><u>184</u> <u>185</u> <u>186</u> 0 0</p> <p><b>86 Investigator Reported Source of Cargo Weight</b>                      ___ (0) No cargo                      ___ (1) Measured                      ___ (2) Estimated                      ___ (3) Rated capacity                      ___ (9) Unknown source or weight</p> <p style="text-align: right;"><u>187</u></p> <p>Source _____</p>



COMPLETED BY TEAM

1 Primary Sampling Unit Number 1 2

2 Case Number-Stratification 3 4 5 6

3 Record Number 3  
7

4 Transaction Code 8

5 Version Number 0  
9

6 Investigator I.D. Number 10

VEHICLE INSPECTION

7 Vehicle Number 11 12

8 Reason Vehicle Registration Records Are Not Obtainable

- (0) Not required - vehicle inspected
- (1) Records obtained
- (2) Hit and run vehicle - no information
- (3) Records not found
- (4) Vehicle not registered
- (5) Registration number not correct
- (6) No information on vehicle
- (7) Out-of-state or foreign vehicle
- (8) To be updated
- (9) Record not received before file closed

13

9 Date vehicle inspected and field data elements obtained 8  
14 15 16 17 18 19

10 Completing Person 20

11 Reason Vehicle Inspection Not Completed

- (00) Not required
- (01) Inspection completed
- (02) Vehicle cannot be located
- (03) Vehicle repaired or destroyed
- (04) Vehicle outside of study area
- (05) Vehicle impounded
- (06) Vehicle sold
- (07) Hit and run vehicle
- (08) Owner could not be located
- (09) Owner refusal
- (10) Insurance company refusal
- (11) Attorney refusal or litigation
- (12) Repair or tow facility refusal
- (13) Stolen
- (14) Wrong name and address on PAR
- (15) Interstate truck
- (16) Commercial vehicle unavailable
- (17) Other (specify) \_\_\_\_\_

21 22

12 Reason Highest Total Delta V Unknown

- (00) No reconstruction required
- (01) Highest total delta V known - based on CRASH damage data only
- (02) Highest total delta V known - based on CRASH damage and trajectory data
- (03) Highest total delta V known - based on Poles algorithm
- (04) Highest total delta V known - based on OLDMISS algorithm
- (05) Rollover
- (06) Other nonhorizontal force (e.g. vaulting)
- (07) Sideswipe type damage/severe override
- (08) Vehicle out of scope/pedestrian
- (09) Yielding object (outside scope of poles algorithm)
- (10) Other (e.g. animal) (specify) \_\_\_\_\_

23 24

13 Confidence in Reconstruction Program Results (for Highest Delta V)

- (0) No reconstruction
- (1) Collision fits model - results appear reasonable
- (2) Collision fits model - results appear high
- (3) Collision fits model - results appear low
- (4) Borderline reconstruction - results appear reasonable

25

14 Reconstruction Program Output on Other than Highest Delta V

- (0) No - reconstruction program output for highest delta V or no reconstruction
- (1) Yes - reconstruction program output on a secondary CDC

26

15 Data Obtained for this Vehicle's Most Severe Impact Regardless of Usage

- (00) No data obtained
- (01) CDC only
- (02) TDC only
- (03) Crush profile\* only (outside scope of CDC/TDC)
- (04) Trajectory data only
- (05) CDC and crush profile only
- (06) TDC and crush profile only
- (07) CDC and trajectory
- (08) TDC and trajectory
- (09) Crush profile\* (outside scope of CDC/TDC) and trajectory
- (10) CDC, crush profile and trajectory
- (11) TDC, crush profile and trajectory
- (12) Other (specify) \_\_\_\_\_

27 28

\*For vehicles outside the scope of CDC/TDC, crush profile means damage sketch and applicable measurements

16 Submission of Potential Safety Problem Bulletin

- (0) No
- (1) Yes

29

COMPLETED BY ZONE CENTER

17 Use of Measurement Stands  
 \_\_\_ (0) No vehicle inspection  
 \_\_\_ (1) Vehicle inspected stands required used correctly  
 \_\_\_ (2) Vehicle inspected stands required used incorrectly  
 \_\_\_ (3) Vehicle inspected stands required not used  
 \_\_\_ (4) Stands not required 30

18 Damage Measurements  
 \_\_\_ (0) No vehicle inspection  
 \_\_\_ (1) Vehicle inspected measurements required complete and correct  
 \_\_\_ (2) Vehicle inspected measurements required obtained incomplete measurements  
 \_\_\_ (3) Vehicle inspected measurements required obtained measurements incorrectly  
 \_\_\_ (4) Vehicle inspected measurements required not obtained  
 \_\_\_ (5) Measurements not required 31

19 Post Crash Baseline Measurements  
 \_\_\_ (0) Vehicle not inspected  
 \_\_\_ (1) Vehicle inspected measurements correct and completed  
 \_\_\_ (2) Vehicle inspected obtained incomplete measurements  
 \_\_\_ (3) Vehicle inspected obtained measurements incorrectly  
 \_\_\_ (4) Vehicle inspected measurements not obtained  
 \_\_\_ (5) Measurements not required 32

20 Vehicle Damage Diagram Documentation  
 \_\_\_ (0) Vehicle not inspected  
 \_\_\_ (1) Vehicle inspected correct and complete documentation  
 \_\_\_ (2) Vehicle inspected incomplete documentation  
 \_\_\_ (3) Vehicle inspected incorrect documentation  
 \_\_\_ (4) Vehicle inspected no documentation  
 \_\_\_ (5) No documentation required 33

21 Occupant(s) Contact(s)  
 \_\_\_ (0) Vehicle not inspected  
 \_\_\_ (1) Vehicle inspected contacts visible - documented correctly and completely  
 \_\_\_ (2) Vehicle inspected contacts visible - incomplete documentation  
 \_\_\_ (3) Vehicle inspected contacts visible - documented incorrectly  
 \_\_\_ (4) Vehicle inspected contacts visible - not documented  
 \_\_\_ (5) Vehicle inspected - no contacts visible  
 \_\_\_ (6) Vehicle interior not inspected  
 \_\_\_ (7) No documentation required 34

22 Date Official Record Update Received  
E  
 \_\_\_ 35 \_\_\_ 36 \_\_\_ 37 \_\_\_ 38 \_\_\_ 39 \_\_\_ 40

23 Reviewed By 41  
 \_\_\_ 42

24 Reconstruction Documentation  
 \_\_\_ (0) Reconstruction not applicable

Reconstruction applicable  
 \_\_\_ (1) PSU results accurate  
 \_\_\_ (2) Minor corrections to PSU results by Zone Center  
 \_\_\_ (3) Major corrections to PSU results by Zone Center  
 \_\_\_ (4) No PSU results computer run added by Zone Center  
 \_\_\_ (5) PSU reconstruction deleted by Zone Center  
 \_\_\_ (6) No PSU results incomplete data prevents Zone Center Run 43

ERROR TALLY  
 (Completed By Zone Center)

Blank	Not in error and not missing	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
0	RDE system error	Response	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
2	Error (not correctable)	Variable	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
3	Error (correctable)	Response	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
6	Sequencing errors in CDC's or injury data	Variable	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
8	Data entry error	Response	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
9	Unknown coded on field form	Variable	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
A	Hardcopy change with no error - not automated	Response	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
		Variable	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
		Response	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
		Variable	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
		Response	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145



**VEHICLE FOR NONTOWAWAY ACCIDENT**

<p>1 Primary Sampling Unit Number <span style="float:right">1 2</span></p> <p>2 Case Number-Stratification <span style="float:right">3 4 5 6</span></p> <p>3 Record Number <span style="float:right">3 7</span></p> <p>4 Transaction Code <span style="float:right">8</span></p> <p>5 Version Number <span style="float:right">0 9</span></p> <p>6 Investigator I.D. Number <span style="float:right">10</span></p>	<p>11. Hit and Run Involvement</p> <p>___ (0) No hit-and-run</p> <p>___ (1) Yes - hit-and-run involved vehicle <span style="float:right">17</span></p>
<b>IDENTIFICATION</b>	
<p>7. Vehicle Number <span style="float:right">11 12</span></p> <p>8. Number of Occupant Forms Submitted</p> <p>___ Code only the number of occupants in this vehicle for which an OCCUPANT FORM was submitted.</p> <p>___ (97) 97 or more <span style="float:right">13 14</span></p> <p>9 Vehicle Role</p> <p>___ (0) Noncollision</p> <p>___ (1) Striking unit</p> <p>___ (2) Struck unit</p> <p>___ (3) Both striking and struck</p> <p>___ (9) Unknown <span style="float:right">15</span></p> <p>10 Manner of Leaving Scene (Determined by Investigator)</p> <p>___ (1) Driven</p> <p>___ (2) Towed - due to vehicle damage</p> <p>___ (3) Towed - not due to vehicle damage</p> <p>___ (4) Towed - details unknown</p> <p>___ (5) Abandoned</p> <p>___ (9) Unknown <span style="float:right">16</span></p>	<p style="text-align:center;"><b>EXTERIOR ITEMS</b></p> <p>12. Vehicle Model Year</p> <p>___ Code the last two digits of the model year</p> <p>___ (99) Unknown <span style="float:right">18 19</span></p> <p>13 Vehicle Make (specify).</p> <hr/> <p>Applicable codes are found in your NASS Data Collection, Coding and Editing Manual.</p> <p>___ (99) Unknown <span style="float:right">20 21</span></p> <p>14. Vehicle Model (specify):</p> <hr/> <p>Applicable codes are found in your NASS Data Collection, Coding and Editing Manual</p> <p>___ (99) Unknown <span style="float:right">22 23</span></p> <p>15. Registration of Vehicle</p> <p>___ (0) Not registered</p> <p>___ (1) In-state (at least)</p> <p>___ (2) Out-of-state (only)</p> <p>___ (8) Other registration (e.g., federal foreign, military) (specify):</p> <hr/> <p>___ (9) Unknown <span style="float:right">24</span></p>
<p>16 Vehicle Identification Number</p> <p>___ No VIN - Code all Zeros</p> <p>___ Unknown - Code all nine's</p> <p>Left justify.</p> <p>Slash zeros. 0</p>	
<p>25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41</p>	

**National Accident Sampling System – Continuous Sampling  
Subsystem: Vehicle For Nontowaway Accident**

Vehicle No. \_\_\_\_\_

Page 2

**17 Body Type**

**Automobiles**

- \_\_\_ (01) Convertible (excludes sun-roof, t-bar)
- \_\_\_ (02) 2-door sedan, hardtop, coupe
- \_\_\_ (03) 3-door/2-door hatchback
- \_\_\_ (04) 4-door sedan, hardtop
- \_\_\_ (05) 5-door/4-door hatchback
- \_\_\_ (06) Station wagon (excluding van and truck based)
- \_\_\_ (08) Other automobile type (specify) \_\_\_\_\_

- \_\_\_ (09) Unknown automobile type

**Automobile Derivatives and Short Utility Vehicles**

- \_\_\_ (10) Auto based pickup (includes El Camino, Caballero Ranchero and Brat)
- \_\_\_ (11) Auto based panel (cargo station wagon, includes auto based ambulance/hearse)
- \_\_\_ (12) Short utility - not truck based (includes Jeep CJ-5, Jeep CJ-7, Renegade, Land-rover, Pre-78 Bronco, Landcruiser, Thing)
- \_\_\_ (13) Large limousine - more than four side doors or stretched chassis.

**Motorcycles**

- \_\_\_ (20) Motorcycle
- \_\_\_ (21) Mopeds (motorized bicycles)
- \_\_\_ (28) Other motorcycle (minibikes, motorscooters) (specify) \_\_\_\_\_
- \_\_\_ (29) Unknown motorcycle type

**Bus (excludes van based)**

- \_\_\_ (30) School bus (designed to carry students, not cross country or transit)
- \_\_\_ (31) Cross country intercity (designed for long distance)
- \_\_\_ (32) Transit bus (includes short ride city bus and medium range suburban bus)
- \_\_\_ (38) Other bus (e.g., bus based motorhome) (specify) \_\_\_\_\_
- \_\_\_ (39) Unknown bus type

**Van Based Light Truck (≤10,000 lbs GVWR)**

- \_\_\_ (40) Van (includes VW bus, Vanagon, Kombi, Beauville, Chateau, Club Wagon, Sportsman - excludes moving van)
- \_\_\_ (41) Van-commercial cutaway (includes box van, multi-stop, parcel, van pickups)
- \_\_\_ (42) Van based motorhome
- \_\_\_ (48) Other van type (specify) \_\_\_\_\_
- \_\_\_ (49) Unknown van type

**Light Conventional Truck (Pickup style cab, ≤10,000 lbs GVWR)**

- \_\_\_ (50) Pickup (includes open box and caps)
- \_\_\_ (51) Pickup with slide-in camper
- \_\_\_ (52) Pickup based motorhome (chassis mounted)
- \_\_\_ (53) Cab chassis based (includes rescue vehicles, light stake, dump, and tow trucks)
- \_\_\_ (54) Truck based panel
- \_\_\_ (55) Truck based station wagon (4-door, includes Suburban, Travelall, Wagoneer)
- \_\_\_ (56) Truck based utility (2-door, includes Blazer, Bronco - 78 on, Jimmy, Ramcharger, Cherokee, Trailduster, Scout)
- \_\_\_ (58) Other light conventional truck (e.g., stretched Suburban limousine) (specify) \_\_\_\_\_

- \_\_\_ (59) Unknown light conventional truck
- \_\_\_ (69) Unknown light truck (van or pickup)

**Medium/Heavy Truck (> 10,000 lbs GVWR)**

- \_\_\_ (70) Step vans
- \_\_\_ (71) Single unit straight truck (10,000 lbs < GVWR ≤ 26,000 lbs)
- \_\_\_ (72) Single unit straight truck (> 26,000 lbs GVWR)
- \_\_\_ (73) Medium/heavy truck based motorhome
- \_\_\_ (74) Truck-tractor with no cargo trailer
- \_\_\_ (75) Truck-tractor pulling one or more trailers
- \_\_\_ (77) Truck-tractor (unknown if pulling trailer)
- \_\_\_ (78) Unknown medium/heavy truck type
- \_\_\_ (79) Unknown truck type (light/medium/heavy)

**Other Vehicles**

- \_\_\_ (80) Snowmobile
- \_\_\_ (81) Farm equipment other than trucks
- \_\_\_ (82) ATV, all terrain vehicle (e.g., dune/swamp buggy)
- \_\_\_ (83) Construction equipment other than trucks (e.g., grader, off road)
- \_\_\_ (88) Other (e.g., go-cart, fork lift, city street sweeper) (specify). \_\_\_\_\_
- \_\_\_ (89) Unknown other vehicle (specify) \_\_\_\_\_
- \_\_\_ (99) Unknown body type

COMPLETED BY TEAM	
<p>1 Primary Sampling Unit Number <span style="float: right;">1 2</span></p> <p>2 Case Number-Stratification <span style="float: right;">3 4 5 6</span></p> <p>3 Record Number <span style="float: right;">3 7</span></p> <p>4 Transaction Code <span style="float: right;">8</span></p> <p>5 Version Number <span style="float: right;">0 9</span></p> <p>6 Investigator I D Number <span style="float: right;">10</span></p>	<p>9. Date vehicle inspected and field data elements obtained <span style="float: right;">0 0 0 0 8 14 15 16 17 18 19</span></p> <p>10. Completing Person <span style="float: right;">0 20</span></p> <p>11 Reason Vehicle Inspection Not Completed</p> <p><input type="checkbox"/> (00) Not required</p> <p><input type="checkbox"/> (01) Inspection completed</p> <p><input type="checkbox"/> (02) Vehicle cannot be located</p> <p><input type="checkbox"/> (03) Vehicle repaired</p> <p><input type="checkbox"/> (04) Vehicle outside of study area</p> <p><input type="checkbox"/> (05) Vehicle impounded</p> <p><input type="checkbox"/> (06) Vehicle sold</p> <p><input type="checkbox"/> (07) Hit and run vehicle</p> <p><input type="checkbox"/> (08) Owner could not be located</p> <p><input type="checkbox"/> (09) Owner refusal</p> <p><input type="checkbox"/> (10) Insurance company refusal</p> <p><input type="checkbox"/> (11) Attorney refusal or litigation</p> <p><input type="checkbox"/> (12) Repair or tow facility refusal</p> <p><input type="checkbox"/> (13) Stolen</p> <p><input type="checkbox"/> (14) Wrong name and address on PAR</p> <p><input type="checkbox"/> (15) Interstate truck</p> <p><input type="checkbox"/> (16) Commercial vehicle unavailable</p> <p><input type="checkbox"/> (17) Other (specify): <span style="float: right;">0 0 21 22</span></p>
VEHICLE INSPECTION	
<p>7 Vehicle Number <span style="float: right;">11 12</span></p> <p>8 Reason Vehicle Registration Records are not Obtainable</p> <p><input type="checkbox"/> (0) Not required - vehicle inspected</p> <p><input type="checkbox"/> (1) Records obtained</p> <p><input type="checkbox"/> (2) Hit and run vehicle - no information</p> <p><input type="checkbox"/> (3) Records not found</p> <p><input type="checkbox"/> (4) Vehicle not registered</p> <p><input type="checkbox"/> (5) Registration number not correct</p> <p><input type="checkbox"/> (6) No information on vehicle</p> <p><input type="checkbox"/> (7) Out-of-state or foreign vehicle</p> <p><input type="checkbox"/> (8) To be updated</p> <p><input type="checkbox"/> (9) Record not received before file closed <span style="float: right;">13</span></p>	<p style="text-align: center;"><b>COMPLETED BY ZONE CENTER</b></p> <p>22 Date Official Record Update Received <span style="float: right;">8 35 36 37 38 39 40</span></p> <p>23 Reviewed by <span style="float: right;">41 42</span></p>

-STOP FORM COMPLETE-

This vehicle is from an accident sampled in the Nontowaway stratum E  
Neither the inspection nor photographs of this vehicle are required

**ERROR TALLY**  
(Completed By Zone Center)

Blank - Not in error and not missing	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	0 - RDE system error	Response	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
2 - Error (not correctable)	Variable	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
3 - Error (correctable)	Response	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
6 - Sequencing errors in CDC's or injury data	Variable	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
8 - Data entry error	Response	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
9 - Unknown coded on field form	Variable	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
A - Hardcopy change with no error - not automated	Response	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
	Variable	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
	Response	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128



**VEHICLE UPDATE RECORD**

**This section must be completed prior to initial case submission**

<p>1 Primary Sampling Unit Number <span style="float: right;">1 2</span></p> <p>2 Case Number-Stratification <span style="float: right;">3 4 5 6</span></p> <p>3 Record Number <span style="float: right;">3 7</span></p> <p>4 Transaction Code <span style="float: right;">2 8</span></p> <p>5 Version Number <span style="float: right;">0 9</span></p> <p>6 Investigator I.D. Number <span style="float: right;">10</span></p>	<p>VEHICLE NUMBER: _____</p> <p>SOURCE OF DATA ON WHICH UPDATE IS BASED</p> <p>_____</p>
---	--

**VEHICLE DATA CODED ON INITIAL SUBMISSION**

12 Vehicle Model Year	18 19
13 Vehicle Make	20 21
14 Vehicle Model	22 23
15 Registration of Vehicle	24
16 Vehicle I.D. Number	25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41
17 Body Type	42 43
84 Vehicle Curb Weight	181 182 183

**UPDATED VEHICLE DATA BASED ON SUBSEQUENTLY ACQUIRED VEHICLE REGISTRATION DATA  
[or reason data not obtained (see response for log variable 8) \_\_\_\_\_]**

12 Vehicle Model Year	18 19
13 Vehicle Make	20 21
14 Vehicle Model	22 23
15 Registration of Vehicle	24
16 Vehicle I.D. Number	25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41
17 Body Type	42 43
84 Vehicle Curb Weight	181 182 183





### CRASH Program Summary

NCI

This form presents the CRASH Program summary information for traffic units numbered \_\_\_\_\_

NASS

	Vehicle No.	Make	Model
First Vehicle	_____	_____	_____
Second Vehicle	_____	_____	_____

Primary Sampling Unit Number \_\_\_\_\_

Case Number - Stratification \_\_\_\_\_

Common Impact Number \_\_\_\_\_

**2. VEHICLE CLASS WEIGHT?**

Veh #	Class	Occupant	Cargo	Curb	Weight
Veh # 1	_____	_____	_____	_____	_____
Veh # 2	_____	_____	_____	_____	_____

**3. Veh # 1 CDC PDOF** \_\_\_\_\_ ± \_\_\_\_\_

**4. Veh # 2 CDC PDOF** \_\_\_\_\_ ± \_\_\_\_\_

**5. VEHICLE STIFFNESS'**

Veh # 1 \_\_\_\_\_

Veh # 2 \_\_\_\_\_

**6. KNOWLEDGE of REST and IMPACT POSITIONS'**

\_\_\_\_\_ No - skip to 38    Damage Dimensions

\_\_\_\_\_ Yes

**7. REST**

Veh #	X	Y	↓
Veh # 1	_____	_____	_____
Veh # 2	_____	_____	_____

**8. IMPACT**

Veh #	X	Y	↓
Veh # 1	_____	_____	_____
Veh # 2	_____	_____	_____

**9. Slip angles PRIOR to impact?**

\_\_\_\_\_ No - skip to 11.

\_\_\_\_\_ Yes

**10. Slip angles**

Veh # 1 \_\_\_\_\_ ± \_\_\_\_\_

Veh # 2 \_\_\_\_\_ ± \_\_\_\_\_

**11. SUSTAINED CONTACT?**

\_\_\_\_\_ No

\_\_\_\_\_ Yes

**12. SKIDDING of Vehicle One?**

\_\_\_\_\_ No - skip to 15

\_\_\_\_\_ Yes

**13. Did SKIDDING stop prior to final rest?**

\_\_\_\_\_ No - skip to 15

\_\_\_\_\_ Yes

**14. Location**

X \_\_\_\_\_

Y \_\_\_\_\_

↓ \_\_\_\_\_

**15. Was Vehicle One's PATH CURVED?**

\_\_\_\_\_ No - skip to 17

\_\_\_\_\_ Yes

**16. Point on Path**

X \_\_\_\_\_

Y \_\_\_\_\_

↓ \_\_\_\_\_

**17. ROTATION DIRECTION of Vehicle One?**

\_\_\_\_\_ None - skip to 19

\_\_\_\_\_ Clockwise

\_\_\_\_\_ Counterclockwise

**18. More than 360 degrees?**

\_\_\_\_\_ No

\_\_\_\_\_ Yes

**19. SKIDDING OF Vehicle Two?**

\_\_\_\_\_ No - skip to 22.

\_\_\_\_\_ Yes

**20. Did SKIDDING stop prior to final rest?**

\_\_\_\_\_ No - skip to 22

\_\_\_\_\_ Yes

**21. Location**

X \_\_\_\_\_

Y \_\_\_\_\_

↓ \_\_\_\_\_

**22. Was Vehicle Two's PATH CURVED?**

\_\_\_\_\_ No - skip to 24.

\_\_\_\_\_ Yes

**23. Point on Path**

X \_\_\_\_\_

Y \_\_\_\_\_

↓ \_\_\_\_\_

**24. ROTATION DIRECTION of Vehicle Two?**

\_\_\_\_\_ None - skip to 26.

\_\_\_\_\_ Clockwise

\_\_\_\_\_ Counterclockwise

**25. More than 360 degrees?**

\_\_\_\_\_ No

\_\_\_\_\_ Yes

**26. Tire-Ground FRICTION'**

\_\_\_\_\_

National Accident Sampling System – Continuous Sampling Subsystem: CRASH Program Summary

<p>27 ROLLING RESISTANCE? [Option (1) or (2)]</p> <p>(1) Proportion of Braking Each Wheel</p> <p>28 ROLLING RESISTANCES for Veh # 1 RF ___ ___ ___          Individual Wheels LF ___ ___ ___          RR ___ ___ ___          LR ___ ___ ___</p> <p>29 ROLLING RESISTANCES for Veh # 2 RF ___ ___ ___          Individual Wheels LF ___ ___ ___          RR ___ ___ ___          LR ___ ___ ___</p> <p><b>OR</b></p> <p>(2) Longitudinal Deceleration</p> <p>30 Veh # 1 ___ ___ ___          31 Veh # 2 ___ ___ ___</p> <p>32 TRAJECTORY SIMULATION?</p> <p>___ No - skip to 38          ___ Yes - Steer angles?</p> <p>33 STEER ANGLES Veh # 1 RF ___ ___          LF ___ ___          RR ___ ___          LR ___ ___</p> <p>34 STEER ANGLES Veh # 2 RF ___ ___          LF ___ ___          RR ___ ___          LR ___ ___</p> <p>35 TERRAIN BOUNDARY?</p> <p>___ No - skip to 38.          ___ Yes - Boundary Points?</p> <p>36 BOUNDARY POINTS XBP1 ___ ___ ___          YBP1 ___ ___ ___          XBP2 ___ ___ ___          YBP2 ___ ___ ___</p> <p>37 SECONDARY FRICTION COEFFICIENT? ___ ___ ___</p>	<p>38. Are DAMAGE DIMENSIONS Known?</p> <p>___ No - PROGRAM COMPLETED?          ___ Yes - Dimensions in Inches</p> <p>39. Side damage          42. End damage Veh # 1 L ___ ___ ___</p> <p>40. Side damage          43. End damage C<sub>1</sub> ___ ___ ___          C<sub>2</sub> ___ ___ ___          C<sub>3</sub> ___ ___ ___          C<sub>4</sub> ___ ___ ___          C<sub>5</sub> ___ ___ ___          C<sub>6</sub> ___ ___ ___</p> <p>41. Side damage          44. End damage D: ___ ___ ___</p> <p>45. Side damage          48. End damage Veh # 2 L ___ ___ ___</p> <p>46. Side damage          49. End damage C<sub>1</sub> ___ ___ ___          C<sub>2</sub> ___ ___ ___          C<sub>3</sub> ___ ___ ___          C<sub>4</sub> ___ ___ ___          C<sub>5</sub> ___ ___ ___          C<sub>6</sub> ___ ___ ___</p> <p>47. Side damage          50. End damage D: ___ ___ ___</p>
---	--

If this Common Impact was with a Motor Vehicle *Not in Transport*, fill in the information below.

Model Year _____	Make _____	The CDC, crush profile (C <sub>1</sub> through C <sub>6</sub> ), and trajectory measurement for this vehicle should be recorded above
Curb Weight _____ lbs	Model _____	
Cargo Weight _____ lbs		
Total Occupant Weight _____ lbs	VIN _____	

Complete and ATTACH the appropriate schematic and damage dimensions (Vehicle Form page 6 and 6A-6P) to this Form.

Produced by the National Highway Traffic Safety Administration  
 Form 6A-6P (Rev. 10-1984)



OLDMISS Program Summary

NCI

<p>1. TITLE Primary Sampling Unit Number _____  Case Number - Stratification _____  Common Impact Number _____</p> <p>2. Size Category?  Vehicle # 1 _____  Vehicle # 2 _____</p> <p>3. Stiffness Category?  Vehicle # 1 _____  Vehicle # 2 _____</p> <p>4. Vehicle Weights? (Lbs.)  Curb Occupant(s) Cargo  Veh # 1 ____ + ____ + ____ = _____*  Veh # 2 ____ + ____ + ____ = _____*  *(Ø = Unknown)</p> <p>5. Vehicle Heading Angles At Impact?  ψ Vehicle # 1 ± _____°  ψ Vehicle # 2 ± _____°</p> <p>6. Damaged Area Of Each Vehicle?  Vehicle # 1 _____  Vehicle # 2 _____  (F = Front, B = Back, L = Left, R = Right)</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 15%; text-align: center;">Year</td> <td style="width: 15%; text-align: center;">Make</td> <td style="width: 15%; text-align: center;">Model</td> <td style="width: 15%; text-align: center;">NASS Veh #</td> </tr> <tr> <td>OLDMISS Veh. # 1</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>OLDMISS Veh. # 2</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </table> <p>7. For Which Vehicle Is The Damage Known? _____</p> <p>8. Damage Width For Known Vehicle? (Inches)  L _____</p> <p>9. Number Of Crush Measurements For Known Vehicle?  (2, 4 or 6) _____</p> <p>10. Crush Measurements For Known Vehicle? (Inches)  C<sub>1</sub> _____  C<sub>2</sub> _____  C<sub>3</sub> _____  C<sub>4</sub> _____  C<sub>5</sub> _____  C<sub>6</sub> _____</p> <p>11. Damage Midpoint Offset For Known Vehicle? (Inches)  D ± _____</p> <p>12. PDOF In Degrees For Known Vehicle? (-360 to 360°)  ± _____</p> <p>13. Estimated Damage Midpoint Offset For Unknown Vehicle? (Inches)  D ± _____</p>		Year	Make	Model	NASS Veh #	OLDMISS Veh. # 1	_____	_____	_____	_____	OLDMISS Veh. # 2	_____	_____	_____	_____
	Year	Make	Model	NASS Veh #												
OLDMISS Veh. # 1	_____	_____	_____	_____												
OLDMISS Veh. # 2	_____	_____	_____	_____												

Variable Name: Investigator I.D. Number

Format: 1 column - numeric

Beginning  
Column 10

Element Values:

Range: 1 through 9

Source: Zone Center.

Remarks:

The person who was primarily responsible for the completion of the Vehicle Form shall enter his/her unique number.

Each researcher's unique number is assigned by the PSU's Zone Center.

This variable is a mandatory variable and cannot be changed.

Variable Name: Vehicle Number

Format: 2 columns - numeric

Beginning  
Column 11

Element Values:

Range: 01 through 30

Source: PAR

Remarks:

Numbers assigned to vehicles must be consecutive starting with 01 with no missing numbers. Each motor vehicle in-transport must be assigned a unique number. Vehicle numbers are to be assigned consecutively according to the order NASS vehicles are listed on the PAR. If there are any NASS vehicles not listed on the PAR, then use the next consecutive number as the researcher determines.

In the instance where one motor vehicle is towing another, the vehicle number or numbers assigned depends on the accident circumstances and the type of linkage between the vehicles. If the linkage between the vehicles is fixed (e.g., tow bar, cradle, etc.), then the combination is one vehicle. A fixed linkage is defined as one which has the property of keeping the towed unit separated from the power unit by a distance which is essentially constant. Included within this definition are cradle linkages where the towed unit has two or more wheels off the ground.

If the linkage is nonfixed (e.g., rope, chain, etc.), then assign a vehicle number to the power unit component independent of whether or not it was involved in the accident. The towed component is assigned a vehicle number only if it was involved in the accident. If the linkage is nonfixed, then each vehicle is considered to be in-transport.

Do not assign a number to any struck motor vehicle not in-transport (e.g., a vehicle parked out of the roadway). A Vehicle Form is not completed for these vehicles nor is a Driver Form. Any occupants they contain, including a person who was intent on driving the vehicle, are to be handled using the Pedestrian & Nonmotorist Form. However, the vehicle should be shown on the accident diagram and referred to as P-1, etc. Also, data which may be required to exercise the CRASH program is to be collected. The necessary data questions are located at the bottom of the second page of the CRASH Program Summary.

Variable Name: Number of Occupant Forms Submitted

Format: 2 columns - numeric

Beginning  
Column 13

Element Values:

Range: 00 through 50

97 97 or more

Source: Researcher determined -- inputs include police report, vehicle inspection, driver interviews, and other interviewees.

Remarks:

Code only the number of occupants in this vehicle for which an Occupant Form was submitted.

The value coded here should agree with the value coded on variable D08, Number of Occupants This Motor Vehicle, unless the actual number of occupants in this vehicle is unknown (D08 equal "99").

Code "01" (one occupant) is used in the case of a hit-and-run vehicle, where it is assumed that only one occupant/driver was present. Additional Occupant Forms (and thus the number coded here) can be submitted if reliable evidence exists that additional occupants were present.

This variable is a mandatory variable and cannot be changed.

Variable Name: Vehicle Role

Format: 1 column - numeric

Beginning  
Column 15

Element Values:

- 0 Noncollision
- 1 Striking unit
- 2 Struck unit
- 3 Both striking and struck
- 9 Unknown

Source: Researcher determined from all available information.

Remarks:

Code "0" (Noncollision) only when the noncollision occurred first, even if subsequent impacts occurred. Noncollision includes overturned (which includes overturning motorcycles), fire/explosion, jackknifed, or immersion. A vehicle that sets an object (e.g., cargo, spewed gravel, etc.) in motion which strikes or is struck by another motor vehicle prior to stabilization of the object is coded as "0". The other motor vehicle (if in transport) is either a Striking unit ("1") or a Struck unit ("2") depending on whether or not the unit is in motion or stationary.

A vehicle must be in motion to be a striking vehicle. If the vehicle was not in motion, then it was struck. If a vehicle in motion contacts an object with its leading end and/or side (including an object that was set in motion by another motor vehicle), then the vehicle is striking.

If a vehicle in motion contacts another vehicle, pedestrian, or nonmotorist with its leading end, and/or side, then the vehicle is striking. For example, in a headon collision both vehicles are striking. If a vehicle is moving forward and is not in rotation and contacts another vehicle, pedestrian, or nonmotorist with other than its front (with one exception), then the vehicle is struck. The exception is for sideswiping vehicles. Both sideswiping vehicles are striking. Sideswiping includes front or rear endswipes.

For a vehicle to be both striking and struck it must sustain two impacts such that they did not occur with the same vehicle (e.g., side-slap), object, pedestrian, or nonmotorist. If the impacts occurred at the same location on this vehicle, they must have occurred at different points in time in the accident sequence. The classical example of a vehicle which is both striking and struck is the chain reaction rear-end where the vehicle which is striking and struck is located within the chain.

A vehicle that impacts an object and sends that object into another vehicle, or another vehicle's path, is coded as "1" (Striking Unit).

VEHICLE ROLE (V09)

OTHER VEHICLE/ OBJECT/ Pedestrian or Nonmotorist	MOTOR VEHICLE UNDER CONSIDERATION (BEING INSPECTED)				NOT TRACKING	
	STATIONARY	TRACKING (Includes Controlled Turn)	CONTACT IS TO OTHER THAN ITS LEADING END <sup>1</sup>	Side/End Swiping Type Contact	(Significant yaw and/or Rotation)	Other than its Leading End and/or Side <sup>2</sup> is Contacted
VEHICLE IN MOTION	STRUCK	STRIKING	STRUCK <sup>3</sup>	STRIKING	STRIKING	STRUCK
OBJECT IN MOTION	STRUCK	STRIKING	STRUCK <sup>3</sup>	STRIKING	STRIKING	STRUCK
STATIONARY VEHICLE OR OBJECT	STRUCK	STRIKING	STRIKING	STRIKING	STRIKING	STRUCK
PEDESTRIAN OR NON-MOTORIST	STRUCK	STRIKING	STRUCK <sup>3</sup>	STRIKING	STRIKING	STRUCK

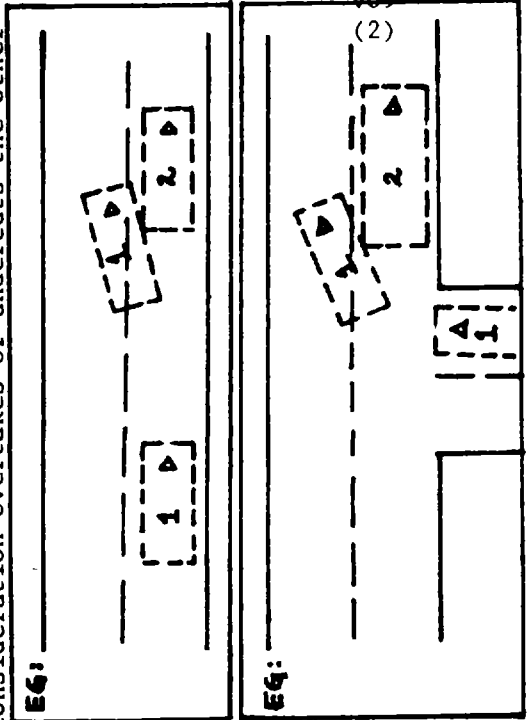
1. Leading End (Tracking): That end (Back or Front) of the vehicle under consideration which passes over a section of terrain before its opposite end.

2. Leading End and/or Side (Not Tracking): That end and/or side (Back, Front, Left or Right) of the vehicle under consideration which passes over a section of terrain before its opposite end and/or side.

3. Exception: Code "Striking" in those cases where the vehicle under consideration overtakes or undercuts the other vehicle/object/pedestrian or nonmotorist.

a. Overtaking: The vehicle under consideration is passing the other vehicle/object/pedestrian or nonmotorist and contacts the other vehicle/object/pedestrian or nonmotorist with its side.

b. Undercutting: The vehicle under consideration "cuts a corner" or turns in such a manner as to contact with its side the other vehicle/object/pedestrian or nonmotorist which is stationary or moving in the same general direction.





Variable Name: Manner of Leaving Scene (Determined by Investigator)

Format: 1 column - numeric

Beginning  
Column 16

Element Values:

- 1 Driven
- 2 Towed - due to vehicle damage
- 3 Towed - not due to vehicle damage
- 4 Towed - details unknown
- 5 Abandoned
- 9 Unknown

Source: Researcher determined -- inputs include vehicle inspection, interviewees, wrecker operators, police report.

Remarks:

This variable measures the disposition of the vehicle or power unit of an articulated combination at the accident scene.

The source of information for selecting an element value is the researcher, based on his/her final information which may be different from the police report.

Code "2" (Towed - due to vehicle damage) refers to any towing which is due to disabling damage caused by this accident which prohibits vehicle movement under its own power.

Code "3" (Towed - not due to vehicle damage) refers to those cases where the towing results from other than damage (e.g., mired vehicles, driver arrested, etc.).

Code "4" (Towed - details unknown) refers to any towing, the reason for which is unknown. In other words, a vehicle is towed but it cannot be determined whether it was due to damage or for other reasons.

For vehicles which are discovered later to have been towed due to damage but which are not reported as such on the police report, code "2" (Towed - due to vehicle damage).

Code "5" (Abandoned) should only be used when all the information available to the researcher, at the time of case submission, indicates that the vehicle still remained at the scene.

Variable Name: Manner of Leaving Scene (Determined by Investigator) [cont'd.]

Consider the following examples.

If a vehicle is involved in a previous accident (stabilization had occurred) and is then involved in another accident (in-transport because on roadway) and finally is towed from the scene but not because of the damage sustained in the second impact, then code "3" (Towed - not due to vehicle damage) is used.

If a vehicle is pushed home by hand or by another vehicle after the accident because it was not driveable, then code "2" (Towed - due to vehicle damage).

A vehicle is driven from a scene and subsequently breaks down. It is towed from the subsequent location. The towing may have been a result of the damage sustained in the accident. Even if the subsequent towing was due to damage, code "1" (Driven) for this vehicle.

Variable Name: Hit and Run Involvement

Format: 1 column - numeric

Beginning  
Column 17

Element Values:

- 0 No hit-and-run
- 1 Yes - hit and run involved vehicle

Source: Primary source is the police report; the researcher can determine if the police report contains an omission or a commission and modify accordingly.

Remarks:

A hit-and-run may occur when a motor vehicle in-transport has contact with: (a) another motor vehicle in-transport, (b) a motor vehicle not in transport, (c) a motor vehicle not in transport which contains a nonmotorist, (d) a pedestrian, (e) pedalcyclist, (f) another nonmotorist, or (g) an object. Hit-and-run is only considered when a motor vehicle in-transport, or its driver, departs from the scene; therefore, fleeing pedestrians and motor vehicles not in-transport are excluded.

It does not matter whether the hit-and-run vehicle was striking or struck. The hit-and-run vehicle(s) is (are) the one(s) that departed prior to investigation by the police, or that vehicle which is abandoned at the scene when its occupant(s) fled from the area (see exceptions below). If the police report indicates that the vehicle was involved in a collision which was investigated, but there is little or no information on that vehicle because of its departure prior to police arrival on-scene, then "hit-and-run" should be indicated.

Exceptions to this "departed prior to investigation by the police" rule exist. One exception occurs if an occupant, or occupants, of a vehicle are taken, or go, directly from the scene to a medical treatment facility or physician. If doubt exists concerning the departure for treatment, assume hit-and-run. A second exception involves a driver who leaves the scene but furnishes name, address, vehicle make, model, and model year such that it is recorded on the PAR, and the PAR does not indicate hit-and-run. No hit-and-run (code "0") is to be coded in this instance independent of the truthfulness of the information provided. A third exception involves vehicles which set an object in motion such that (1) the object is contacted, before it stabilizes, by another in-transport motor vehicle, and (2) the vehicle which set the object in motion leaves the scene without providing the pertinent information (compare with exception two above), and (3) the PAR does not indicate hit-and-run. In this instance code "0" (No hit-and-run) is to be used; however, if the PAR had indicated hit-and-run, then code "1" (Yes - hit-and-run involved vehicle) should be used.

Variable Name: Hit and Run Involvement (cont'd.)

Code "1" (Yes - hit and run involved vehicle) when it has been determined that a hit and run (as defined in paragraphs one through three of this variable) has occurred.

When the presence of a hit-and-run vehicle is indicated (V11 equals code "1"), the NASS researcher should include Vehicle and Driver Forms for each such vehicle. If the vehicle was known or assumed to have been in-transport at the time of the accident, at least one Occupant Form should be completed. If it can be determined from a reliable source that a vehicle contained "x" number of occupants or nonmotorists (departed scene but was not in-transport at time of impact) at the time of its involvement, then submit the appropriate number of forms (Occupant or Pedestrian and Nonmotorist). Although most of the variables on the forms will have element values which are unknown, the forms are necessary to document the presence of the vehicle(s) and its person(s).

Hit-and-run (code "1") can also be used if it is alleged by one of the involved parties that another vehicle, not reported by the police, was involved in the accident. However, the allegation must be supported by statements to this effect from an unbiased witness or from the existing physical evidence. An unsupported claim by one of the parties that a hit-and-run vehicle was involved should be coded as no hit-and-run ("0").

If the PAR indicates the presence of a hit-and-run vehicle, but the NASS researcher learns during the investigation that the allegation of the involvement of a hit-and-run vehicle was fabricated, then any information about the fabricated vehicle can be dropped. Caution must be used in this instance. The dropping of a police-reported vehicle must be based on an interviewee's admission or upon reliable evidence collected. Suspicion of falsehood is not an acceptable justification.

Variable Name: Vehicle Model Year

Format: 2 columns - numeric

Beginning  
Column 18

Element Values:

Range: 60 through 88

Code the last two digits of the model year for which the vehicle was manufactured.

99 Unknown

Source: Primary source is the VIN during vehicle inspection; secondary sources include police report and interviewees.

Remarks:

A vehicle manufactured as a 1988 model is to be coded as "88".

Variable Name: Vehicle Make

Format: 2 columns - numeric

Beginning  
Column 20

Element Values:

Automobile

01	American Motors	39	Jaguar
02	Jeep (includes AMC-Jeep, Kaiser)	40	Lancia
03	AM General	41	Mazda
		42	Mercedes Benz
		43	MG
06	Chrysler	[18]	Opel
07	Dodge	44	Peugeot
08	Imperial	45	Porsche
09	Plymouth	46	Renault
		47	Saab
		48	Subaru
12	Ford	49	Toyota
13	Lincoln	50	Triumph
14	Mercury	51	Volvo
		52	Mitsubishi
		53	Suzuki
18	Buick (includes Opel)	59	Other foreign
19	Cadillac	<u>V14</u>	
20	Chevrolet	31	Aston Martin
21	Oldsmobile	32	Bricklin
22	Pontiac	33	Citroen
23	GMC	34	Delorean
		35	Ferrari
		36	Hillman
29	Other domestic	37	Jensen
	<u>V14</u>	38	Lamborghini
	01 Studebaker/Avanti	39	Lotus
	02 Checker	40	Maserati
	28 Other domestic (e.g., Desoto)	41	Morris
		42	Rolls Royce/Bentley
30	Volkswagen (domestic and foreign)	43	Rover
31	Alfa Romeo	44	Simca
32	Audi	45	Sunbeam
33	Austin/Austin Healey	46	TVR
34	BMW	47	Daihatsu
35	Datsun/Nissan	48	Desta (APV-utility)
36	Fiat	49	Reliant (British)
37	Honda	50	Yugo
38	Isuzu	51	Hyundai
		58	Other foreign (e.g., Morgan, Singer)

Variable Name: Vehicle Make (cont'd.)

Motored Cycles

[34]	BMW	[48]	Subaru
60	BSA	[49]	Toyota
61	Ducati	[30]	Volkswagen
62	Harley-Davidson	[51]	Volvo
[37]	Honda	88	White
63	Kawasaki		
64	Moto-Guzzi	95	Other
65	Norton		<u>V14</u>
[53]	Suzuki	01	Autocar
[50]	Triumph	02	Auto-Union-DKW
67	Yamaha	03	Divco
69	Other	04	Western Star
		05	IVECO
70	Mo-ped (all mo-peds whose manufacturer is not specifically listed above)	88	Other truck or bus(e.g., Oshkosh)

Trucks and Busses

[03]	AM General
80	Brockway
[20]	Chevrolet
81	Diamond Reo or Reo
[35]	Datsun
[07]	Dodge
[12]	Ford
82	Freightliner or White Freightliner
83	FWD
[23]	GMC
84	International Harvester
[38]	Isuzu
[02]	Jeep
85	Kenworth
86	Mack
[41]	Mazda
[42]	Mercedes Benz
[52]	Mitsubishi
87	Peterbilt
[09]	Plymouth

Other make

98	Other make (use codes 29, 59, 69, 70, 96 if applicable)
----	---

Unknown make

99	Unknown make
----	--------------

[ ] The brackets mean that the make's number has been previously listed.

Variable Name: Vehicle Make (cont'd.)

## Alphabetical Listing of Makes

31	Alfa Romeo	82	Freightliner or	61	Moto-Guzzi
03	AM General		White Freightliner	35	Nissan
01	American Motors	83	FWD	65	Norton
5931	Aston Martin	23	GMC	21	Oldsmobile
32	Audi	62	Harley-Davidson	18	Opel
33	Austin	5936	Hillman	87	Peterbilt
34	BMW	37	Honda	44	Peugeot
5932	Bricklin	5951	Hyundai	09	Plymouth
80	Brockway	84	International	22	Pontiac
60	BSA		Harvester	45	Porsche
18	Buick	38	Isuzu	5949	Reliant (British
19	Cadillac	39	Jaguar	46	Renault
2902	Checker	02	Jeep	5942	Rolls Royce/Bent
20	Chevrolet	5937	Jensen	5943	Rover
06	Chrysler	63	Kawasaki	47	Saab
5933	Citroen	85	Kenworth	5944	Simka
35	Datsun	5938	Lamborghini	2901	Studebaker/Avant
5934	Delorean	40	Lancia	48	Subaru
5948	Desta (APV- utility)	13	Lincoln	5945	Sunbeam
5947	Diahatsu	5939	Lotus	53	Suzuki
81	Diamond Reo or Reo	86	Mack	50	Triumph
07	Dodge	5940	Maserati	49	Toyota
61	Ducati	41	Mazda	5946	TVR
5935	Ferrari	42	Mercedes-Benz	30	Volkswagen
36	Fiat	14	Mercury	51	Volvo
12	Ford	43	MG	88	White
		52	Mitsubishi	67	Yamaha
		5941	Morris	5960	Yugo

Source: Primary source is the VIN during vehicle inspection; secondary sources include the police report and interviewees.

Remarks:

Please write the Vehicle Make of the vehicle in the available space for ready visual reference, even though the information is incorporated in the Make Code.



V13  
(4)

Variable Name: Vehicle Make (cont'd.)

The Make codes are organized into general groups. These groups are:

01-29 - Domestic automobiles  
 30-59 - Foreign automobiles  
 60-70 (34, 37, 50, 53) - Motored Cycles  
 80-88 (02, 03, 07, 09, 12, 20, 23, 30, 35, 38, 41, 42, 48, 49, 51) -  
           Trucks and Buses  
 29, 59, 69, 70, 95, 98 - Other  
 99 - Unknown

If the make of the vehicle is unknown and is not listed as one of the specific attributes, select an "other" code based upon the vehicle's body type (V17). Reference table below:

<u>V13 Vehicle Make</u>	<u>V14 Vehicle Model</u>	<u>17 Body Type</u>
29 Other domestic automobile	01, 02, 28	01-13
59 Other foreign automobile	31-46, 58	01-13
69 Other motored cycle (except Moped)	61-68	20, 28, 29
70 Other Moped	61, 62	21
95 Other Truck/Bus	01-04, 78, 88	30-79
98 Other	97	80-89, 99

If the make of a vehicle is known, but the model is not, then code Vehicle Model (V14) as "99" (Unknown).

If the make and model of a vehicle is not known but the body style is known (e.g., hit-and-run vehicle), then code Vehicle Make (V13) and Vehicle Model (V14) as "99" (Unknown) and Body Type (V17) as "01-06, 08-13, 20-21, 28-32, 38-42, 48-56, 58-59, 69-75, 77-83, 88-89".

If no information is available for a vehicle then Vehicle Make (V13), Vehicle Model (V14), and Body Style (V17) will all be coded "99" (Unknown).

V13, Vehicle Make, V14, Vehicle Model, and V17, Body Style, have to be used in conjunction; therefore, refer to remarks for V14 and V17.

Variable Name: Vehicle Model

Format: 2 columns - numeric

Beginning  
Column 22

Element Values:

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>American Motors (01)</u>			
01	Rambler/American	Rogue, 220, 440, Scrambler	
02	Rebel/Matador	550,770,660, Classic, Brougham, Barcelona x, Marlin	
03	Ambassador	880,990, SST, DPL, Brougham	
04	Pacer	DL, Limited	
05	AMX	DL, Limited	68-70
06	Javelin	SST, AMX (1971-1974)	
07	Hornet/Concord	SST, Sportabout, AMX (1975-1978), Limited, DL, SC 360	
08	Spirit/Gremlin	Limited, DL, Custom, AMX (1979 on), GT (1983 on)	
09	Eagle	DL, Limited	80 on
10	SX4/Kammback	DL, Limited	81 on
*	Alliance/Encore		
28	Other (domestic automobile)		
72	Espace (Mini-Van)		
99	Unknown		
<u>Jeep (02)</u>			
01	CJ-2/CJ-3/CJ-4	Military	
02	CJ-5/CJ-6/CJ-7/ CJ-8	Scrambler, Golden Eagle, Renegade, Laredo	thru 86
03	Wrangler (YJ)		87 on
71	Cherokee	Wide Track Chief, Commando, Jeepster	
73	Pick-up	J-10, J-20, Honcho	
76	Wagoneer	Custom, Brougham Limited	
77	Comanche		86 on
78	Other (light truck)		
28	Other (domestic automobile)		
99	Unknown		

\* See Renault

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>AM General (03)</u>			
01	Dispatcher	Post Office (Jeep)	
75	Dispatcher	DJ-Series, Post Office Delivery (Van)	
87	Bus (rear engine)	Transit	
88	Other (truck)	Military off-road	
28	Other (domestic automobile)		
99	Unknown		
<u>Chrysler (06)</u>			
07	LeBaron	S, Medallion, Salon,	77 on
09	Cordoba	Crown, 300, LS	
10	Newport	Custom	thru 81
		Royal, 300	thru 71
	New Yorker,		thru 82
		Imperial	81-83
	Fifth Avenue		83 on
		Town and Country, Brougham	
14	E-Class	New Yorker, Grand Lebaron, GTS	83 on
15	Laser	Turbo, XE, XT	84-86
16	Lebaron		85 on
28	Other (domestic automobile)		
31	Maserati Sport		87 on
99	Unknown		
<u>Dodge (07)</u>			
01	Dart	170,270, Custom, GT, Swinger, Sport, Demon, 340,360, Special, Special Edition	
02	Coronet/Charger/Magnum	Brougham, Custom, Super Bee, Crestwood, Deluxe, XE, R/T, 440,500	
03	Polara/Monaco	Custom, Special, Police, Taxi, Crestwood, Brougham	
04	Royal Monaco		
05	Challenger	R/T, T/A, Rallye	70-74
06	Aspen	Custom, Special Edition, Police	
07	Diplomat	Medallion, "S", Salon	
08	Omni	024, De Tomaso, Miser, Charger 2.2, Custom, Shelby, GLH, America, Expo	

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>Dodge</u> (07) (cont'd.)			
09	Mirada		
10	St. Regis		
11	Aries (K)	Custom, SE	
12	400	LS	
13	Rampage (car based pick-up)	2.2	
14	600	ES	83 on
15	Daytona	Turbo, Z, Shelby, Pacifica	84 on
16	Lancer	Pacifica	
17	Shadow	ES	86 on
33	Challenger-foreign		78 on
34	Colt	GT, Custom, Carousel, RS	
35	Conquest		86 on
43	Colt Pickup, Vista Van	Power Ram, Ram 50, D50, W50	
70	Raider		87 on
71	Ramcharger	Ram	
72	Caravan	S-Van,	84 on
73	D, W-Series Pickup	Ram, Custom, Royal, Miser	
74	Van (B Series)	Sportsman Van, Royal, Maxiwagon, Ram Mini Ram Van	
75	Van Derivative	Karivan	
77	Dakota	4 x 4	
81	Medium/Heavy: CBE		
82	Medium/Heavy: COE, low entry		
83	Medium/Heavy: COE, high entry		
84	Medium/Heavy: unk. engine location		
85	Medium: Bus (not van based)		
88	Other (truck)		
28	Other (domestic automobile)		
90	Medium/Heavy: COE, unk. entry position		
99	Unknown		

V14  
(4)

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>Imperial</u> (08)			
10	Imperial	Imperial LeBaron, Crown	thru 75
28	Other (domestic automobile)		
99	Unknown		
<u>Plymouth</u> (09)			
01	Valiant/Duster/ Scamp	100,200, Taxi, Brougham, Signet, Custom, Special 340, Special 360 340, 360	thru 76
02	Satellite/ Belvedere	Belvedere I, II, GTX, Road Runner (thru 1974), Brougham, Sebring, Sebring Plus, Superbird	
03	Fury	I, II, III, Road Runner (1975), Suburban, Salon, VIP, Sport	
04	Gran Fury	Sedan, Brougham, Custom, Sport, Suburban	
05	Barracuda	Formula "S", 340, Gran Coupe, AAR Cuda	
06	Volare	Custom, Premier, Road Runner (1976 on), Police	
07	Caravelle		
08	Horizon	TC-3, Turismo, Miser, Turismo 2.2, Custom, SE, Duster, America, Expo	
11	Reliant (K)	Custom, SE	
13	Scamp (car based pick-up)	GT	82 on
17	Sundance		86 on
31	Cricket		
32	Arrow	GS, GT, Fire Arrow	
33	Sapporo		
34	Champ/Colt	Custom	
35	Conquest	TSI	
71	Trailduster		
72	Voyager	S-Van	84 on
74	Van (Voyager)	Sport, Premier	
77	Arrow pickup (foreign)		
78	Other (light truck)		
28	Other (domestic automobile)		
99	Unknown		

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>Ford</u> (12)			
01	Falcon	Falcon-Futura (through 1969)	thru 70
02	Fairlane	500, 500 XL, Fairlane-Torino (1968-70)	thru 70
03	Mustang/Mustang II	Mach I, Boss, Grande, Cobra, Cobra II, Ghia, SVO, GT	
04	Thunderbird	All sizes, Town Landau, Heritage, Elan, Fila, Turbo Coupe Sport, LX	
05	LTD II	Squire, Brougham	77-79
06	LTD/Galaxy/ Custom	XL, Landau, Ranch Wagon, County Squire, S, 500, 500 XL, Brougham, Crown Victoria (81 and 82)	
07	Ranchero (car based pick-up)	500, GT, Squire, Custom	
08	Maverick	Grabber	70-77
09	Pinto	MPG, Pony, ESS	71-80
10	Torino/Gran Torino	Elite, GT, Cobra, Sport, Squire, Brougham	71-76
11	Granada	Ghia, L, GL, GLX	75 on
12	Fairmont	Fairmont-Futura (1978-1981)	78 on
13	Escort	L, GL, GLX, SS, GT	81 on
14	EXP	Turbo	82 on
15	Tempo	L, GL, GLX, Sport, 4x4	83 on
16	Crown Victoria		83 on
17	Taurus	LX, MT5	86 on
31	English Ford	(e.g., Cortina)	
32	Fiesta		78-80
33	Laser	GL Ghia, GL Sport	83 on
34	Festivia	KIA/Mazda	87 on
70	Bronco II	Ranger based	83 on
71	Bronco	Full size truck based	
72	Aerostar		
73	F-Series Pickup	F-100 to F-350	
74	Van	E-Series, Econoline, Club Wagon, Chateau, Cutaway based (e.g., box van, van bus/RV)	
75	Van derivative	Parcel	
77	Ranger	Super Cab, Courier (Import), STX	82 on
78	Other (light truck)		
81	Medium/Heavy: CBE	F-500 through F-800, L/LN/LNT/LT/LS/LTS-series, FT8000, FT800D, FT800	
82	Medium/Heavy: COE low entry	C/CT-series	
83	Medium/Heavy: COE, high entry	C/CLT-series	

Variable Name: Vehicle Model (cont'd.)

Model Code	Vehicle Line	Includes	Model Years
<u>Ford</u> (12) (cont'd.)			
84	Medium/Heavy: unk. engine location		
85	Medium Bus	B-series (not van based)	
88	Other (truck)		
90	Medium/Heavy: COE, unk. entry position		
28	Other (domestic automobile)		
99	Unknown		
<u>Lincoln</u> (13)			
01	Lincoln	Lincoln Continental (thru 81), Town Car (82 on)	
02	Mark	I, II, III, IV, V, VI, VII, LSC	
05	Continental		82 on
11	Versailles		77-80
28	Other (domestic automobile)		
99	Unknown		
<u>Mercury</u> (14)			
02	Cyclone	GT, CJ, Spoiler	thru 71
03	Capri-Domestic		79-86
04	Cougar	Villager, Brougham, XR7 (thru 80)	67 on
05	Cougar XR7		81 on
06	Marquis/Monterey	Marauder, X-100, Parklane, Colony Park, S-55, Custom, Brougham, Grand (thru 82), Montclair	67 on
08	Comet	Caliente, Capri (1966-1967), GT, Voyager, 202	
09	Bobcat		75-80
10	Montego	GT, MX, Villager, Brougham	67-76
11	Monarch	Ghia	75-81
12	Zephyr	Z7, GS	78 on
13	Lynx	L, LS, GS, RS, XR3	81 on
14	LN7		82-83
15	Topaz	L, LS, GS, 4 x 4	83 on
16	Grand Marquis		83 on
17	Sable		86 on

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>Mercury</u> (14) (cont'd.)			
31	Capri-foreign	Capri (1970-1978), Capri II	70-78
33	Pantera		
34	Merkur	XR4Ti	
35	Scorpio		87 on
36	Tracer	Mazda	
28	Other (domestic automobile)		
99	Unknown		
<u>Buick</u> (18)			
01	Regal/Century/ Special	GS, GS350, GS400, GS455, Luxus, Skylark, (thru 1972), Sportswagon, Wagon, Custom Special, Sport Coupe, Limited	thru 81
02	LeSabre/Wildcat/ Centurion	Estate Wagon, Custom, Luxus, Sport Coupe, Wagon, Limited, Invicta, T-Type	
03	Electra/Electra 225	Custom, Limited, Park Avenue, Wagon	
05	Riviera	"S" Type, "T" Type	
08	Apollo	S/R, Skylark (1975)	73-75
10	Regal	G-car, "T" Type, Grand National	82 on
12	Skyhawk	"S" Type, Road Hawk	75-81
15	Skylark	Limited, Sport, S/R, "S", Custom (see code 01), "T" Type, "T" Type Custom	76 on
16	Skyhawk	J-car, "T" Type	82 on
17	Century	A-car, "T" Type	82 on
18	Somerset	N-car, Regal	85 on
31	Opel Kadett		thru 75
32	Opel Manta/1900	Luxus, Rallye, Sports Coupe	thru 75
33	Opel GT		thru 75
34	Opel Isuzu	Deluxe, Sport	76-79
28	Other (domestic automobile)		
99	Unknown		
<u>Cadillac</u> (19)			
03	DeVille/Brougham	Calais, Fleetwood 60-Special, Coupe, Sedan	
04	Limousine	Fleetwood 75, Formal	
05	Eldorado	Touring Coupe, Biarritz	
09	Allante		87 on



V14  
(8)

Variable Name: Vehicle Model (cont'd.)

Model Code	Vehicle Line	Includes	Model Years
<u>Cadillac</u> (19) (cont'd.)			
06	Commercial Series	(e.g., ambulance, hearse)	thru 81
14	Seville	Elegante	76 on
16	Cimarron	J-car, D'oro	82 on
28	Other (domestic automobile)		
99	Unknown		
<u>Chevrolet</u> (20)			
01	Malibu/Chevelle	Classic, Councours, Laguna, S-3, Nomad Greenbriar, Estate, 300, SS-396/454, Deluxe	64 on
02	Caprice/Impala	Classic, Classic Brougham, Kingswood, Townsmen, Estate, Brookwood, Super Sport, Bel Air, Biscayne	
04	Corvette	Stingray	53 on
06	Corvair	Corvair Monza, 500, Corvair Spyder, Corsa	thru 69
07	El Camino	Royal Knight	59 on
08	Nova	Chevy II, Chevy Nova, LN, LE, Concours	thru 79
09	Camaro	SS, LT, Z-28, Berlinetta, Iroc-Z	67 on
10	Monte Carlo	G-car, SS, LS, Aerocoupe	70 on
11	Vega	GT, Cosworth, Kamback	71-77
12	Monza	2 + 2, Spyder, Sport, Towne Coupe	75-80
13	Chevette	Scooter	76 on
15	Citation	X-car, X-11	80 on
16	Cavalier	J-car, CS, RS, Z24	82 on
17	Celebrity	A-car, Wagon, Eurosport	82 on
19	Baretta/Corsica		87 on
31	Spectrum (Isuzu made)		
32	Nova (Toyota)		85 on
33	Sprint		
70	Blazer	S-10 based	83 on
71	Blazer	Full size truck based	
72	Astro Van		
73	C, K-Series Pickup		
74	G-Series Van	Beauville, Chevy Van, Sport Van	
75	Van Derivatives	P-Series, Parcel Van	
76	Suburban		
77	S-10	Luv Pickup	82 on
78	Other (light truck)		
81	Medium/Heavy: CBE	C50, C60 and C65 series, M60 and M65 s ries, H70, H80 and H90 series, J70, J80 and J90 series, Bison 90	

Variable Name: Vehicle Model (cont'd.)

Model Code	Vehicle Line	Includes	Model Years
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Chevrolet (20) (cont'd.)

82	Medium/Heavy: COE low entry	T60 and T65 series	
83	Medium/Heavy: COE high entry	Titan 90	
84	Medium/Heavy: unk. engine location	PS6500, P6T042	
85	Bus	S60 series	
88	Other (truck)		
90	Medium/Heavy: COE unk. entry position		
28	Other (domestic automobile)		
99	Unknown		

Oldsmobile (21)

01	Cutlass	Supreme, Calais, Cruiser, "S", "LS", Salon, Brougham, Vista Cruiser, 442, F-85 (thru 1972), Rallye 350, Hurst Olds	
02	Delta 88	Royale, Custom, Custom Cruiser, Jetstar 88, Delmont 88, Delta, Starfire (thru 1966)	
03	Ninety-Eight	Regency, Luxury	
05	Toronado	Brougham, XSR, Custom, Trofed	
06	Commercial Series	Chassis Cowl, CKD Chassis	
12	Starfire	"SX"	75-80
15	Omega	Brougham, Salon, F-87, F-85 (1975 on), X-car (1980 on)	73 on
16	Firenza	J-car	82 on
17	Ciera	A-car, Cutlass Ciera, ES, Brougham	82 on
18	Calais	N-car, GT	85 on
28	Other (domestic automobile)		
99	Unknown		

Pontiac (22)

01	LeMans/Tempest	Grand Am, Safari, T-37, Grand Sport, Luxury, Custom, GTO (thru 1973), Judge, GT-37, Sprint, Daewoo (1987 on)	
02	Bonneville/ Catalina/Parisienne	Brougham, Grand Safari, Safari, GrandVille, Executive, 2 + 2, Starchief	

V14  
(10)

Variable Name: Vehicle Model (cont'd.)

Model Code	Vehicle Line	Includes	Model Years
<u>Pontiac</u> (22) (cont'd.)			
05	Fiero	P-car, 2M4	84 on
08	Ventura	SJ, Custom, II, Sprint, GTO (1974 on)	71-77
09	Firebird/Trans Am	Esprit, Formula, Skybird, Redbird, Yellowbird, Spring, GTA	68 on
10	Grand Prix	LJ, SJ, Brougham, G-car	
11	Astre	Safari, Wagon, SJ, Custom	75-77
12	Sunbird	Sport, Safari, Wagon	76-80
13	T-1000/1000		81 on
15	Phoenix	LJ, SJ, X-car, (1980 on)	78 on
16	J-2000/2000	J-car, Sunbird, Convertible, LE, SE, GT	82 on
17	6000	A-car, STE	82 on
18	Grand Am	N-car, SE	85 on
28	Other (domestic automobile)		
99	Unknown		

GMC (23)

07	Caballero/Sprint		
70	Jimmy	S-15 based	83 on
71	Jimmy	Full sized truck based	
72	Safari (Mini-Van)		
73	C, K-Series Pickup		
74	G Van/Vandura, Rally Van		
75	Van Derivatives	P-series, Value Van, Magnavan	
76	Suburban		
77	S-15		82 on
78	Other (light truck)		
81	Medium/Heavy: CBE	C-5000, C-6000, C-7000 series, Brigadier 8000, Brigadier 9500, General 9500	
82	Medium/Heavy: COE low entry	W-6000, W-7000	
83	Medium/Heavy: COE high entry	Astro 95	
84	Medium/Heavy: unk. engine location	P5G500, P68042	
85	Bus	B-6000	
88	Other (truck)		
90	Medium/Heavy: COE unk. entry position		

V14

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>GMC</u> (23) (cont'd.)			
28	Other (domestic automobile)		
99	Unknown		
<u>Other domestic</u> (29)			
01	Studebaker/Avanti		
02	Checker		
28	Other (domestic automobile (e.g., Desoto)		
<u>Volkswagen</u> (30)			
31	Karmann Ghia		
32	Beetle		
33	Super Beetle		
34	411/412	Squareback, Fastback	
35	Squareback/ Fastback	Type 3, 1600	
36	Rabbit	L, GTI Sport, LS Custom, GL Deluxe	thru 84
37	Dasher		
38	Scirocco		
39	The Thing		
40	Jetta		
41	Quantum		
42	Golf	Syncro, GTI, Cabriolet	85 on
43	Rabbit Pickup		
44	Fox		87 on
74	Van/Vanagon/Camper		
78	Other (light truck)		
58	Other (foreign automobile)		
99	Unknown		
<u>Alfa Romero</u> (31)			
31	Spider	Veloce, 2000/1750, all roadsters	
32	Sports Sedan	Alfetta, Berlina, 2000/1750, Giulia Super, 4 door sedans, Milano (86 on)	
33	Sprint Veloce	Alfetta GT 2000 GTV, 1750 GTV, Giulia Sprint GT, all 2 door coupes	
34	GTV-6		
58	Other (foreign automobile)		
99	Unknown		

V14  
(12)

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>Audi</u> (32)			
31	Super 90		
32	100	LS, GL	
33	Fox		
34	4000	Coupe GT	
35	5000	Coupe	
36	Quattro		82 on
58	Other (foreign automobile)		
99	Unknown		
<u>Austin/Austin Healey</u> (33)			
31	Marina	GT	
32	America		
33	Healey Sprite		
34	Healey 3000	Healey 100	
35	Mini		
58	Other (foreign automobile)		
99	Unknown		
<u>BMW</u> (34)			
31	1600, 2002	Tii	
32	Coupe	3.OCS, 2800 CS	
33	Bavaria Sedan	2500, 2800	
34	630, 633, 635	CSI	
35	320i, 318i, 325E		
36	524i, 528i, 530i	TD, Automatic	83 on
	533i, 535i		
37	733i, 735i		
61	0- 50 cc		
62	51-124 cc		
63	125-349 cc		
64	350-449 cc		
65	450-749 cc		
66	750 cc or over		
58	Other (foreign automobile)		
99	Unknown		

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>Datsun/Nissan</u> (35)			
31	F-10		
32	200 SX		
33	B210/210/1200	Honeybee	
34	240/260/280/300	Z, ZX, 2 + 2	
35	310		
36	510	PL	
37	610	PL	
38	710	PL	
39	810/Maxima	Maxima	
40	Roadster (SPL 311/ SRL 311)	1600/2000 Convertible	thru 70
41	PL 411/RL 411		
42	Stanza	XE	82 on
43	Sentra		83 on
44	Pulsar	NX, EXA (86 on)	83 on
70	MPV		86 on
77	Pickup		
78	Other (light truck)		
58	Other (foreign automobile)		
83	Medium/Heavy: COE high entry		86 on
99	Unknown		
<u>Fiat</u> (36)			
31	124 (Coupe/Sedan)	Sport	
32	124 (Spider)	Spider 2000	
33	Brava/131		
34	850 (Coupe & Spyder)		
35	128		
36	X-1/9		
37	Strada		
58	Other (foreign automobile)		
99	Unknown		
<u>Honda</u> (37)			
31	Civic	1300, 1500, CVCC	
32	Accord	LX, CVCC	

V14  
(14)

Variable Name: Vehicle Model (cont'd.)

Model Code	Vehicle Line	Includes	Model Years
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Honda (37) (cont'd.)

33	Prelude		
34	600	Coupe, Sedan	
35	Civic-CRX	2 seater	
36	Acura	HX, Integra, Climax, Legend	86 on
61	0- 50 cc		
62	51-124 cc		
63	125-349 cc		
64	350-449 cc		
65	450-749 cc		
66	750 cc or over		
58	Other (foreign automobile)		
99	Unknown		

Isuzu (38)

31	I Mark	Gemini	
32	Impulse		83 on
33	Aska		87 on
70	Trooper II		84 on
77	P'up (Pick-up)	Rodeo, Space Cab	
78	Other (light truck)		
58	Other (foreign automobile)		
99	Unknown		

Jaguar (39)

31	XJ-S Coupe		
32	XJ6/XJ12 Sedan/Coupe L, XJ, C, 420/340 Sedans		
33	XK-E	2 + 2, V-12 Roadster, 120	
58	Other (foreign automobile)		
99	Unknown		

Lancia (40)

31	Beta Sedan /HPE		
32	Beta Coupe/Zagato		
33	Scorpion		
58	Other (foreign automobile)		
99	Unknown		

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>Mazda</u> (41)			
31	RX2		
32	RX3		
33	RX4		
34	RX7	GLE, SE	
35	GLC/323		
36	Cosmo		
37	626		
38	808		
39	Mizer		thru 76
40	R-100		thru 72
41	618/616		
42	1800		
43	929		86 on
77	Pick-up	B-2200, B-2000, SE5, Cab Plus, LX	
78	Other (light truck)		
58	Other (foreign automobile)		
99	Unknown		
<u>Mercedes-Benz</u> (42)			
31	200/220/230/240/ 250/280/300/260 (Sedan and 5 passenger "C" only)	SE,CD,D,SD,TD,CE,E [excludes 280 S, 280 SE (1975 on), 300 SD Sedan (see Code 37]	
32	230 SL/280 SL (2 passenger)		
33	350 SL/450 SL/ 380 SL/560 SL		
34	350 SLC/450 SLC/ 380 SLC/420 SLC/ 560 SLC		
35	300 SEL/280 SEL	TD-T, TD, CDT	
36	450 SEL/380 SEL/ 500 SEL/500 SEC/ 420 SEL/560 SEL/ 560 SEC		
37	450 SE/380 SE/ 280S/280 SE (1975 on)/300 SD		
38	600/6.9 Sedan	Pullman	
39	190		
75	Van Derivative	Kurbstar	82 on



Variable Name: Vehicle Model (cont'd.)

Model Code	Vehicle Line	Includes	Model Years
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Mercedes-Benz (42) (cont'd.)

81	Medium/Heavy: CBE		
82	Medium/Heavy: COE low entry		
83	Medium/Heavy: COE high entry		
84	Medium/Heavy: unk. engine location		
85	Medium: Bus		
88	Other (truck)		
90	Medium/Heavy: COE unk. entry position		
58	Other (foreign automobile)		
99	Unknown		

MG (43)

31	MG Midget		
32	MGB		
33	MGB GT		
34	MGA		
35	TA/TC/TD/TF		
36	MGC	MGC/GT	
58	Other (foreign automobile)		
99	Unknown		

Mitsubishi See V14 Code (52) listed after VolvoOpel See Buick--(18)Peugeot (44)

31	304		
32	403		
33	404		
34	505/504	STI	
35	604	SL, D	
58	Other (foreign automobile)		
61	0-50 cc		
62	51-124 cc		
99	Unknown		

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>Porsche</u> (45)			
31	911	S, E, T, SC, Carrera	
32	912/912E		
33	914	914/S	
34	924	Turbo, S	
35	928	S	
36	930/Turbo		82 on
37	944	Turbo, S	
38	959		86 on
58	Other (foreign automobile)		
99	Unknown		
<u>Renault</u> (46)			
31	LeCar	5	
32	10/Dauphine/ Caravelle/R-8		
33	12	R12	
34	15	R15TL	
35	16		
36	17	R17, Gordini Coupe	
37	R18i		
38	Fuego	TL, TS, GTL, GTS	
39	Alliance	L, DL, Limited	83 on
40	Encore	X-37	
41	Alpine GT		87 on
44	Medallion		87 on
58	Other (foreign automobile)		
99	Unknown		
<u>Saab</u> (47)			
31	99/99E/900/9000	Turbo	
32	Sonnet	Sonnet III, Sonnet 97	
33	95/96/97		
58	Other (foreign automobile)		
99	Unknown		

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
<u>Subaru</u> (48)			
31	FE/GF/DL/STD/GL/G/ GLF	4 wheel drive, Turbo 4x4	
32	Star		
33	360		
43	Brat	DL, GL	
78	Other (light truck)		
58	Other (foreign automobile)		
99	Unknown		
<u>Toyota</u> (49)			
31	Corona	Custom, Deluxe, Mark II, 1900, 2000	
32	Corolla	1100,1200,1600, Deluxe, Custom, SR 5, LE	
33	Celica	1900, 2000, GTS	
34	Celica Supra	Soarer	
35	Cressida		
36	Crown	2300, 2600	
37	Carina	2000	
38	Tercel	4WD Wagon, Corolla-Tercel	
39	Starlet		
40	Camry		
41	MR2	(2-seater)	85 on
*	Nova	See Chevrolet	
70	4-Runner		
71	Landcruiser		
72	Mini-Van		
77	Pickup	Chinook, LN44, Wonder Wagon, SR5, Extra Cab Sport	
78	Other (light truck)		
58	Other (foreign automobile)		
99	Unknown		
<u>Triumph</u> (50)			
31	Spitfire	I, II, III, IV, 1500	
32	GT6		
33	TR4	TR3, TR2, TR4A	
34	TR6		
35	TR7/TR8		
36	Herald	Vitesse	

Variable Name: Vehicle Model (cont'd.)

Model Code	Vehicle Line	Includes	Model Years
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Triumph (50) (cont'd.)

37	Stag		
61	0- 50 cc		
62	51-124 cc		
63	125-349 cc		
64	350-449 cc		
65	450-749 cc		
66	750 cc or more		
58	Other (foreign automobile)		
99	Unknown		

Volvo (51)

31	122	S	
32	142/144/145	S, Deluxe, GL, GLS, E	
33	164	S, E	
34	242/244/245	Deluxe, DL, GLE, GLT, GL	
35	262/264/265	GL	
36	1800	E, S, ES	
37	P-544		
38	760/780		83 on
39	740	GLE	
81	Medium/Heavy: CBE		
82	Medium/Heavy: COE, low entry		
83	Medium/Heavy: COE, high entry		
84	Medium/Heavy: unk. engine location		
85	Medium: Bus		
88	Other (truck)		
90	Medium/Heavy: COE, unk. entry position		
58	Other (foreign automobile)		
99	Unknown		

Mitsubishi (52)

31	Starion	2 + 2	83 on
32	Tredia		83 on
33	Cordia		83 on

Variable Name: Vehicle Model (cont'd.)

Model Code	Vehicle Line	Includes	Model Years
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Mitsubishi (52) (cont'd.)

34	Galant		
35	Mirage		
70	Montero		
72	Mini-Van		83 on
77	Pickup	Mighty, Max, SPX	
58	Other (foreign automobile)		
99	Unknown		

Suzuki (53)

31	SA310	GLX	
61	0-50 cc		
62	51-124 cc		
63	125-349 cc		
64	350-449 cc		
65	450-749 cc		
66	750 cc or over		
70	SJ - 410	Samurai SJ-413	
99	Unknown		

Other Import (59)

31	Aston Martin		
32	Bricklin		
33	Citroen		
34	Delorean		
35	Ferrari		
36	Hillman		
37	Jensen		
38	Lamborghini		
39	Lotus		
40	Maserati		
41	Morris		
42	Rolls Royce/Bentley		
43	Rover		
44	Simca		
45	Sunbeam		
46	TVR		
47	Daihatsu		
48	Desta (APV-utility)		

Variable Name: Vehicle Model (cont'd.)

<u>Model Code</u>	<u>Vehicle Line</u>	<u>Includes</u>	<u>Model Years</u>
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Other Import (59) (cont'd.)

49	Reliant (British)		
50	Yugo		
51	Hyundai		
58	Other (foreign automobile) [e.g., Morgan, Singer]		

MOTORED CYCLE (60-69)

V13

BMW (34)  
BSA (60)  
Ducati (61)  
Harley-Davidson (62)  
Honda (37)  
Kawasaki (63)  
Moto-Guzzi (64)  
Norton (65)  
Suzuki (53)  
Triumph (50)  
Yamaha (67)  
Other Motored Cycle (69)

V14

61	0- 50 cc
62	51-124 cc
63	125-349 cc
64	350-449 cc
65	450-749 cc
66	750 cc or over
99	Unknown

V13Mo-ped (70)V14

61	0- 50 cc
62	51-124 cc
99	Unknown

V14  
(22)

Variable Name: Vehicle Model (cont'd.)

Model Code	Vehicle Line	Includes	Model Years
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TRUCKS AND BUSES (80-83, 85-88)

V13

Brockway (80)  
Diamond Reo or Reo (81)  
Freightliner or White Freightliner (82)  
FWD (83)  
Kenworth (85)  
Mack (86)  
Peterbilt (87)  
White (88)

V14

80 Motor Home  
 81 Medium/Heavy: CBE  
 82 Medium/Heavy: COE, low entry  
 83 Medium/Heavy: COE, high entry  
 84 Medium/Heavy: unk. engine location  
 +85 Bus: conventional (engine out front)  
 86 Bus: flat front, front engine  
 87 Bus: flat front, rear engine  
 88 Other (truck)  
 90 Medium/Heavy: COE, unk. entry position  
 99 (Unknown Model)

+Use code "85" (Bus) if the frontal plane or the engine location is unknown

International Harvester (84)

71	Scout	Scout II, Utility Pickup, SS-2, Roadstar, Terra Traveltop, 800 Series, Traveler
73	Pickup/Panel	R100, 900A-1500C, 1000D-1500D, 1010-1510, 100-500
75	Multistop	Metro RM 120-160, MS1210, MS1510
76	Travellall	1010-1210, 100-200
78	Other (light truck)	
80	Motor Home	1310 MHC, 1500 MHC
81	Medium/Heavy: CBE	Loadstar/Fleetstar, Paystar, CBE Transstar (4200), S-Series, Mixer
82	Medium/Heavy: COE, low entry	CO, VCO, DCO (190-1950), Cargostar, LFM 5370 (Garbage)
83	Medium/Heavy: COE, high entry	DCO, DCOT, UCO, VCOT, (405 Series), COE Transstar, Unistar, Conco 707B, 9600 Series
84	Medium/Heavy: unk. engine location	

Variable Name: Vehicle Model (cont'd.)

Model Code	Vehicle Line	Includes	Model Years
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International Harvester (84) (cont'd.)

85	Bus: Conventional	R153-1853, Loadstar 1603-1853	
86	Bus: flat front, front engine	173 FC, 183 FC	
87	Bus: flat front, rear engine	183RE, 193RE, (transit)	
88	Other (truck)	Fire Truck - R140-R306, CO 8190	
90	Medium/Heavy: COE, unk. entry position		
99	Unknown		

Other (Truck or Bus) (95)

01	Autocar		
02	Auto-Union-DKW		
03	Divco		
04	Western Star		
05	IVECO/MAGIRUS		
78	Other (light truck)*		
88	Other (truck+) (e.g., Oshkosh, Grumman)		

Other make (98)

97	Other (e.g., snowmobile, go-cart)		
99	Unknown**		

\* Use code "88" (other (truck)) if the vehicle's GVWR is unknown.

\*\* Occurs when make is not explicitly listed and it is unknown whether make is domestic or import.

+ Truck as used here includes (1) any truck of unknown GVWR, (2) medium or heavy trucks, and (3) buses.

++ Farm tractors must be coded as make "98" and model "97" regardless of whether the model is known



Variable Name: Vehicle Model (cont'd.)

Unknown make (99)

99 Unknown\*

\*Use this code even if you know more detail about the model than this code indicates (e.g., unknown pickup truck, unknown CBE tractor semi-trailer, unknown bus, or unknown car pickup body). V17, Body Type, is available to code the additional information.

Source: Primary source is the VIN during vehicle inspection; secondary sources include police report and interviewees.

Remarks:

The model codes are organized into general groups. These groups are:

- 01-28, 99 - domestic passenger car (automobile)
- 31-58, 99 - foreign passenger car (automobile)
- 60-68, 99 - motored cycles (including motorcycles, mini-bikes, motor scooters, dirt bikes, and mo-peds)
- 70-78, 99 - light trucks (including truck based utility vehicles, light duty pickup trucks, standard pickup trucks, vans, van based station wagons, van based buses, van derivatives, and truck based station wagons)
- 80-90, 99 - trucks and buses (includes all trucks over 10,000 lbs. GVWR except those pickup type trucks mentioned under Body Type (V17) code "50" (Pickup), and all buses except those that are van based)

Within these groups, the model codes for automobiles and light trucks generally are not ordered to give any indication of vehicle size or type. However, the model codes for motored cycles, trucks/buses, other and unknown have specific definition. These definitions are:

Motored Cycle

- 61 0-50 cc
- 62 51-124 cc
- 63 125-349 cc
- 64 350-449 cc
- 65 450-749 cc
- 66 750 cc or over
- 99 Unknown

These codes should be used to indicate the manufacturer's model size, rather than the actual piston displacement. For example, a 1980 Honda CB 750 has an original piston displacement of 749cc. This would be coded as "66" (750 or over).

Variable Name: Vehicle Model (cont'd.)

Trucks/Buses

80 Motor Home  
81 Medium/Heavy: CBE  
82 Medium/Heavy: COE, low entry  
83 Medium/Heavy: COE, high entry  
84 Medium/Heavy: unknown engine location  
+85 Bus: conventional (engine out front)  
86 Bus: flat front, front engine  
87 Bus: flat front, rear engine  
88 Other (truck)  
90 Medium/Heavy: COE, unk. entry position  
99 Unknown

+Use code "85" (Bus) if the frontal plane or the engine location is unknown.

Other make (98)

28 Other domestic automobile  
58 Other foreign automobile  
78 Other light truck  
88 Other truck  
97 Other (e.g., snowmobile, gocart)

Other make (99)

99 Unknown\*

\*Use this code even if you know more detail about the model than this code indicates (e.g., unknown pickup truck, unknown CBE tractor semi-trailer, unknown bus, or unknown car pickup body). V17, Body Type, is available to code the additional information.

V13, Vehicle Make, V14, Vehicle Model, and V17, Body Type, have to be used in conjunction; therefore refer to remarks for V13 and V17.

Variable Name: Registration of Vehicle

Format: 1 column numeric

Beginning  
Column 24

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Vehicle Identification Number

Format: 17 columns - alphanumeric

Beginning Column 25

Element Values:

Code the entire VIN, left justify	
000000000000000000	No VIN
999999999999999999	Unknown

Source: Primary source is vehicle inspection; a secondary source is the police report.

Remarks:

If a vehicle is inspected the VIN must be obtained from the vehicle if at all possible. Only in those cases where the vehicle condition prevents obtaining the VIN from the vehicle is it allowable to use vehicle registration data or the PAR to code this variable.

Leave "Blank" any column which does not have a VIN character.

If part of the VIN is missing or not decipherable, leave the column any such character would ordinarily occupy "Blank".

If the entire VIN is unknown or missing, enter "9"s in the entire field.

If the vehicle is a type which has no VIN (e.g., go-cart), enter "0"s in the entire field.

If the vehicle is a motor home or school bus, the vehicle chassis VIN should be coded and the secondary manufacturer's number should be annotated.

Code the entire VIN as found during inspection of the vehicle and left justify, as shown in the following example:

```

VIN:   A 3 A 1 9 7 H 1 1 8 8 1 5
CODE:  A 3 A 1 9 7 H 1 1 8 8 1 5 - - - -

```

Code the police reported or vehicle registration VIN, if available (and indicate police or vehicle registration). Do so only when the vehicle is not inspected, and the reported characters are consistent with reference materials (e.g., NATB) with respect to alphanumeric characters.

Variable Name: Vehicle Identification Number (cont'd.)

If the vehicle is manufactured by the Ford Motor Company and begins with a script, "F", the "F" should not be coded. Proceed to the next character as in the example:

VIN: 3 U 6 2 S 1 0 0 9 3 2  
CODE: 3 U 6 2 S 1 0 0 9 3 2 \_ \_ \_ \_ \_

NOTE: For this variable only, slash zeros "0", so that they are not confused with the alphabet character "O", as in DOT.

In addition, if any hyphens or periods are contained in the string of alphanumeric characters, they should be ignored as in the example below.

VIN: S M - E 3 0 7 6 4 2 1  
CODE: S M E 3 0 7 6 4 2 1 \_ \_ \_ \_ \_

The VIN for the vehicle chassis of motor homes and school buses should be encoded and the secondary manufacturer's number should be annotated.

If the state will not allow transmittal of the complete VIN, code all characters except the sequential production numbers. Code zeros ("0") in place of the sequential numbers.

In those cases where the VIN reported by the state does not match the references given below, the reported VIN should be coded and a note should be made on the form indicating the discrepancy.

The location of the VIN will vary among, and within, vehicles. Reference sources which may prove helpful in locating the VIN include, but are not limited to:

- (1) Motor Vehicle Identification Manual  
National Automobile Theft Bureau  
Palmer Publications Company  
Downers Grove, Illinois 60515
- (2) Passenger Car and Truck-Accident  
Investigator's Manual  
MVMA of the U.S., Inc.  
300 New Center Building  
Detroit, Michigan 48202
- (3) Lee S. Cole  
Davis Publishing Co.  
Post Office Box 841  
Santa Cruz, California 95060  
(Vehicle Identification 1938-1968  
Vehicle Identification 1968-1981)
- (4) N.A.D.A. Official Used Car Guide  
National Automobile Dealers Association  
8400 Westpark Drive  
McLean, Virginia 22102

Variable Name: Vehicle Identification Number (cont'd.)

Remember, vehicles manufactured after September 1980 conform to Federal Motor Vehicle Safety Standard 115. This standard has certain requirements: (1) each VIN has 17 characters, and (2) the VIN does not contain the letters "I", "O", or "Q". There are many other requirements, one of which requires that the VIN pass a mathematical test; thus, the use of the "check digit".

Each character in a VIN has a value, and each place has a weight. Each weight is multiplied by the value of the character in it; the products are summed and divided by eleven (11). The remainder (once converted from a decimal to an integer) must be the same as the value of the check digit character (the ninth one), except when the remainder is ten (10), in which case, the check digit character is "X".

<u>VIN Place</u>	<u>Value Factor</u>	<u>Character Values</u>					
1st	8	A-1	B-2	C-3	D-4	E-5	
2nd	7						
3rd	6	F-6	G-7	H-8		J-1	
4th	5						
5th	4	K-2	L-3	M-4	N-5		
6th	3						
7th	2	P-7		R-9	S-2	T-3	
8th	10						
Check Digit	0	U-4	V-5	W-6	X-7	Y-8	
9th	9						
10th	8	Z-9					
11th	7						
12th	6	0-0	1-1	2-2	3-3	4-4	
13th	5						
14th	4	5-5	6-6	7-7	8-8	9-9	
15th	3						
16th	2						

Example:

VIN Character	1	G	4	A	H	5	9	H	4	5	G	1	1	3	3	4	1	Sum
Assigned Value	1	7	4	1	8	5	9	8	4	5	7	1	1	8	3	4	1	
Weight Factor	8	7	6	5	4	3	2	10	0	9	8	7	6	5	4	3	2	
Product	8	49	24	5	32	15	18	80	0	45	56	7	6	40	12	12	2	411

Divide sum by eleven (11):  $411/11 = 37.3636\dots = 37$  and  $4/11s$   
 Compare integer remainder to check digit: "4" equals "4".

Variable Name: Vehicle Identification Number (cont'd.)

Remainders of Eleven:

<u>Decimal</u>	<u>Integer</u>	<u>Decimal</u>	<u>Integer</u>	<u>Decimal</u>	<u>Integer</u>
.000000	0	.545454	6	.727272	8
.090909	1	.636363	7	.818181	9
.181818	2	.363636	4	.909090	X*
.272727	3	.454545	5		

- \* The character X is used instead of the integer ten (10) since the field is only one character wide.

Variable Name: Body Type

Format: 2 columns - numeric

Beginning  
Column 42

Element Values:

Automobiles

- 01 Convertible (excludes sun-roof, t-bar)
- 02 2-door sedan, hardtop, coupe
- 03 3-door/2-door hatchback
- 04 4-door sedan, hardtop
- 05 5-door/4-door hatchback coupe
- 06 Station wagon (excluding van and truck based)
- 08 Other automobile type (specify)
- 09 Unknown automobile type

Automobile Derivatives and Short Utility Vehicles

- 10 Auto based pickup (includes El Camino, Caballero, Ranchero, Brat)
- 11 Auto based panel (cargo station wagon, includes auto based ambulance/hearse)
- 12 Short utility - not truck based (includes Jeep CJ-5, Jeep CJ-7, Renegade, Landrover, Pre-78 Bronco, Landcruiser, Thing)
- 13 Large limousine - more than four side doors or stretched chassis

Motorcycles

- 20 Motorcycle
- 21 Mopeds (motorized bicycles)
- 28 Other motorcycle (minibikes, motorscooters) (specify)
- 29 Unknown motorcycle type

Bus (excludes van based)

- 30 School bus (designed to carry students, not cross country or transit)
- 31 Cross country/intercity (designed for long distance)
- 32 Transit bus (includes short ride city bus and medium range suburban bus)
- 38 Other bus (e.g., bus based motor home) (specify)
- 39 Unknown bus type

Van Based Light Truck (< 10,000 lbs. GVWR)

- 40 Van (includes VW Bus, Vanagon, Kombi, Beauville, Chateau, Club Wagon, Sportsman; excludes moving van)



Variable Name: Body Type (cont'd.)

Van Based Light Truck (< 10,000 lbs. GVWR)

- 41 Van-commercial cutaway (includes box van, multi-stop, parcel, van pickups)
- 42 Van based motor home
- 48 Other van type (specify)
- 49 Unknown van type

Light Conventional Truck (Pickup style cab, < 10,000 lbs. GVWR)

- 50 Pickup (includes open box and caps)
- 51 Pickup with slide-in camper
- 52 Pickup based motorhome (chassis mounted)
- 53 Cab chassis based (includes rescue vehicles, light stake, dump, and tow trucks)
- 54 Truck based panel
- 55 Truck based station wagon (4-door; includes Suburban, Travelall, Wagoneer)
- 56 Truck based utility (2-door; includes Blazer, Bronco - 78 on, Jimmy)
- 58 Other light conventional truck (e.g., stretched Suburban limousine) (specify)
- 59 Unknown light conventional truck
- 69 Unknown light truck (van or pickup)

Medium/Heavy Truck (> 10,000 lbs. GVWR)

- 70 Step vans
- 71 Single unit straight truck (10,000 lbs. < GVWR ≤ 26,000 lbs.)
- 72 Single unit straight truck (> 26,000 lbs. GVWR)
- 73 Medium/heavy truck based motor home
- 74 Truck-tractor with no cargo trailer
- 75 Truck-tractor pulling one or more trailers
- 77 Truck-tractor (unknown if pulling trailer)
- 78 Unknown medium/heavy truck type
- 79 Unknown truck type (light/medium/heavy)

Other Vehicles

- 80 Snowmobile
- 81 Farm equipment other than trucks
- 82 ATV, all terrain vehicle (e.g., dune/swamp buggy)
- 83 Construction equipment other than trucks (e.g., grader, off road)
- 88 Other (e.g., go-cart, fork lift, city street sweeper) (specify)
- 89 Unknown other vehicle (specify)
- 99 Unknown body type

Variable Name: Body Type (cont'd.)

Source: Primary source is vehicle inspection; secondary sources include police report and interviewees.

Remarks:

Note the selection of any code is based solely on its body type rather than usage or ownership (i.e., code the vehicle as it was originally manufactured).

Code "01" (Convertible) refers to automobiles with soft or removable hard shells which are considered to be "convertibles". A removable hardtop is one that can be removed without tools, such as older Corvettes or XKE's. This would also include "targa" tops. Removable solid roof sections that were bolted on at the factory are considered standard roofs. Cars with sun roofs or "T" tops should be considered as having a standard roof. The position of the top at the time of the collision is not considered when coding the Body Type.

Codes "03" (3-door/2-door hatchback) and "05" (5-door/4-door hatchback coupe) includes those automobiles with hinged rear "doors" which include large glass cargo portals as found on fastbacks or hatchbacks. Station wagons with hinged doors which open vertically are excluded from this category since they are coded "06" (Station wagon excluding van-based or truck-based station wagon).

Code "08" (Other automobile) refers to other automobiles such as the one-door Isetta, street rods without doors, etc.

Code "11" (Auto based panel) includes to hearse body vehicles which may be used for ambulance, funeral, or other purposes (including private usage). Note that only ambulances with a hearse body style are coded here. Ambulances other than hearse types are coded according to their particular body type.

A motorcycle (motored cycle) is defined as any motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than 3 wheels in contact with the ground, but excluding a tractor (Source: Uniform Vehicle Code and Model Traffic Ordinance - revised 1968, section 1-135.)

Code "20" (Motorcycle) is restricted to "standard" motorcycles [i.e., it excludes minibikes, motorscooters, or any motorcycles with sidecars attached--these are coded under "28" (Other motorcycle)].

Variable Name: Body Type (cont'd.)

Code "21" [Moped (motorized bicycle)] refers to a motor-driven cycle whose speed attainable in 1 mile is 30 mph or less, which is equipped with a motor that produces 2-horsepower or less. If an internal combustion engine is used, the piston displacement shall not exceed 50 cc and the power drive system shall not require the operator to shift gears. Also note that pedals are not required equipment on mopeds.

Code "28" [Other motorcycle (minibikes, motorscooters)] must be used for all terrain cycles (i.e., ATC--three wheelers).

Codes "30" through "39" refer to vehicles (excluding vans, truck-based station wagons, etc.) which are designed to transport more than ten persons.

Code "30" (School bus) refers to vehicles which are specifically designed for usage by a school corporation for the purpose of transporting children independent of usage and ownership at the time of the accident. Body Type alone, independent of color (e.g., yellow), is the determining criterion.

Code "31" (Cross country) refers to buses having adjustable seat backs and only one normal entry-exit door. This bus is of the type most commonly used for commercial cross country service; however, recall that body type alone (independent of usage and ownership) is sufficient by itself to use this code.

Code "32" (Transit bus) refers to buses having fixed seatbacks and two normal entry-exit door systems. This bus is of the type most commonly used for intra-city commuter service; however, recall that body type alone (independent of usage and ownership) is sufficient by itself to use this code.

Code "38" (Other bus) is used for buses which are exclusive of the above bus codes or in cases where the researcher has identified and photographed the vehicle but is uncertain as to which of the above bus codes is to be used.

Code "39" (Unknown type bus) is used when the researcher has no information which would allow more specific classification in one of the bus codes.

Code "40" (Van) includes VW Bus, Econoline, Chevy Van, Dodge Tradesman, and station wagons based on these models. Minivans (e.g., Ford Aerostar) should also be included.

Code "40" (Van) and "55" (Truck based station wagon) are to be used in instances where these trucks are used as buses, although not specifically designed for that purpose.

## Variable Name: Body Type (cont'd.)

Code "41" (Van-commercial cutaway) includes all derivatives other than motor homes that are based on a van chassis, even if greater than 10,000 lbs. GVWR (e.g., Chevrolet Hi Cube Van, Dodge Kary Van, Ford Econoline Parcel Delivery Van).

Code "48" (Other van type) would be used for light duty vans that would not qualify for a more specific code. Possible inclusions for this could be some special use mail vans, milk trucks or light duty step vans. Note that step vans over 10,000 lbs. GVWR would be coded "70" (Step vans).

Code "50" (Pickup) includes all those light trucks that were originally manufactured as a pickup (i.e., chassis with box bed) even if subsequent alterations were made to the box. This code includes those pickups for which the GVWR is greater than 10,000 lbs.

Code "53" (Cab chassis based) includes all those light trucks that were originally manufactured as just a chassis cab even if subsequent alterations were made to the chassis. This includes rescue vehicles, light stake, flatbed, dump, and tow trucks. (NOTE: The VIN may be used to determine whether the vehicle was manufactured as a pickup or a chassis cab.)

For Cherokees and other similar vehicles, code "56" (truck based utility) for the two-door model and code "55", (truck based station wagon for the four-door model. Use code "59" (Unknown light conventional truck) for situations when the number of doors is unknown.

Code "70" (Step Vans) for medium/heavy truck based commercial cutaway type vans. A commercial cutaway type van built on a van based (light truck) chassis should be coded "41" (Van-commercial cutaway).

Code "77" (Unknown if pulling trailer) can be used when you know that a truck tractor was involved, but it is unknown if a trailer was attached.

Code "82" (Dune buggy, swamp buggy, etc.) also can be used if an amphibious vehicle or a motorcycle based ATV (i.e., ATV--four wheelers) is encountered.

Code "83" excludes passenger vehicles which are owned/leased and operated by construction related firms. These should be assigned codes "01" through "06" unless the vehicle has been modified, in which case, it should be coded "08". Construction related includes state or municipally owned road cleaning equipment, or utility related equipment where the model is essentially a special vehicle ("83"). However, some of these vehicles are single unit trucks modified with the cleaning or repair equipment attached front or rear. In the latter case, code straight truck over 10,000 lbs. GVWR ("71" or "72").

Code "88" (Other) is used for special vehicles which are exclusive of the above special vehicle codes (e.g., go-cart).

V17

(6)

Variable Name: Body Type (cont'd.)

Fire trucks will be coded based on GVWR and Body Type.

Use the codes "09", "29", "39", "49", "59", "69", "78", "79", or "89" in those cases where the make and model of a vehicle are not known but some detail concerning the body type is known (e.g., a hit-and-run vehicle described as a "pickup truck" would be coded as "59" [Unknown light conventional truck]). These codes would normally be used when the Vehicle Make, V13, and Vehicle Model, V14, are coded as "99" (Unknown).

Variable Name: Towed Trailing Unit

Format: 1 column - numeric

Beginning  
Column 44

Element Values:

- 0 No towed unit  
Yes, towed trailing unit hitch type
- 1 Clamp on (temporary)
- 2 Bumper hitch (bolted)
- 3 Frame
- 4 Fifth wheel
- 5 Converter dolly - with 1 towbar
- 6 Converter dolly - with 2 towbars
- 8 Other (specify)
- 9 Unknown hitch type

Source: Primary source is vehicle inspection; secondary sources include driver interview, photographs, and police report.

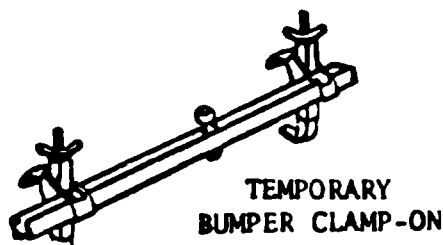
Remarks:

A towed trailing unit includes horse trailers, fifth wheel trailers, travel trailers, camper trailers, boat trailers, truck trailers, towed motor vehicles or any other trailer (except as excluded above).

Code "0" (No towed unit) is used when it is unknown whether or not a trailer was being towed, or when no wheeled unit was being towed by the vehicle, or when V17 (Body Type) is coded "74" (Truck tractor with no cargo trailer).

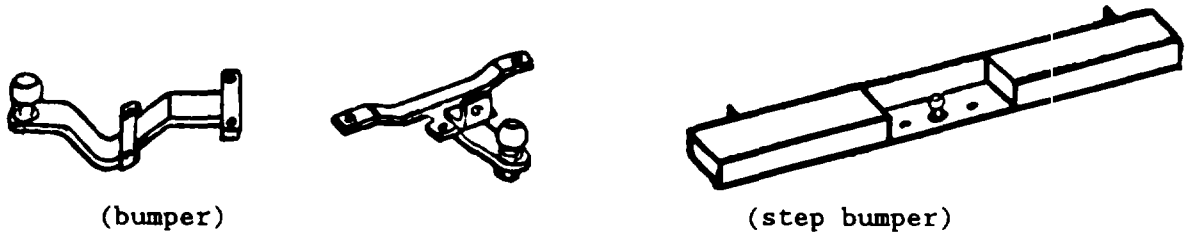
If V17 = "75" or "77", code "0" if only one trailer; if more than one trailer, then code as appropriate for the second (third, etc.) trailer.

Code "1" (Clamp on) is used to describe a trailer hitch that is mounted by bands or clamps that are tightened around the bumper face (no holes are drilled in the bumper for mounting purposes).

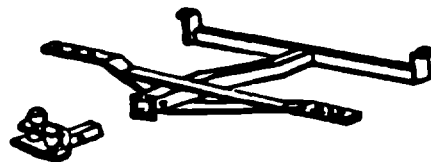


Variable Name: Towed Trailing Unit (cont'd.)

Code "2" (Bumper hitch) is used to describe a trailer hitch that is permanently mounted by drilling holes and bolting the hitch to the bumper. Also included would be a trailer ball mounted on a step bumper.

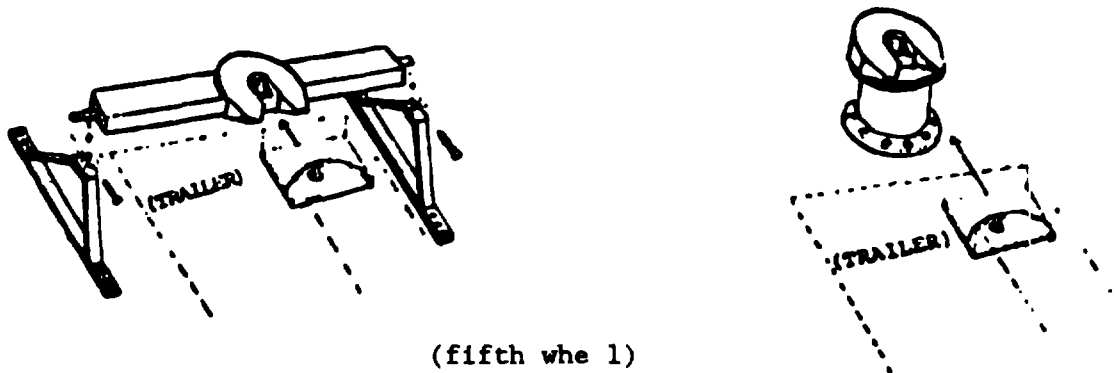


Code "3" (Frame) is used to describe a trailer hitch that is permanently mounted by drilling holes and bolting (or welding) the hitch to the frame rails. In most cases, this type of hitch is also attached to the bumper.



(frame hitch)

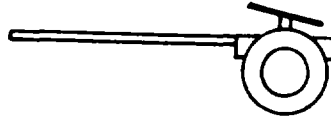
Code "4" (Fifth wheel) is used to describe a trailer hitch that is a permanently mounted rounded plate upon which the trailer rests and is coupled to the towing unit. Note that this does not include the "fifth wheel" hitch used on tractor-semi-trailer combinations.



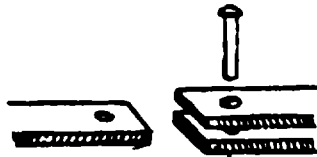
(fifth whe 1)

Variable Name: Towed Trailing Unit (cont'd.)

Code "5" (Converter dolly - with one towbar) and Code "6" (Converter dolly - with two towbars) will not be used in 1987.



Code "8" (Other) is used to code a trailer hitch that cannot be described by using one of the more specific codes 1 through 4. Also included would be nonfixed linkage (i.e., rope, cable, chain), even if the nonfixed linkage is attached to a specific hitch type.



CLEVIS AND PIN



PINTLE AND RING

Code "9" (Unknown hitch type) is used when it is known that a trailer was being towed (V14 ≠75, 77) but specific hitch type is unknown.



Variable Name: Seating Capacity/Truck Vocation

Format: 2 columns - numeric

Beginning  
Column 45

Element Values:

71 Truck-tractor - no trailer  
99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown) except in the following situation.

If V17 (Body Type) is coded "74" (Truck-Tractor with no cargo trailer), then code this variable "71" (Truck-tractor - no trailer).

V20  
V21  
V22  
V23

Variable Name: Tire Condition (at time of or resulting from accident)  
Axle  
Tire  
Condition

Format: 3 columns - numeric

Beginning  
Column 47  
48  
49  
50

Element Values:

Axle:	0	No abnormal tire condition
	9	Unknown axle
Tire:	0	No abnormal tire condition
	9	Unknown axle
Condition:	0	No abnormal tire condition
	9	Unknown axle

Source:

Remarks:

This variable is not collected in 1987. Code "999" (Unknown); however, so as to enable the 1986 consistency checks to be used, code V20-V23 equal to "000" (No abnormal tire condition) if V17, Body Type, equals "80" (Snowmobile).

VEHICLE FORM

V24  
V25

Variable Name: Type of Outside Mirror - Left  
Type of Outside Mirror - Right

Format: 1 column - numeric

Beginning  
Column 59  
60

Element Values:

9 Unknown

Source:

Remarks:

These variables are not collected in 1987. Code "9"s (Unknown).

Variable Name: Override/Underride (this vehicle)

Format: 1 column - numeric

Beginning  
Column 61

Element Values:

0 No override/underride or vehicle not applicable to CDC/TDC  
or a side impact

Override (see specified CDC)

1 1st CDC (V42-47)  
2 2nd CDC (V51-56)  
3 Other not automated CDC (specify)

Underride (see specified CDC)

4 1st CDC (V42-47)  
5 2nd CDC (V51-56)  
6 Other not automated CDC (specify)  
7 Medium/heavy truck override/underride  
9 Unknown

Source: Vehicle Inspection

Remarks:

Override/underride is coded only for end-to-end impacts. Impacts involving the end of one vehicle and the side of another vehicle are not applicable and should be coded "0" (No override/underride or vehicle not applicable to CDC/TDC).

Override/underride is coded based on "the action of the vehicle" [i.e., overriding (codes "1"- "3") or underriding (codes "4"- "6")] and is defined as any situation where the bumpers of two vehicles do not match up vertically and/or the resulting damage to one vehicle in the impact requires that the technique of averaging two planes of measurement be used.

Bumpers are considered to be "mismatched" if no significant damage occurred during the bumper-to-bumper interaction on either bumpers vertical plane.

Variable Name: Override/Underride (this vehicle) [cont'd.]

This variable is coded for vehicle-to-vehicle impacts only. If the action of one vehicle in the impact is overriding (codes "1"- "3"), then the action of the other vehicle must be underriding (codes "4"- "6"). However, a not-in-transport vehicle (CDC/TDC applicable) will be treated as a vehicle and not as an object for the purposes of this variable. The only instance in which both vehicles in an impact, for which there is a codeable override/underride, would not have an override or underride coded is when one of the vehicles is not inspected. In this instance, the inspected vehicle would receive, if applicable, an override/underride code and the non-inspected vehicle would be coded "9" (Unknown).

Code "0" if no override/underride occurred to the vehicle under consideration or if the vehicle(s) impacted by this vehicle is (are) not applicable to CDC/TDC [e.g., the "other vehicle" is a bus (V17-30-39)].

Codes "1"- "6" and "9" are to be used only when both vehicles involved in the override/underride impact configuration are CDC applicable. However, if one of the vehicles is TDC applicable, then this variable is coded "7" (Medium/heavy truck override/underride).

The attributes "1" and "2" and "4" and "5" relate to the coded CDCs. The first CDC (codes "1" and "4") means the most severe impact to the vehicle; the second CDC (codes "2" and "5") means the second most severe impact to the vehicle.

Select the code "1" or "2" or "4" or "5" that corresponds to the coded (1st or 2nd) CDC associated with the override/underride. If both coded CDCs for this vehicle involve override/underride, then code "1" or "4" respectively. If the only override/underride is associated with a non-coded CDC, then code "3" or "6".

Code "9" (Unknown) includes when there is an unknown CDC for a known impact [e.g., vehicle was inspected but CDC(s) are unknown].

Variable Name: Rear Turn Signal Color

Format: 1 column - numeric

Beginning  
Column 62

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Cab configuration

Format: 1 column - numeric

Beginning  
Column 63

Element Values:

- 0 Not a medium/heavy truck or bus (V17  $\neq$  30-39 or 70-78)
- 8 Other (specify)
- 9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "0" (Not a medium/heavy truck or bus) except in the following situations.

If V17, Body Type is coded "30"- "39", then code this variable "8" (other).

If V17, Body Type, is coded "70"- "78", then code this variable "9" (Unknown).

VEHICLE FORM

V29  
V30  
V31  
V32

Variable Name: Number of Axles - Power Unit (Medium/Heavy Trucks and Buses Over 10,000 lbs. GVWR -- V17 = 30-39 or 70-78)  
Number of Axles - 1st Trailer (Medium/Heavy Trucks and Buses Over 10,000 lbs. GVWR -- V17 = 30-39 or 70-78)  
Number of Axles - 2nd Trailer (Medium/Heavy Trucks and Buses Over 10,000 lbs. GVWR -- V17 = 30-39 or 70-78)  
Number of Axles - 3rd Trailer (Medium/Heavy Trucks and Buses Over 10,000 lbs. GVWR -- V17 = 30-39 or 70-78)

Format: 1 column - numeric

Beginning  
Column 47  
48  
49  
50

Element Values:

0 Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)  
9 Unknown

Source:

Remarks:

These variables are not collected in 1987. Code "0"s (Not a medium/heavy truck or bus) except in the following situation.

If V17, Body Type, is coded "30"- "39" or "70"- "78", then code these variables "9"s (Unknown).



V33  
V34  
V35

Variable Name: Length of 1st Trailing Unit (Medium/Heavy Trucks or Bus  
Over 10,000 lbs. GVWR -- [V17 = 30-39 or 70-78])  
Length of 2nd Trailing Unit (Medium/Heavy Trucks or Bus  
Over 10,000 lbs. GVWR -- [V17 = 30-39 or 70-78])  
Length of 3rd Trailing Unit (Medium/Heavy Trucks or Bus  
Over 10,000 lbs. GVWR -- [V17 = 30-39 or 70-78])

Format: 1 column - numeric

Beginning  
Column 68  
69  
70

Element Values:

0 Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)  
9 Unknown

Source:

Remarks:

These variables are not collected in 1987. Code "0"s (Not a medium/heavy truck or bus) except in the following situation.

If V17, Body Type, is coded "30"- "39" or "70"- "78", then code these variables "9"s (Unknown).

Variable Name: Maximum Overall Width (Medium/Heavy Trucks and Buses  
Over 10,000 lbs. GVWR -- V17 = 30-39 or 70-78)

Format: 3 columns - numeric

Beginning  
Column 71

Element Values:

000	Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)
999	Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "000" (Not a medium/heavy truck or bus) except in the following situation.

If V17, Body Type, is coded "30"- "39" or "70"- "78", then code this variable "999" (Unknown).

Variable Name: Maximum Overall Length (Medium/Heavy Trucks and Buses  
Over 10,000 lbs. GVWR -- V17 = 30-39 or 70-78)

Format: 3 columns - numeric

Beginning  
Column 74

Element Values:

000	Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)
999	Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "000" (Not a medium/heavy truck or bus) except in the following situation.

If V17, Body Type, is coded "30"- "39" or "70"- "78", then code this variable "999" (Unknown).

Variable Name: Type of Brake Actuation (Medium/Heavy Trucks and Buses  
Over 10,000 lbs. GVWR -- V17 = 30-39 or 70-78)

Format: 1 column - numeric

Beginning  
Column 77

Element Values:

0 Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)  
9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "0" (Not a medium/heavy truck or bus) except in the following situation.

If V17, Body Type, is coded "30"- "39" or "70"- "78", then code this variable "9" (Unknown).

Variable Name: Gross Vehicle Weight Rating (GVWR) (Medium/Heavy Trucks and Buses over 10,000 lbs. GVWR -- V17 = 30-39 or 70-78)

Format: 1 column - numeric

Element Values:

0 Not a medium/heavy truck or bus (V17 ≠ 30-39 or 70-78)  
9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "0" (Not a medium/heavy truck or bus) except in the following situation.

If V17, Body Type, is coded "30"- "39" or "70"- "78", then code this variable "9" (Unknown).

INSTRUCTIONS FOR COMPLETION OF FIELD MEASUREMENTS PAGE

Document all the necessary field measurements on this page following the Crush Measurement Techniques protocol as specified in the Vehicle Inspection section of the NASS Accident Investigation Procedures Manual. Complete the top portion (measurements related to shift and bowing) when applicable. The first line would be used for base line measurements. The second line would be used for free space adjustments, and the third line would be used for recording the crush resultant. Use as many lines as necessary when applying averaging techniques. For example, on a side impact with sill override, the crush measurements taken along the plane of maximum crush are averaged with the measurements taken at the sill level. Thus, seven lines will be necessary to describe the damage profile and all seven lines will have the same impact number but different L, C, and D measurements. Note that the measurements on the seventh line are average measurements and, thus, should be annotated average under Column 2 (Plane of C-measurements).

To determine if the crush averaging protocol (specified below) should be applied, proceed as follows:

End Plane: If above bumper crush appears to be five inches or greater than the bumper crush, then take "C" measurements at both locations;

Side Plane: If there is (a) disengagement, of at least six inches in length, of the lower lip of the door from the sill, (b) latch, hinge, or pillar separation occurs, or (c) crush at the maximum crush level which appears to be five inches or greater than at the sill level, then take "C" measurements at the maximum crush level and at the sill level.

"Crush Averaging Protocol"

End Plane: The bumper crush shall be averaged with the above bumper crush any time there is five inches or more crush above the bumper than at the bumper, at two or more "C" locations. Only those "C" locations that meet this criterion are averaged, and use the bumper level crush for the "C" locations which do not meet this criterion. However, if no bumper crush is present at the "C" locations that do not meet this criterion, then use the above bumper crush.

- NOTE: (1) If there is less than five inches of above bumper crush and no bumper crush, then use the above bumper crush.
- (2) If there is no bumper crush or above bumper crush, then use EAD stroke, if present, or zero.

Side Plane: The sill crush shall be averaged with the level of maximum crush above the sill any time there is five inches or more crush above the sill than

at the sill, at two or more "C" locations. Only those "C" locations that meet this criterion are averaged (i.e., use the level of maximum crush for the "C" locations which do not meet this criterion).

For fiberglass bodied vehicles (e.g., Corvettes), "C" measurements should be taken where the depths of penetration or crush can be determined. This usually occurs where structural supporting members for the fiberglass panels have been deformed. For the cases where the fiberglass panels are cracked and resume their original shape or where sections are completely broken away, "C" measurements are not applicable.

Form Page 6A through Page 6P

#### INSTRUCTIONS FOR COMPLETION OF VEHICLE SKETCH

The researcher must keep in mind that all relevant data is not clearly recognized and encoded when the vehicle is inspected. Some information, of no apparent value at the time of the inspection, may be of great value in explaining vehicle or occupant phenomena in the subsequent reconstruction. For this reason, all scrapes, scratches, transfers, buckling and indications of engagement or relative motion must be annotated on this form. If there is insufficient room for this purpose, use a numerical coding scheme in which the numerals on the form page (6A through 6P) are keyed to the researcher's descriptive statements on the back of the page.

All the observed damage is sketched on page 6A (or 6B through 6P) of the Vehicle Form. Any damage known to be pre-crash is so specified. In sketching the damage, boundaries of the damaged area are marked by solid lines, with damage highlighted by crosshatching (XXXXXXXX) to indicate direct damage and single hatching (////////) to indicate induced damage.

The original and post-crash wheelbase, front and rear overhangs, as well as the dimensions required to determine extent-zone (column 7 of CDC) are measured and documented on page 6A (or 6B through 6P). Also, the vehicle number, the damage to the tires, wheel steer angles, type of transmission, average track, maximum width, curb weight, overall length, wheel base, engine size (number of cylinders and displacement) of the vehicle, and the location of maximum crush are measured and documented on the page.

CDC RELATED REMARKS

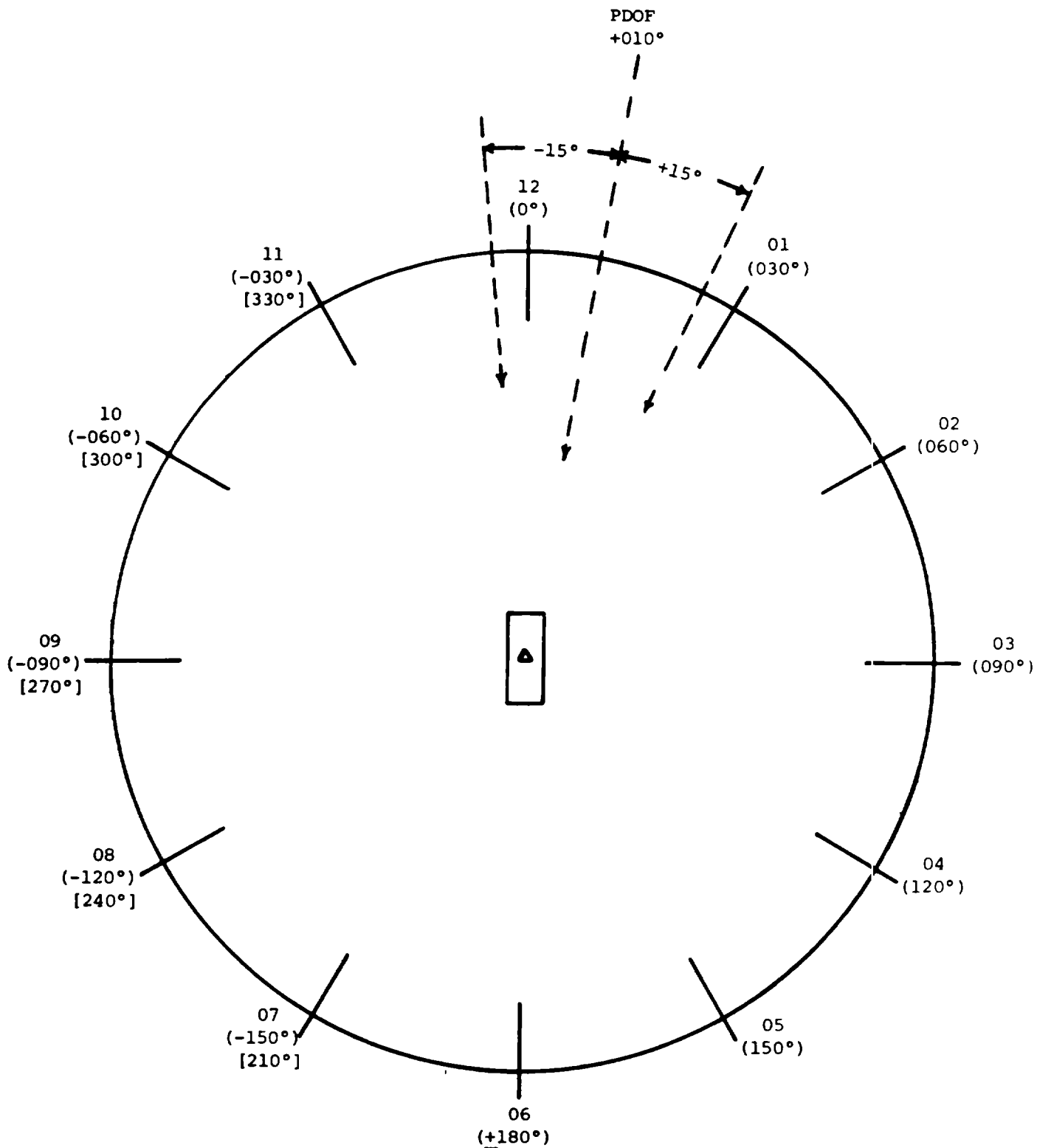
An estimated CDC should be indicated for each impact (bottom of page 7). In this estimate write the direction of principal force in increments of ten degrees rather than in clock positions. Thus, if the direction appeared to be approximately ten degrees to the right of straight-ahead, indicate "010". If the direction of force appeared to be ten degrees left of straight-ahead, indicate "-010" ("350"). The final coding of the CDC at the top of page 8 reflects the direction of force in clock positions. So in the example shown on the following page where the principal direction of force (PDOF) is closest to ten degrees to the right of straight-ahead, "010" ["-005" ("355") to "025"], the Direction of Force (V42/V51) is coded according to the clock direction--either 12 or 01 as determined by examining all available inputs to ensure accuracy for force assignments. If upon examining all the available inputs the researcher feels the PDOF is more likely to be within +015 to +025 and classifies the clock direction as "01", the bottom of page 7 should still reflect the original value "010".

When occasional differences which seem to be inconsistent (e.g., PDOF = 010° and clock position = 01) are encountered, they actually reflect the research method; therefore, they can be reconciled by reviewing the entire case and any CRASH output to determine if the difference is reasonable. This procedure allows the reviewer to appreciate what the researcher thought the PDOF (bottom of page 7) was, to the closest 10 degrees, based upon examination of that vehicle alone, while the clock position representing the force at the top of page 8 reflects the final determination after examining all sources (vehicles, objects contacted, scene evidence, CRASH program, etc.). In other words, it is not necessary for the force directions at the top of page 8 and bottom of page 7 to be compatible; however, any force directions on the final CRASH output must be compatible with the force direction at the top of page 8.

Coding CDC's for articulated vehicles, snow plows, deer guards, etc.

- A. If a trailer separates from the CDC-applicable vehicle which was towing it and subsequently impacts the vehicle, the trailer is treated as an object and the vehicle receives a CDC.
- B. If a trailer jackknifes and contacts the CDC-applicable vehicle that is towing it but does not separate, the vehicle receives a CDC.
- C. When a plow attached to a CDC-applicable vehicle is impacted by that vehicle, a CDC will not be generated. The respective CDC variables on the Vehicle Form will be blank.
- D. When damage occurs to a CDC-applicable vehicle due to cargo shifts a CDC will not be generated. The respective CDC variables on the Vehicle Form will be left blank.





V41  
V50  
(2)

Variable Name: 1st C.D.C. - Object Contacted (cont'd.)  
2nd C.D.C. - Object Contacted (cont'd.)

Collision with Nonstationary Object

- 73 Animal
- 74 Trailer, disconnected in transport
- 75 Train
- 76 Other nonstationary objects  
(specify)
- 81 through 95  
If the object contacted by the  
vehicle under consideration  
was a pedestrian or nonmotorist,  
add eighty (80) to the  
Pedestrian or Nonmotorist  
number, and code the resultant  
sum (e.g., 5 + 80 = 85)
- 96 Vehicle occupant
- 97 Other object (specify)
- 99 Unknown

Source: Primary sources are the scene and vehicle inspections;  
secondary sources include the police report and interviewees.

Remarks:

Code the appropriate object contacted for each event even if there is no C.D.C.

This section is not to be completed until after the CRASH program is exercised except for those cases where: (1) the CRASH program is inapplicable, (2) the vehicle has sustained but one impact and there is insufficient data for a trajectory reconstruction to aid in the determination of force directions, or (3) the vehicle is outside the scope of CDC (SAE J224 MAR80).

Code "00" (Noncollision) refers to those situations where this vehicle's harmful event (see ANSI D16.1-1983, section 2.4.1, page 12) did not in any sequence result from an impact. Examples of such situations are covered under codes "02" through "08" of A12, First Harmful Event. However, it must be kept in mind that even if a vehicle's first harmful event did not involve an impact, the vehicle may subsequently have impacted a vehicle, object, pedestrian, or nonmotorist. Just because A12


Variable Name: 1st C.D.C. - Object Contacted (cont'd.)  
2nd C.D.C. - Object Contacted (cont'd.)

(First Harmful Event) equals "02 through "08" does not mean that the vehicle involved was not subsequently involved in an impact for which the object contacted is coded here. For example, when A12 = 04 (Fell from vehicle), there is a good chance, particularly if the person was the driver, that the vehicle was subsequently involved in an impact. Further, in some instances of A12 = 08 (Jackknife with intraunit damage) code "00" (Non collision) ought not be used. In the jackknife situation, this occurs when the power unit of the articulated vehicle impacts the trailer unit in which case you should code the vehicle's own number.

Code "00" (Noncollision) may also be used for a vehicle which sets an object in motion that strikes or is struck by a vehicle. Examples include dislodged cargo, spewed gravel, etc. It may also be used in other situations subject to consultation with the Zone Centers.

Code "31" (Motor vehicle not in transport) refers to a motor vehicle which is not on the roadway and not in motion (e.g., vehicle located in parking lane).

For codes "32" and "33" (Tree ....), measure the diameter of the tree on the horizontal plane at the point of impact.

For pole (codes "34" through "42") the word "pole" used in a general sense, includes all types of supports for utility lines, light standards, traffic control signals, and signs. A pole may be made of wood, metal, or concrete and may have various cross-sectional shapes and dimensions. The pole must be nontemporary (i.e., have a permanent base). The pole must be at least five feet in height with the minimum cross-sectional dimension greater than two inches. U-shaped (  ) support (other than C-Channels) or supports are not poles.

Codes "34" and "35" (Luminaire ....) refer to a pole whose primary purpose is to support one or more light standards. A secondary purpose may be to support a traffic signal or sign. Private luminaires are not eligible.

Codes "36" through "39" (Sign pole ....) refer to a pole whose sole purpose is to support one or more highway traffic sign(s) that provides warning, guidance, or regulatory information. Private signs are not eligible.

Variable Name: 1st C.D.C. - Object Contacted (cont'd.)  
2nd C.D.C. - Object Contacted (cont'd.)

Codes "34", "36", and "38" (... breakaway) refer to a breakaway device that is designed to readily disengage, fracture, or bend away from an impacting vehicle above a predetermined force level. A pole fitted with such a breakaway device is a breakaway pole; otherwise, it is a nonbreakaway pole. Common types include: slip base (steel); frangible base (cast aluminum); and progressive shear (galvanized steel or stainless steel).


Codes "35", "37", and "39" (... nonbreakaway) refer to supports which are not designed to "break away" and reduce the deceleration force experienced by the vehicle.

For codes "36" and "37" (Large sign ....) the support pole's largest cross-sectional dimension is greater than or equal to 4 inches.

For codes "38" and "39" (Small sign ....) the support pole's largest cross-sectional dimension must be greater than or equal to 2 inches and less than 4 inches.

Code "40" (Utility pole) refers to a pole whose primary purpose is to support utility lines. A secondary purpose may be to support a light standard, traffic signal, or sign.

Code "41" (Traffic signal pole) refers to a pole whose primary purpose is to support a traffic signal. A secondary purpose may be to support a sign.

Code "43" (Other post, pole, or support) includes U-shaped (  ) supports (e.g., STOP or YIELD signs), other small poles that are less than 2 inches in cross-sectional dimension, all private (non-highway, non-traffic) signs and supports, and any other post, pole, or support not coded in codes "34" through "42". [NOTE: This code does not relate directly with A12, First Harmful Event, code "33" (Other post, pole, or support) since STOP or YIELD signs would be coded "29" (Highway/Traffic sign post) for A12.]

When a vehicle strikes a fixed object whose object contacted code is "32" through "41" or "43" and causes the fixed object or any portion thereof to become dislodged or airborne such that the object or portion thereof subsequently falls on the vehicle, the appropriate object contacted code for the object in its dislodged or airborne state is the same as when the object was initially struck (i.e., "32"- "41", "43").

Variable Name: 1st C.D.C. - Object Contacted (cont'd.)  
2nd C.D.C. - Object Contacted (cont'd.)

Code "44" (Fence) includes both the fence material and the support posts.

Code "45" (Mail box) includes mail box and any supporting posts associated with it.

Code "46" (Other movable objects) includes other stationary objects that are readily movable--compare with code "72" (Other stationary/fixed object). Examples include trash cans, grocery carts, unoccupied pedalcycles, small boulders, etc.

Code "47" (Culvert) is a man-made structure that allows passage over a drainage area and is that part of the structure which is intended to channel flow through the structure and maintain the stability/integrity of the road bed. If the structure has a portion above the road surface which is of sufficient height to engage above the wheels of an errant passenger vehicle and redirect it, that part of the structure is considered a bridge rail, code "57". A ditch, code "71", ends where a culvert begins and resumes on the opposite side of the culvert.

Code "50" (Abutment), is a structural member that supports an overhead structure that is used for other than vehicular or pedestrian traffic (e.g., support for a tunnel, overhead pipeline, etc.). Abutments related to bridges should be coded "56" (Bridge pier or abutment).

Code "56" (Bridge pier or abutment) is a structural member of a bridge that supports an overpass structure used for vehicular or pedestrian traffic. This code is directly related to A12, First Harmful Event, code "22" (Bridge pier or abutment). See A12, code "22" figure 8, for a descriptive drawing.

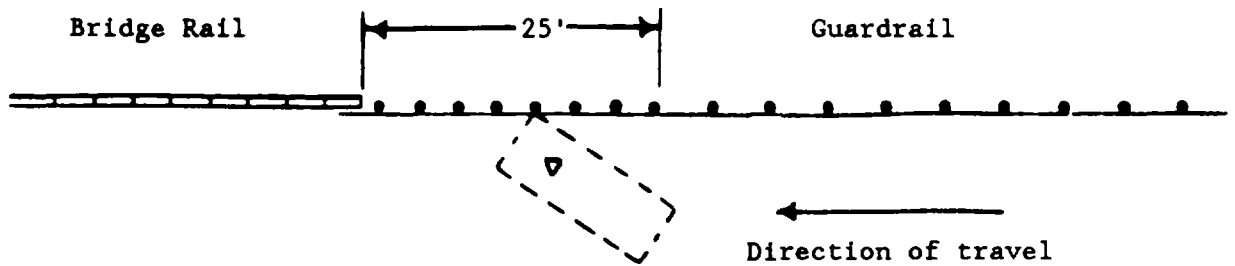
Code "57" (Bridge rail) is a longitudinal barrier located on a bridge and is used when the contact was with any portion of the rail except for the parapet end. This code is directly related to A12, First Harmful Event, code "24" (Bridge rail).

Code "58" (Bridge parapet end) is the end structure of a bridge rail (including concrete supports for the bridge rail ends). This code is directly related to A12, First Harmful Event, code "23" (Bridge parapet end).

Code "59" (Guardrail - bridge rail transition) is used when any contact was made with a guardrail within 25 feet from the leading end (upstream end) of the bridge rail or parapet wall. The upstream end should be for the vehicle's direction of travel, not necessarily the normal traffic flow. This transition guardrail may be located on the roadside, in a gully or median. This code takes precedence over codes "62" and "63" below. See example 1.

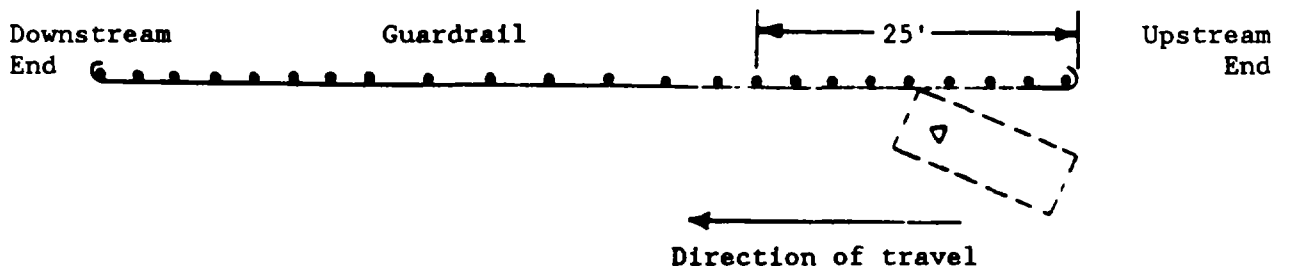
V41  
V50  
(6)

Variable Name: 1st C.D.C. - Object Contacted (cont'd.)  
2nd C.D.C. - Object Contacted (cont'd.)

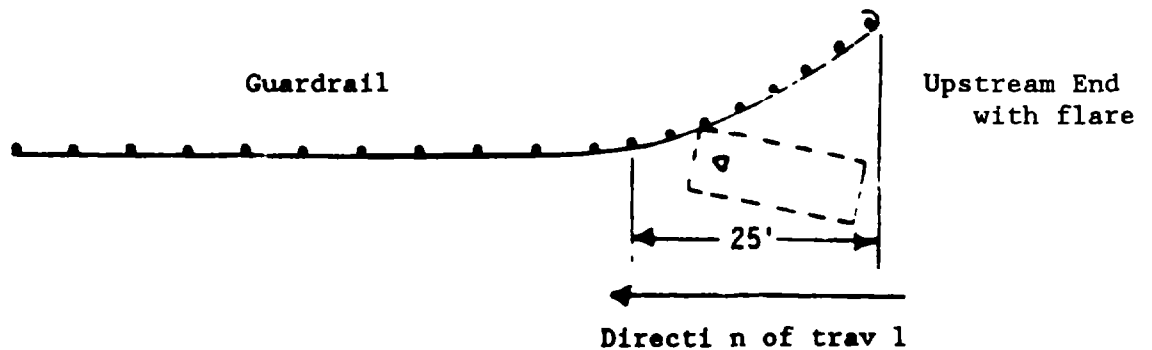


EXAMPLE 1

Code "60" [Guardrail end (non-median)] is used when any vehicle contact is made with a guardrail within 25 feet of its leading end (upstream end). The upstream end should be considered for the direction of vehicle travel, not necessarily the normal traffic flow. The guardrail end may be located on the roadside or in a gore. The flare length is not a consideration for coding this variable. The guardrail must meet the definition of code "62" below. This code takes precedence over code "62" below. See example 3.



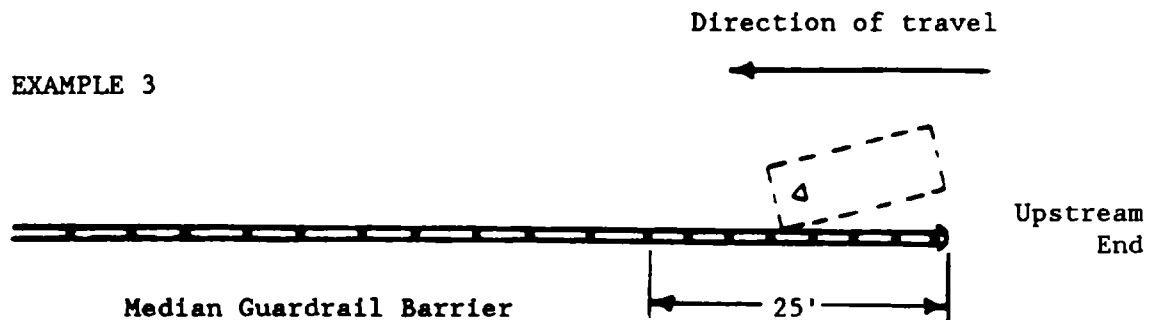
EXAMPLE 2



V41  
V50  
(7)

Variable Name: 1st C.D.C. - Object Contacted (cont'd.)  
2nd C.D.C. - Object Contacted (cont'd.)

Code "61" [Guardrail end (median)] is used when any vehicle contact is made with a median barrier within 25 feet from its leading end (upstream end). The upstream end should be considered for the direction of vehicle travel not necessarily the normal traffic flow. The guardrail must meet the definition of code "63" below. This code takes precedence over code "63" below. See example 3.



Code "62" [Guardrail (non-median)] is a longitudinal barrier, designed as a guardrail, located on the outside of the road surface. Guardrails which are located in gore areas (ANSI D16.1-1976, section 2.5.20, page 15) are considered guardrails (non-median) (code "62"), although they are used to redirect traffic at ramp areas. If the trafficway is undivided, it makes no difference on which side of the road the struck guardrail was located. See page V41 et al. (8), types 01-09, for examples of guardrails.

Code "63" [Guardrail (median)] is a longitudinal barrier, designed as a guardrail [e.g., types 01-09 on V41 et al. (8)] located in a median.

Code "64" [Concrete barrier (non-median)] is a concrete safety shape barrier [e.g., types 10 or 16 on V41 et al. (8 or 9)] located on the outside of the road surface. Concrete barriers located in gore areas are considered concrete barriers (non-median) (code "64"), although they are used to redirect traffic at ramp areas. If the trafficway is undivided, it makes no difference on which side of the road the struck barrier was located.

Code "65" [Concrete barrier (median)] is a concrete safety shape barrier [e.g., types 10 and 16 on V41 et al. (8 and 9)] located in a median.

Code "66" (Other median barrier) is a barrier designed as a median barrier [e.g., types 11-15, 17-20 on V41 et al. (9)] located in the median.

Variable Name: 1st C.D.C. - Object Contacted (cont'd.)  
2nd C.D.C. - Object Contacted (cont'd.)

Code "67" [Other longitudinal barrier (non-median)] is any barrier that does not meet the requirements for codes "62" or "64" and is located on the outside of the road surface or in a gore area.

Code "68" (Impact Attenuator/Crash Cushion) refers to crash cushions which are barriers placed in front of fixed objects on the highway to absorb energy, and to thus mitigate the injury effects of collisions at such sites. A number of the common devices are described and illustrated following A12 (First Harmful Event) in this manual. Other impact attenuating devices may be encountered; therefore, the researcher should be sure to photograph them for verification when uncertain.

Code "69" (Ground) refers to an impact with the ground. Collisions which may be classified using this code include (but are not limited to) vehicles which overturn/rollover as well as those which sustain undercarriage damage by (1) straddling the pavement and shoulder and impacting a prominent pavement lip, or (2) free falls or vaults from the road surface to the ground. This includes uncontrolled motorcycles which contact the ground first. For motorcycle impacts, ground will be coded as an impact unless evidence indicates that the motorcycle did not strike the ground.

Code "71" (Ditch) is a man made structure for drainage purposes. When the sides of the ditch are approximately of equal height it makes no difference which side of the ditch was struck; however, if the struck side is substantially higher than the other side, code the impact with the struck side as an embankment (codes "52" and "53"). Substantial means that an embankment existed had the ditch not been present.

Code "72" (Other stationary/fixed object) is any other object of sufficient mass, or anchored, such that it is not readily movable--compare with code "46" (other movable objects). Examples include large boulders, large logs (fallen trees), etc.

Code "73" (Animal) should be coded if the object contacted was an animal (stationary or nonstationary). Where a nonmotorist was associated with the animal [i.e., on the animal, or on or in an animal powered nonmotor vehicle transport device (see P08, Pedestrian and Nonmotorist Type, code "8")] use the following scheme. If the contact is to (1) the animal, the animal and the person, the animal and the conveyance, or the animal, conveyance, and the person, code "73" (Animal); (2) the conveyance or to



V41  
V50  
(11)

Variable Name: 1st C.D.C. - Object Contacted (cont'd.)  
2nd C.D.C. - Object Contacted (cont'd.)

both the conveyance and the person, code "76" (Other nonstationary objects); or (3) to the person, code the person's Pedestrian or Nonmotorist's Number plus 80 (codes "81" through "95").

Code "76" (Other nonstationary objects) refers to any other object that is moving (exceptions include a stationary pedalcycle associated with a pedalcyclist or a stationary nonmotorist conveyance associated with a nonmotorist).

A nonmotorist conveyance is defined as any human-powered device by which a nonmotorist may move, or by which a pedestrian or nonmotorist may move another nonmotorist, other than by pedaling. A nonmotorist conveyance includes the following: baby carriage, coaster wagon, ice skates, roller skates, push cart, scooter, skate board, skis, sled, wheel chair, rickshaw, etc. Excluded are pedalcyclists. Pedalcyclist refers to any occupant of a pedalcycle (see D16.1-1976, section 2.2.16, page 6). For a pedalcyclist or nonmotorist associated with a nonmotorist conveyance, code "76" (Other nonstationary objects) if the impact was with the pedalcycle, the conveyance, the pedalcycle and pedalcyclist, or the conveyance and nonmotorist associated with the conveyance; code "81" through "95" if the impact was with the person(s).

Codes "81" through "95" are used to identify contacted pedestrian or nonmotorists where the code is derived by adding eighty (80) to that person's unique number and coding the resultant sum (e.g., 5 + 80 = 85). Pedestrian refers to any person who is on a trafficway or on a sidewalk or path contiguous with a trafficway, and who is not in or on a nonmotorist conveyance.

Code "96" (Vehicle occupant) is used when the object contacted was any person who was an occupant of a motor vehicle. Two examples of this code are as follows. Code "96" (Vehicle occupant) for any occupant who falls from a vehicle (A12, First Harmful Event, equal 04) and is subsequently run over before stabilization occurred. In addition, use this code for any motorcyclist who separates from his/her motorcycle during impact and subsequently impacts a motor vehicle before stabilization occurred.

V42  
V51

Variable Name: 1st C.D.C. - Direction of Force  
2nd C.D.C. - Direction of Force

Format: 2 columns - numeric

Beginning  
Column 82  
94

Element Values:

Range: Blank, 00-13, 20-32, 40-52, 60-72, 80-92, 99

C.D.C.

Blank - No C.D.C.

00	Non-horizontal force	08	8 o'clock
01	1 o'clock	09	9 o'clock
02	2 o'clock	10	10 o'clock
03	3 o'clock	11	11 o'clock
04	4 o'clock	12	12 o'clock
05	5 o'clock	99	Unknown
06	6 o'clock		
07	7 o'clock		

Incremental Values for Above Force Directions

00	No shift
20	End shift vertical--up; top shift forward
40	End shift vertical--down; top shift rearward
60	End or top shift lateral--right
80	End of top shift lateral--left.

Source: Restricted to vehicle inspection or photographs.

Remarks:

Code the principal direction of force incremented to indicate vertical or lateral shifting of vehicle basic end structures which occur during horizontal force application or longitudinal or lateral shifting to the top structure as a result of non-horizontal force application to the top. In other words, the combined value (Direction of Force + Incremental Value for CDC only) is coded under this variable.

V42  
V51  
(2)

Variable Name: 1st C.D.C. - Direction of Force (cont'd.)  
2nd C.D.C. - Direction of Force (cont'd.)

Code variables V41 and V50 (1st and 2nd C.D.C. - Object Contacted) with the appropriate code(s) when the object contacted is known regardless of how the C.D.C., variables V42-V47 and V51-V56 are coded.

The CDC generated for a particular impact is based upon damage which is the result of direct impact only; it does not include induced damage. All CDCs are based entirely upon the procedures in SAE J224 MAR80.

Any time a vehicle becomes inverted and impacts any object or vehicle while inverted, the clock direction is coded as "00" (plus any incremental value for a top structure impact). Also use "00" (Non-horizontal force) with any other circumstance which is consistent with the directions contained in SAE J224 MAR80.

If there is only one CDC, it should be entered in variable V42-V47, whether or not CRASH was exercised. Variables V49-V57 should then be left "Blank".

If it is unknown whether the vehicle sustained a second impact, code variables V49-V57 Unknown ("99" or "9").

Rank order any CDCs on the basis of the CRASH program results, if used.

If there are two or more CDCs, and if CRASH is exercised on none or on a portion of the CDCs, subjectively order the most severe impacts (in terms of assumed change in velocity, delta "V").

If CRASH can be exercised on only one CDC, where two or more exist, the CDC used in CRASH should be coded in variables V42-V47 if it is felt to represent the highest change in velocity (delta "V"); it should be coded in variables V51-V56 if it is felt to represent the second highest delta "V", etc. It should not be coded if it is felt to represent the third highest or lesser delta "V".

If no CDC has been recorded for a vehicle which has sustained but one impact, row variables V42-V47 are coded as Unknown ("99" or "9") and the remaining row is left "Blank". If no CDCs are recorded for a vehicle which has sustained more than one impact, fill in the CDC rows with Unknowns ("99" or "9"). If an unknown number of impacts occurred, fill in both CDC rows with the appropriate CDCs (or Unknowns, if applicable).

V42  
V51  
(3)

Variable Name: 1st C.D.C. - Direction of Force (cont'd.)  
2nd C.D.C. - Direction of Force (cont'd.)

If a vehicle has sustained multiple impacts and, for example, the only CDC which can be generated (due to contamination from repair process which was underway at the time of inspection, etc.) is for the second most severe impact, row variables V42-V47 are coded as Unknown ("99" or "9") and the generated CDC is coded in row variables V51-V56.

No CDCs may be entered in the row variables unless those CDCs are known in their entirety [i.e., do not use "9" (Unknown) for any missing character when that character is Unknown]. Conversely, any time a "9" is coded in any column for the CDC row variables, all other CDC columns in that row must be coded "9" (Unknown); however, variables V47 and V56 may be coded "09".

Verbal Descriptions by drivers, occupants, or owners may not form the basis for a CDC except in pedestrian accidents or very minor accidents (no residual damage) where the vehicle has been inspected. In cases involving no residual damage and where the vehicle is involved with another vehicle or object, that other vehicle or object should be inspected.

In some instances where the vehicle is undergoing repair (parts removed) or has been repaired (parts available) a CDC may be determined from those parts and a description of the damage from testimony of a repairman judged to be reliable. (NOTE: Do not formulate "C" measurements for these vehicles unless there is only minor alteration which does not detract from the researcher confidence in those measurements.)

For non-light vehicles (i.e., vehicles which are beyond the scope of the CDC) follow the guidance provided in section 4.6.

For intraunit force type damages (i.e., jackknife), if a vehicle inspection is not obtained, then code one row of Unknowns for CDC applicable vehicles.

Code the actual object contacted if known (i.e., in a jackknife the objects contacted would be that vehicle's number).

VEHICLE FORM

V43  
V52

Variable Name: 1st C.D.C. - Deformation Location  
2nd C.D.C. - Deformation Location

Format: 1 column - alphanumeric

Beginning  
Column 84  
96

Element Value:

Blank - no C.D.C.  
F Front  
R Right side  
L Left side  
B Back (rear)  
T Top  
U Undercarriage  
9 Unknown

Source: Restricted to vehicle inspection or photographs.

Remarks:

See remarks section for variables V42 and V51.

V44  
V53

Variable Name: 1st C.D.C. - Specific Longitudinal or Lateral Location  
2nd C.D.C. - Specific Longitudinal or Lateral Location

Format: 1 column - alphanumeric

Beginning  
Column 85  
97

Element Value:

- Blank - no C.D.C.
- D Distributed--side or end
- L Left--front or rear
- C Center--front or rear
- R Right-front or rear
- F Side front--left or right
- P Side center section--L or R
- B Side rear--left or right
- Y Side (F + P) or end (L + C)
- Z Side (P + B) or end (C + R)
- 9 Unknown

Source: Restricted to vehicle inspection or photographs.

Remarks:

See remarks section for variables V42 and V51.

Variable Name: 1st C.D.C. - Specific Vertical or Lateral Location  
 2nd C.D.C. - Specific Vertical or Lateral Location

Format: 1 column - alphanumeric

Beginning  
 Column 86  
 98

Element Value:

C.D.C. (Vertical - Front, Rear, or Side Impacts)

Blank - no C.D.C.

A All  
 H Top of frame to top  
 E Everything below belt line  
 G Belt line and above  
 M Middle--top of frame to belt line or hood  
 L Frame--top of frame, frame, bottom of frame (including  
 undercarriage)  
 W Below undercarriage level (wheels and tires only)  
 9 Unknown

C.D.C. (Lateral - Top and Undercarriage Impacts)

Blank - no C.D.C.

D Distributed  
 L Left  
 C Center  
 R Right  
 Y Left and Center (L + C)  
 Z Right and Center (R + C)  
 9 Unknown

Source: Restricted to vehicle inspection or photographs.

Remarks:

See remarks section for variables V42 and V51.

Variable Name: 1st C.D.C. - Type of Damage Distribution  
2nd C.D.C. - Type of Damage Distribution

Format: 1 column - alphanumeric

Beginning  
Column 87  
99

Element Value:

- Blank - no C.D.C.
- W Wide impact area
- N Narrow impact area
- S Sideswipe
- O Rollover (includes side)
- A Overhanging structure
- E Corner
- K Conversion in impact type
- U No residual deformation
- 9 Unknown

Source: Restricted to vehicle inspection or photographs.

Remarks:

See remarks section for variables V42 and V51.



V47

V56

Variable Name: 1st C.D.C. - Deformation Extent Guide  
2nd C.D.C. - Deformation Extent Guide

Format: 2 columns - alphanumeric

Beginning  
Column 88  
100

Element Value:

Blank - no C.D.C.

01 One  
02 Two  
03 Three  
04 Four  
05 Five  
06 Six  
07 Seven  
08 Eight  
09 Nine  
99 Unknown

Source: Restricted to vehicle inspection or photographs.

Remarks:

See remarks section for variables V42 and V51.

When a body panel is torn loose from the vehicle frame due to impact, the extent zone should be coded from direct damage only; consider body panels torn loose from the frame as not representative of residual crush.

Variable Name: 1st C.D.C. - Event Number (in accident)  
2nd C.D.C. - Event Number (in accident)

Format: 2 columns - numeric

Beginning  
Column 90  
102

Element Values:

Blank - no event  
1-7 - First through seventh  
8 - Eighth or additional  
9 - Unknown

Remarks:

In accidents involving multiple vehicles and multiple events, the events are numbered in sequence by chronology in reference to the entire accident. This total accident sequence event number is coded adjacent (V48 or V57) to the CDC that was produced during this event. For example, three cars are waiting at a red light. A pickup truck rear ends the third car in line and pushes it into the second car which in turn is pushed into the first car. The sequential event numbers in this accident would be as follows;

Number 1 - pickup vs. 3rd car  
Number 2 - 3rd car vs. 2nd car  
Number 3 - 2nd car vs. 1st car

Do not forget that the numbers are actually encoded in accordance with CDC prioritization.

Crush Profile

V58-V64

Within this section entitled "Crush Profile" there is room to encode the damage dimensions of two impact damage patterns (V58-V60 and V61-V63). The crush profiles in these fields must be coded relative to the impacts described in variables V40-V48 and V49-V57, respectively. The L, Cs, and D values coded must be a clear measurement of the actual direct plus induced damage profiles and must not be altered significantly by another impact (i.e., overlapping impacts).

If the damage pattern measurements are known and have not been altered, encode the appropriate measurements to the nearest inch. If only two or four C-values are collected (rare occasions) then leave the remaining C-value fields blank.

Variable Name: Crush Profile - L

Format: 4 columns - numeric

Beginning  
Column 103  
129

Element Values:

Range: 0001 through 0250 inches, Blank

Nearest inch

Blank - No crush profile for most severe impact(s)

Source: Vehicle Inspection

Remarks:

These variables should reflect the "L" dimensions, as measured during vehicle inspection, of the highest (V58) and second highest (V61) delta "V" impacts sustained by the vehicle.

The damage measurements associated with a CDC may be coded regardless of the use of a reconstruction program. In either case the measurement normally used in a computer simulation would be coded (i.e. CRASH L). This measurement may be different than the Field "L" in those cases where the entire end sustains direct and/or induced damage. In those cases the undeformed end width is used for the reconstruction program and should be coded here.

When a reconstruction algorithm is used, the output of the reconstruction program contains a "Summary of the Damage Data". The value of "L" coded must be the same as the "L" value given in this reconstruction program output's summary. (NOTE: The "L" measurement used in the reconstruction program considers both direct and induced damage.)

If there is a reconstruction attempt, but this variable is unknown, leave "Blank".

When a reconstruction program is used and no values are entered (e.g., CDC only run or OLDMISS), leave "Blank".

If no reconstruction program is used, but damage dimensions are obtained, code the acquired dimensions appropriately.

Variable Name: Crush Profile - C1-C6

Format: 18 columns - numeric  
(6 groups of 3)

Beginning  
Column 107  
133

Element Values:

Range: 000 through 120 inches, Blank

Nearest inch

Blank - No crush profile for most severe impact(s)

Source: Vehicle Inspection

Remarks:

The damage measurements associated with a CDC may be coded regardless of the use of a reconstruction program. In this case the "C" values obtained for each impact (highest two delta V impacts) are coded to the nearest inch in the space provided.

If a reconstruction program is used, the values of "C" (i.e., C1, C2, C3, C4, C5, and C6) coded must be the same as the "C" values given in the reconstruction output Summary. These are the C-values used in the reconstruction program, and they may differ from C-measurements made in the field. For example, in a side impact with sill override, the C-measurements are taken along the plane that represents maximum crush and at the sill level. These C-measurements are averaged for the reconstruction purposes. In this example, the C-values coded are averaged C-measurements. [NOTE: If only 4 C-measurements are taken (i.e.,  $L \leq 16$ "), then leave C5 and C6 "Blank".]

If there is a reconstruction attempt, but these variables are unknown, leave "Blank".

When a reconstruction program is used and no values are entered (e.g., CDC only run or OLDMISS), leave "Blank".

If no reconstruction program is used, but damage dimensions are obtained, code the acquired dimensions appropriately.

Variable Name: Crush Profile  $\pm D$

Format: 4 columns - numeric

Beginning  
Column 125  
151

Element Values:

Range: -120 inches through +120 inches, blank

Nearest inch

Blank - No crush profile for most severe impact(s)

$\pm 000$  Greater than -0.5 and less than +0.5

Source: Vehicle inspection

Remarks:

The damage measurements associated with a CDC may be coded regardless of the use of a reconstruction program. If the measured or calculated "D" value obtained for the particular crush profile is zero, code as "+000" in the place provided; otherwise, code the value to the nearest inch.

If a reconstruction program is used this is the value of "D" entered in the program, and remember that it is the induced plus direct "D" that is used in the reconstruction program.

If there is a reconstruction attempt, but this variable is unknown, leave "Blank".

When a reconstruction program is used and no values are entered (e.g., CDC only run or OLDMISS), leave "Blank".

If no reconstruction program is used, but damage dimensions are obtained, code the acquired dimensions appropriately.

Variable Name: Documentation of More than Two C.D.C./T.D.C.s

Format: 1 column - numeric

Beginning  
Column 155

Element Values:

- 1 Two or less coded C.D.C./T.D.C.s
- 2 More than two coded C.D.C./T.D.C.s

Source: Restricted to vehicle inspection

Remarks:

Code "1" (Two or less coded C.D.C./T.D.C.s) when two or less C.D.C.s are coded in row variables V40-V48 and V49-V57 and no other C.D.C.s are formulated at the bottom of page 7, Vehicle Form.

Code "2" (More than two coded C.D.C./T.D.C.s) when two C.D.C.s are coded in row variables V40-V48 and V49-V57; and additional C.D.C.s are reported at the bottom of page 7, Vehicle Form. Unknown C.D.C.s are not considered documented and should not be counted.

A coded C.D.C. includes only complete C.D.C.s. Unknown C.D.C.s are not to be counted, nor are blank C.D.C.s

Variable Name: Vehicle Special Use (this trip)

Format: 1 column - numeric

Beginning  
Column 156

Element Value

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).



Variable Name: Odometer Reading

Format: 3 columns - numeric

Beginning  
Column 157

Element Values:

Range: 001 through 500

Code mileage to the nearest 1,000 miles

000 No odometer

001 Less than 1,500 miles

997 Greater than or equal to 996,500 miles

999 Unknown

Source: Primary source is the vehicle inspection; however, it may be supplemented with information from the police report and/or driver interview.

Remarks:

Code to the nearest 1,000 miles as in the examples:

Mileage: 7,498

Code: 007

Mileage: 7,502

Code: 008

Mileage: 18,342

Code: 018

Mileage: 147,687

Code: 148

Code "001" if the mileage is less than 1,500.

Code "999" (Unknown) if the odometer was disconnected or broken before the collision, or if the mileage is unknown.

This variable measures the mileage on the vehicle's odometer; however, in cases where it is suspected that the odometer is working but has turned over (i.e., recycled) the coded value represents the total mileage on the vehicle rather than the reading on the odometer.

Variable Name: Passenger Compartment Integrity

Format: 1 column - numeric

Beginning  
Column 160

Element Values:

- 0 No passenger compartment
- 1 No integrity loss

Yes, integrity was lost through:

- 2 Windshield
- 3 Door (side)
- 4 Door (rear)
- 5 Roof
- 6 Windshield & door (side)
- 7 Side or rear window breakage
- 8 Other combination of above (specify)
- 9 Unknown

Source: Restricted to vehicle inspection or photographs.

Remarks:

Consider the passenger compartment as a "package" which is designed to contain the occupant. If an opening occurs of sufficient magnitude through which an occupant could have been ejected totally or partially (although it is not necessary for an occupant to have been so ejected), the integrity of the compartment should be considered to have been lost. While it is difficult to define the magnitude of the opening in a universal manner, the minimum size of the opening would be equivalent to the head of most adults. Components which may lose their integrity are restricted to the windshield, windows (side or rear), door or roof (individually or in combination).

The question of integrity loss is assessed with respect to impact-related damage. The damage can be either direct or induced. Damage which is not impact-related (e.g., fire) is not considered.

Doors which open prior to an impact do not constitute loss of integrity, but those which open upon impact or from occupant or cargo loading due to the impact constitute loss of integrity.

Code "3" [Door (side)] refers to any door (including cargo doors) along the left or right side of a vehicle that is not separated from the passenger compartment by a full partition.

Variable Name: Passenger Compartment Integrity (cont'd.)

Code "4" [Door (rear)] refers to a door at the back of a vehicle (not a rear side door). For this door to qualify, there can be no full partition between this rear door and the passenger compartment. For example, rear doors of hatchbacks and stationwagons would qualify; a trunk lid would not.

Code "5" (Roof) includes convertibles, "T-tops", targa tops and removable tops that are up or in place. These tops should not be coded as having lost integrity if they are removed or in the down position prior to impact. Sun/Moon roofs are also excluded, even if shattered.

Code "7" (Side or rear window breakage) regardless of the window type (fixed or movable). Movable windows which were open (down) at impact should not be coded as having lost integrity.

V68  
V70  
V72  
V74

Variable Name: Intruding Component

Format: 2 column - numeric

Beginning  
Column 161  
164  
167  
170

Element Values:

Primary

- 00 No passenger compartment or no intrusion
- 01 Steering column
- 02 Instrument panel left
- 03 Instrument panel center
- 04 Instrument panel right
- 05 A-pillar
- 06 B-pillar
- 07 Door panel or side panel/kick panel
- 08 Roof
- 09 Roof side rail
- 10 Windshield header
- 11 No intrusion of primary component

Other

- 20 Steering column and instrument panel
- 21 Steering column, instrument panel, and A-pillar
- 22 Instrument panel and A-pillar
- 23 A-pillar and roof
- 24 A-pillar and any of the following: door panel, side panel or B-pillar
- 25 A-pillar, roof, and windshield header
- 26 Roof and any of the following: door panel, side panel, or B-pillar
- 27 Roof and windshield header
- 97 Other combination of the above components (Specify)
- 98 Intrusion of unlisted component(s) (Specify)
- 99 Unknown

Source: Vehicle Inspection

Remarks:

Intrusion into the passenger compartment of a vehicle occurs only when an object violates the space previously available to vehicle occupants. For the purpose of this variable only vehicle components, particularly those listed in codes "01" through "10", are noted as having been intruded.

V68  
V70  
V72  
V74  
(2)

Variable Name: Intruding Component (cont'd.)

Intrusion cannot occur unless the vehicle sustained an impact (i.e., intrusion due to fire is coded as "00") yet the damage which caused the intrusion may be either direct or induced. The crushing of exterior sheet metal with no movement of the interior vehicle structure is not coded as intrusion since the occupant "space" volume was not reduced.

Two areas are coded for these variables: Driver Area and Front Seat Passenger Area. The front seat area is divided into Driver and Passenger area dependent on the number of seating positions available. If the front seat has three seat positions, then the driver area is 1/3 of the area from door surface to door surface while the remaining 2/3 of the area is considered passenger area. If the front seat has two seat positions, then the area is divided evenly between driver and passenger areas. For each area (Driver, Passenger) two possible intrusions may be coded: Primary and Other. The "primary" intrusion variables (V68, V72) must be coded with any single component code (codes "01"- "11"). The "other" intrusion variables (V70, V74) must be coded with any of the combination of component attributes (codes "20"- "27"). See Code "98" for exceptions.

The primary intrusion variables should be coded for the single component (listed in codes "01"- "11") which intruded the greatest amount into the particular space (driver or front seat passenger). If two components intruded the same amount and both were greater than any other component listed, then code the "primary" variable with the lower numbered component (i.e., the codes are prioritized).

The combination codes ("20"- "27" and "97") are used for the "other" intrusion variables and record the intrusion into the particular occupant space (driver or front seat passenger). These combination codes are available to allow the coding of two vehicle components which intruded secondary to the primary component (the next most severe intrusion). These codes are restricted to the combination of codes "01" through "10". Any other combination should be coded as "98" (Intrusion of unlisted components).

Code "01" (steering column) includes the steering rim, hub, spokes and column. The steering column must actually move into the particular area and not just shift due to vehicle damage or occupant contact.

Codes "02", "03", "04" (Instrument panel left, center, and right, respectively) when any portion of the instrument panel or dash intrudes into a front seat area space. To discriminate left, center, and right the instrument panel may be measured and divided into thirds.

V68  
V70  
V72  
V74  
(3)

Variable Name: Intruding Component (cont'd.)

Code "05" (A-pillar) for any portion of the upper A pillar (i.e., above the beltline).

Code "06" (B-pillar) for any portion of the upper B pillar (i.e., above the beltline).

Code "07" (Door panel or side panel/kick panel) for any side surface, from the toe pan to the B-pillar.

Code "08" (Roof) for the roof panel only since the roof side rails (above the door portion) is coded as "09" and the windshield header (forward most portion of the roof) is coded as "10".

Code "11" (No intrusion of primary component) is used only in "primary" area intrusion variables (V68 and V72). If intrusion did not occur by any of the listed components (codes "01"- "10"), then use this code for variables V68 and V72.

Codes "20" through "27" are combinations of codes "01" through "10". These combinations are coded for "other" area intrusion only. If there are greater than two intrusions by listed components into an area, then the combination code should not include the component coded in the primary intrusion. On the other hand, if only two intrusions by listed components occurred, then the combination code, including the primary component, may be used.

Code "97" (Other combination of the above components) for any combination of components listed in codes "01" - "10" but not found in the combination codes "20" - "27".

Code "98" [Intrusion of unlisted component(s)] is used in the "other" area intrusion variables (V70, V74) only. If the only intrusion to the driver or passenger area is by an unlisted component, then use this code for the respective area (driver, passenger). If intrusion occurs both by an unlisted component and by a listed component (codes "01" - "10"), then code the listed component in the primary area--even if the intrusion by the unlisted component is greater. If more than two components intrude upon an area and at least one of them is unlisted, report the intrusions only for the listed components individually or in combination in accordance with the guidelines discussed above. If there is intrusion by more than one listed component, do not use this code. Please specify all unlisted components (single or combinations) for each coded intrusion.

Code "99" (Unknown) for all fields if the vehicle is not inspected or the intruded components have been repaired such that intrusion cannot be determined.

V69  
V71  
V73  
V75

Variable Name: Magnitude of Intrusion

Format: 1 column - numeric

Beginning  
Column 163  
166  
169  
172

Element Values:

0 No passenger compartment or no intrusion  
1 Less than 2 inches  
2  $\geq 2$  but  $< 6$  inches  
3  $\geq 6$  but  $< 12$  inches  
4  $\geq 12$  inches  
9 Unknown

Source: Vehicle Inspection

Remarks:

Intrusion was defined in the previous variables. In this variable the maximum amount of intrusion of the component or combination of components is documented. A good estimation of intrusion may be made by measuring driver or passenger space originally available then subtracting the space left after the impact. Next code the measurement in the ranges available in codes "1" through "4".

Code "0" (No passenger compartment or no intrusion) if there are no primary or other intrusions for the particular space.

Code "9" (Unknown) for all fields if the vehicle was not inspected or the intruded components have been partially repaired. In the rare occurrence that the intrusion cannot be measured or estimated, "9" may be coded.

Variable Name: Steering Column Separation

Format: 1 column - numeric

Beginning  
Column 173

Element Values:

0 No steering column  
1 No - column did not separate  
2 Yes - column did separate  
9 Unknown

Source: Vehicle inspection

Remarks:

This variable assesses the performance of the steering column in the impact. Steering column design and performance in collisions varies by year, make, and model of vehicle and will not be evaluated directly in 1987 in the CDS data collection effort. This variable is an indication to the analysts of the amount of steering column movement resulting from the accident.

Code "1" (No - column did not separate) should be used whenever the steering column remained attached to the instrument panel.

Code "2" (Yes - column did separate) should be used whenever the steering column became detached from the instrument panel.

During vehicle inspection the researcher should physically attempt to move the steering wheel up and down as well as side to side. (NOTE: Make sure that any tilt or telescoping devices on the steering column are locked in one position.) If the wheel and column move freely then separation has occurred, and code "2" should be used. If no movement occurs, code "1", unless you can see that the column has separated from its normal instrument panel mounts and is held in place by other than normal means (e.g. intrusion). In this situation, use code "2".

Code "9" (Unknown) when no vehicle inspection is obtained, the steering column is no longer in the vehicle, or the vehicle has been repaired.



Variable Name: Steering Rim Deformation

Format: 1 column - numeric

Beginning  
Column 174

Element Values:

0 No steering rim deformation  
1 Yes - steering rim deformation  
9 Unknown

Source: Vehicle inspection

Remarks:

Steering Rim in this variable is defined as the steering wheel rim, not including spokes and hub. Deformation can be assessed by placing a flat object such as a clipboard on the rim and looking to see if the rim touches it all the way around.

If the vehicle is not inspected or the steering wheel is missing code "9" (Unknown).

Any deformation of the rim, regardless of the cause or severity, would be coded "1" (Yes - steering rim deformation).

Variable Name: Fire Occurrence

Format: 1 column - numeric

Beginning  
Column 175

Element Values:

0 No fire  
Yes, fire occurred  
1 Started in vehicle, minor  
2 Started in vehicle, major  
3 Started external to vehicle, minor  
4 Started external to vehicle, major  
5 Origin unknown  
9 Unknown

Source: Primary source is the vehicle inspection; a secondary source is the police report and scene inspection.

Remarks:

Code "0" (No fire) includes those vehicles which are not inspected but for which it is reasonable to presume any fire to those vehicles would have been mentioned, if it occurred, on the police report. It also includes vehicles with smoke damage only, but which sustained no fire.

To code fire occurrence (codes "1" through "5"), the fire must reach the "vehicle" as defined by the variable Body Type (V17).

Code "1" (Started in vehicle, minor) refers to a fire which starts anywhere in the vehicle but consumes less than 50% of the passenger compartment.

Code "2" (Started in vehicle, major) refers to a fire which starts anywhere in the vehicle and consumes 50% or more of the passenger compartment.

Code "3" (Started external to vehicle, minor) refers to a fire which starts external to the vehicle but consumes less than 50% of the passenger compartment.

Code "4" (Started external to vehicle, major) refers to a fire which starts external to the vehicle but consumes 50% or more of the passenger compartment.

Code "5" (Origin unknown) if the origin of the fire is unknown, regardless of the extent of the fire. Scene inspection should serve as a secondary source for determining fire occurrence. Where the PAR does not

Variable Name: Fire Occurrence (cont'd.)

address fire and no vehicle inspection or interviews are obtained, burned debris and a charred surface at the scene are good indicators that a fire occurred. Thus, the researcher could code "5" (Origin unknown).

Code "9" (Unknown) if (1) there is no vehicle inspection and no interviews of occupants, witnesses, or other persons involved in the accident -- including the investigating officer, and (2) one cannot reasonably presume the occurrence of any fire would have been reported on the police report.

Variable Name: Type of Most Severe Impact This Vehicle, This Vehicle's Role

Format: 1 column - numeric

Beginning  
Column 176

Element Values:

- 0 Nonimpact
- 1 Front of this vehicle
- 2 Left side of this vehicle
- 3 Right side of this vehicle
- 4 Rear of this vehicle
- 5 Other impact location (specify)
- 9 Unknown impact type

Source: Primary source is the vehicle inspection; secondary sources include photographs, police report, and driver interviews.

Remarks:

This variable measures the general area of deformation of this vehicle's most severe impact; consequently, the value coded represents the same plane of the vehicle that was coded for V43, 1st C.D.C. - Deformation Location, where V43 is other than "9" or "Blank". This association, unknown, and out of scope damage classifications for V43 are illustrated in the table below, recognizing that the table is interpretable in only one direction. In other words, it may only be used by beginning the logic with a value for V43, 1st C.D.C. - Deformation Location, to determine the value or range of values for V79, Type of Most Severe Impact This Vehicle, This Vehicle's Role.

IF	THEN
V43 equals:	V79 equals
F	1
L	2
R	3
B	4
T,U	5
9	0, 1-5, or 9
Blank	0, 1-5, or 9

It should be recognized from the above table that vehicles which are beyond the scope of the C.D.C. are coded under this variable as "0" (Nonimpact), "1" - "5" (i.e., one of the various impact aspects), or "9" (Unknown impact type).

Variable Name: Type of Most Severe Impact This Vehicle, This Vehicle's Role  
(cont'd.)

Code "0" (Nonimpact) is used when the vehicle sustains no impact but is part of the case due to: fire or explosion, immersion, gas inhalation, an occupant's fall from the vehicle, an injured occupant without an external impact, or other nonimpacts except most jackknife situations.

If the impact occurred at a corner, follow the corner protocol specified in SAE J224 MAR80 for selection of the proper plane.

"Vehicle" as used in this variable is the same as V17, Body Type, plus any trailers connected by means of a fixed linkage at the time of impact. The four planes (front, right, left, rear) are measured with respect to the entire vehicle (capsule). In contrast, any trailer disconnected prior to impact is treated as an object.

Variable Name: Role of Other Contacted Vehicle, Object, or Person (for same impact as above)

Format: 1 column - numeric

Beginning  
Column 177

Element Values:

- 0 Nonimpact
- 1 Front of other vehicle
- 2 Side of other vehicle
- 3 Rear of other vehicle
- 4 Intraunit damage
- 5 Other location on other vehicle (specify)
- 6 Object (stationary or non-stationary)
- 7 Pedestrian or nonmotorist
- 8 Motorcycle or moped
- 9 Unknown impact type

Source: Primary source is the inspection of the other vehicle; secondary sources include the inspection of this vehicle; photographs, police report, and driver interviews.

Remarks:

Code "0" (Nonimpact) should be used only when V79, Type of Most Severe Impact This Vehicle, This Vehicle's Role, equals "0" (Nonimpact).

Codes "1" (Front of other vehicle), "2" (Side of other vehicle), "3" (Rear of other vehicle), and "5" (Other location on other vehicle) report the geographical location on the other vehicle for the common impact that produced the most severe impact on the vehicle under consideration. Row variables V42 through V47 may or may not be of help in this matter, since the most severe impact for this vehicle may not have produced the most severe impact for the other vehicle.

If a C.D.C. for the other vehicle is coded on its Vehicle Form (i.e., V42-V47 or V51-V56) which corresponds with this vehicle's most severe impact (this is true even if no C.D.C. for this vehicle was coded -- variables V42-V47), then use the table below to select the appropriate value. Remember, this table, as its predecessor (V79), is only interpretable in one direction.

Variable Name: Role of Other Contacted Vehicle, Object, or Person (for same impact as above) [cont'd.]

IF	THEN
V43 or V52 equals	V80 equals
F	1
L,R	2
B	3
T,U	5
9	0-9
Blank	0-9

If no C.D.C. on the other vehicle maps to this vehicle's most severe impact (for whatever reason), then code the most appropriate response.

Code "4" (Intraunit damage) is used whenever the most severe impact for the vehicle under consideration was produced by (1) its trailer and/or towed trailing unit for TDC applicable vehicles or (2) its towed trailing unit and/or cargo for CDC applicable vehicles.

Code "6" [Object (stationary and nonstationary)] whenever the most severe impact for the vehicle under consideration was produced by an object. Object includes motor vehicles not in-transport, which do not contain any nonmotorists, and trailers which disconnect.

Code "7" (Pedestrian or nonmotorist) whenever the most severe impact for the vehicle under consideration occurred with a pedestrian, pedalcyclist, occupant of an animal related nonmotor vehicle transport device, nonmotorist inside a motor vehicle not in-transport, or another nonmotorist. This code is used even if the nonmotorist inside the motor vehicle not in-transport was not injured.

Code "8" (Motorcycle or moped) whenever the most severe impact for the vehicle under consideration was produced by a motorcycle or moped.

Code "9" (Unknown impact type) whenever the most severe impact for the vehicle under consideration resulted from an impact [nonimpacts are coded "0" (Nonimpacts)] of unknown origin.

When applicable the codes "4" (Intraunit damage), "7" (Pedestrian or Nonmotorist), and "8" (Motorcycle or Moped) take precedence over other available codes.

Restraint usage recorded on page 10 of the Vehicle Form is based only on inspection of the vehicle; in other words, it is the recording of the evidence concerning restraint usage provided only by vehicle inspection.

An indication of restraint usage must be determined for every seating position in the vehicle, regardless of the number of occupants in the vehicle. This "indication of usage" should represent "recent usage" rather than "usage ever" if at all possible. Look for such things as:

- \* Belt/fittings damaged by occupant loading: deformed anchorages, stretched webbing, latch metal peening (loading impression on metal);
- \* Placement of belts: on, behind, or under seatbacks or benches; and,
- \* Condition of belts: dirty, dust covered, mechanically unusable, knotted, size adjustment on fixed length belts, cut for convenience or comfort (out of the way, near housings), or cut for occupant extraction by emergency personnel (usually at an easily accessible position).

Restraint "usage in this accident" is not determined on the Vehicle Form. Vehicle evidence, along with police report information, interviews, relationship of contact points to seat position given the PDOF applied to the vehicle, presence of belt-caused injuries, presence or absence of ejection, etc., are used for the final determination of restraint usage recorded on the Occupant Form.

Where recent usage is indicated, code the type of restraint. Where belts have been used but it cannot be determined whether or not the restraint was used recently (e.g., well worn belts and latches), code the type of restraint and annotate the reason for the code. If usage is not indicated, code none ("0").

When a child safety seat exists in other than a normal seating position, such as the floor behind the back seat, use the last column (other position or unit) to code the presence and any indication of usage for that seat. If the child safety seat is in a normal position, make a diagonal line through each appropriate box and code data for the child safety seat in one half and the normal seat position in the other half. Due to the transient nature of these seats, one should key questions regarding its presence and usage at the time of the accident in the interview before making the final assessments on the Occupant Form.



Indications of Ejection

If acquired information indicates that an occupant of a vehicle has been ejected but the vehicle cannot be inspected, do not complete the section entitled "Indication of Ejection". The information on this page can only be obtained through a visual inspection of the vehicle.

## INSTRUCTIONS FOR COMPLETION OF VEHICLE INTERIOR PAGE

Sketch and label (A,B,C,...etc.) all occupant contact points or evidence of contact (i.e., dents, skin transfer, etc.) on the appropriate diagram, indentifying the occupant number (or seat location) and possible body part contacting at each point on the diagram. Using the table, document the "Interior Part Contacted" (i.e., dash, radio knob, AC duct, etc.), the "Supportive Physical Evidence" (i.e., dent, skin or cloth transfer, hair, scuff, etc.), and the "Confidence Level of Contact Point" (your confidence that the point is indeed an occupant contact from this accident). If you are reasonably certain that the area was contacted during this accident circle the 1; if you think it is only a possible contact, then circle the 2.

The diagram of the steering column should be used to show steering wheel deformation and contacts to the column.

The overhead view of the interior (center right part of page) should be used to indicate areas of intrusion, deformation of seat backs, rear seat area occupant contacts, in some cases the direction of occupant travel from seat position to contacted areas, and in some cases areas where the vehicle interior has bulged outward.

Variable Name: Rollover

Format: 1 column - numeric

Beginning  
Column 178

Element Values:

0 No rollover (no overturning)

Rollover primarily about the longitudinal axis

1 Rollover, 1 quarter turn only

2 Rollover, 2 quarter turns

3 Rollover, 3 quarter turns

4 Rollover, 4 or more quarter turns (specify)

5 Rollover primarily about the lateral axis

9 Rollover (overturn), details unknown

Source: Primary sources are the vehicle and scene inspections; secondary sources include photographs, police report, driver interviews, and other interviewees.

Remarks:

Rollover is defined as any vehicle rotation of 90 degrees or more, about any true longitudinal or lateral axis. Rollover can occur at any time during the collision and is coded independently of other configuration questions. If a trailer, attached to the light vehicle, rolled over but the vehicle itself did not, the variable should be coded "0" (No rollover).

If First Harmful Event (A10) equals "01" (Overturn) and it was based on this vehicle, then Rollover for this vehicle must not equal "0".

It should be known whether or not this vehicle rolled over. If uncertainty exists, code "0" (No rollover).

Codes "1", "2", "3", and "4" are coded on the basis of accident reconstruction by the researcher. A "quarter turn" is defined as a rotation of 90 degrees about an axis of the vehicle (this does not include rotation about the vertical axis, commonly called yaw). Therefore, if a vehicle rolled about its longitudinal axis (i.e., side to side roll) onto its roof, it would have rolled 180 degrees and would be coded "2" (Rollover, 2 quarter turns).

Variable Name: Rollover (cont'd.)

When a vehicle rolls 4 or more quarter turns, code "4" and specify the number of quarter turns involved.

Code "5" (Rollover primarily about the lateral axis) should be used when the roll is mainly an end-over-end rollover. This code may be used when a rollover is a combination of a side-to-side and end-over-end roll and it cannot be determined which type of rollover is most prevalent.

Variable Name: Jackknife

Format: 1 column - numeric

Beginning  
Column 179

Element Values:

- 0 Not an articulated vehicle
- 1 No
- 2 Yes - prior to first impact for this vehicle
- 3 Yes - after first impact but prior to last impact for this vehicle
- 4 Yes - details unknown

Source: Primary source is the vehicle inspection; secondary sources include photographs, police report, driver interviews, and other interviewees.

Remarks:

Jackknife can occur at any time during the accident sequence. The phenomenon called "jackknife" is not restricted to truck-tractor vehicles; it may occur with any passenger vehicle, van, motorcycle, etc., which is pulling a training unit, and the trailing unit and the pulling vehicle are capable of rotating (articulating) with respect to each other.

Vehicles coded in variable V18 (Towed Trailing Unit) as "0" (No) are to be coded "0" (Not an articulated vehicle) unless they were previously coded as "75" (Truck-tractor pulling one or more trailers), on variable V17, Body Type. Code "75" (for variable V17, Body Type) as well as any vehicle for which variable V18, Towed Trailing Unit, equals "1" - "4" or "8" or "9" must be coded, on this variable, either "1" (No), or "2" through "4" (Yes).

Code "2" through "4" (Yes...) when any uncontrolled articulation between the units occurs. These codes attempt to capture the time during the accident sequence that the jackknife situation occurred.

Code "2" (Yes - prior to first impact for this vehicle) when any uncontrolled articulation between the units occurs prior to the first impact for this vehicle.

Code "3" (Yes - after first impact but prior to last impact for this vehicle) when any uncontrolled articulation between the units occurs after the first impact for this vehicle but prior to the last impact in this vehicle's accident sequence. Any articulation which occurs after the last impact in the accident is not coded due to the probability of the impact directly causing the units to articulate.

Variable Name: Jackknife (cont'd.)

Code "4" (Yes - details unknown) when any uncontrolled articulation between the units occurs but when its occurrence in the accident sequence could not be determined.

Uncontrolled articulation of units is defined as:

- 1) The pulled unit is not tracking (following directly behind) the power unit; and
- 2) The driver of the vehicle did not initiate the "not-tracking" situation. A turn is an example of a controlled articulation which is not coded in this variable.

Variable Name: Hazardous Cargo

Format: 1 column - numeric

Beginning  
Column 180

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Vehicle Curb Weight

Format: 3 columns - numeric

Beginning  
Column 181

Element Values:

Range: 001 through 500

Code recorded weight to the nearest 100 pounds.

001 Less than 150 Pounds

997 99,650 Pounds or More

999 Unknown

Source: Primary and secondary sources are listed below; occasional tertiary sources [for heavy trucks only (i.e., over 10,000 lbs. GVWR)] are the vehicle inspection and driver interview.

Remarks:

"Vehicle" is defined on this variable to mean one and the same as that which is coded on V17, Body Type.

Code to nearest 100 pounds as in the examples:

Weight: 180 lbs.	Weight: 3,230 lbs.	Weight: 16,500 lbs.
Code: 002	Code: 032	Code: 165

Code "001" if the weight is less than 150 pounds.

Do not confuse the rated Gross Vehicle Weight Rating (GVWR) with the curb weight since it is likely to be significantly greater than the curb weight.

If variable V18 (Towed Trailing Unit) is coded "1" (Yes) and variable V17 (Body Type) is not coded as "75" (Truck-tractor pulling one or more trailers), the weight of the trailer and its cargo is coded under variable V85, Vehicle Cargo Weight.

Variable Name: Vehicle Curb Weight (cont'd.)

Instead, it is coded under variable V85 (Vehicle Cargo Weight). For example, the weight of a boat trailer and its cargo are coded as Vehicle Cargo Weight (V85), distinct from the weight of the vehicle.

When coding a pickup (V17, Body Type, equal 50 or 51) or car [e.g., El Camino (V17 - "10")] with an add-on type camper (i.e., shell or self-contained), do not consider the add-on type camper as part of the curb weight. Add-on type campers should be coded under Variable V85, Vehicle Cargo Weight. However, chassis-mounted campers are to be included in this variable.

Vehicles permanently altered by a secondary source should have their curb weight coded as permanently altered. Researchers should ascertain the permanently altered weight from the vehicle or other reliable source.

If the vehicle model (V14) is known, but the engine size is unknown (e.g., 6 or 8 cylinders), code the average between the high and low curb weights for the model and annotate that the "average" was reported.

When the vehicle specifications do not report the vehicle weight with the proper engine size then adjustments must be made. First, try to determine the weight differences from the vehicle specifications. If the weight difference cannot be determined from the specifications then adjust as follows: 8 cyl. to 6 cyl. - subtract 100 lbs.; 6 cyl. to 4 cyl. - subtract 75 lbs.

Add 100 lbs. to the shipping weight to obtain a curb weight on all light vehicles.

The primary source is the first source of reference material listed below; the next three sources are secondary.

Passenger Vehicle Specifications  
Motor Vehicle Manufacturers Association  
of the U.S., Inc.  
300 New Center Building  
Detroit, Michigan 48202

Automotive News  
Crain Automotive Group, Inc.  
965 East Jefferson Avenue  
Detroit, Michigan 48207

Branham Automobile Reference Book  
Branham Publishing Company  
Post Office Box 1948  
Santa Monica, California 90406



Variable Name: Vehicle Curb Weight (cont'd.)

Gasoline Truck Index and  
Diesel Truck Index  
Truck Index, Inc.  
Post Office Box 4221  
Anaheim, California 92803

Annotate the source used in the space provided on the Vehicle Form under this variable.

Variable Name: Vehicle Cargo Weight

Format: 3 columns - numeric

Beginning  
Column 184

Element Values:

Range: 000 through 500

Code recorded weight to the nearest 100 pounds.

000 Less than 050 Pounds  
997 99,650 Pounds or More  
999 Unknown

Source: Researcher determined -- inputs include vehicle inspection (e.g., GVWR, shipping invoice, bill of lading), driver interview, and other interviewees.

Remarks:

Code to the nearest 100 pounds as in the examples:

Weight: 180 lbs.	Weight: 3,230 lbs.	Weight: 16,500 lbs.
Code: 002	Code: 032	Code: 165

Code "000" if the weight is less than 050 pounds.

Do not include the weight of the occupants in the cargo weight. The weight represented by the occupants will be included as a component (along with cargo and vehicle curb weight) of the single value which represents the vehicles combined weight on the CRASH Program Summary Form, if used.

If variable V18 (Towed Trailing Unit) is coded "1" (Yes) and variable V17 (Body Type) is not coded as "75" (Truck-tractor pulling one or more trailers) [prohibited combination--see Remarks section for V18, Towed Trailing Unit], the weight of the trailer and its cargo (if known) is coded here.

The weight of add-on type campers (i.e., shell or self-contained) should be coded here. See remarks section for V84, Vehicle Curb Weight.

Code "997" (99,650 pounds or more) is not used in 1987.

Code "999" (Unknown) if cargo weight is unknown.

Variable Name: Investigator Reported Source of Cargo Weight

Format: 1 column - numeric

Beginning  
Column 187

Element Values:

0	No cargo
1	Measured
2	Estimated
3	Rated capacity
9	Unknown

Source: Researcher determined -- inputs include vehicle inspection, driver interview, and other interviewees.

Remarks:

Code "0" (No cargo) only if there was no cargo. If cargo is present and the total cargo weight of V85 (Vehicle Cargo Weight) is less than 50 pounds (i.e., if V85 equals "000"), then V77 can equal "1" (Measured) or "2" (Estimated).

If the cargo weight (V85) is coded greater than or equal to 50 pounds, then code this variable as "1" (Measured), "2" (Estimated), or "3" (Rated capacity) respectively.

Annotate the source used in the space provided on the Vehicle Form under this variable.

RECONSTRUCTION PROGRAM

Four options or methods for calculating the Delta V are available in the reconstruction program. Delta V is a vector quantity giving the difference in velocity over the collision or crushing phase of an impact. The direction is the same as that of the principal direction of force. Delta V = V separation - V impact.

DAMAGE ALGORITHM (CRASH 3)

On this method the damage profile and direction of principal force for each vehicle are used to estimate the Delta V. In the absence of an exact profile the CDC itself will be used by the program. When the vehicles have been inspected it is important to use the "nearest 10-degree" estimate of force direction rather than only relying on the o'clock sector definition for CDC.

"Crush Averaging Protocol"

End Plane: The bumper crush shall be averaged with the above bumper crush any time there is five inches or more crush above the bumper than at the bumper, at two or more "C" locations. Only those "C" locations that meet this criterion are averaged, and use the bumper level crush for the "C" locations which do not meet this criterion. However, if no bumper crush is present at the "C" locations that do not meet this criterion, then use the above bumper crush.

- NOTE: (1) If there is less than five inches of above bumper crush and no bumper crush, then use the above bumper crush.
- (2) If there is no bumper crush or above bumper crush, then use EAD stroke, if present, or zero.

Side Plane: The sill crush shall be averaged with the level of maximum crush above the sill any time there is five inches or more crush above the sill than at the sill, at two or more "C" locations. Only those "C" locations that meet this criterion are averaged (i.e., use the level of maximum crush for the "C" locations which do not meet this criterion).

TRAJECTORY ALGORITHM (CRASH 3)

In this method the evidence from the scene as well as vehicle damage data is used to estimate Delta V. The scene evidence of trajectory will allow prediction of impact speed as well as Delta V. The scene data may be uncertain in many cases. For example, the friction coefficient on a wet road may be uncertain. The precise location of final rest and impact positions may be uncertain. The path between impact and final rest may be uncertain. The uncertainty associated with such evidence grows as the time between the accident and the time of scene inspection increases. The researcher should not be dismayed for even a live scene contains ambiguities concerning impact position and trajectory. Even the final rest position may be confused by action of the

police in moving the vehicles to clear traffic congestion. Your best efforts as a trained, experienced researcher are required to obtain reliable evidence in these challenging situations.

#### RECONCILIATION OF DIFFERENT RESULTS BETWEEN DAMAGE AND TRAJECTORY (CRASH 3)

When evidence from the scene and the vehicle are present, the execution of the reconstruction program will produce two independent estimates of Delta V. The two results will seldom be precisely equal. What is a significant difference, and what action should the researcher take in the face of a significant difference?

Experience indicates that satisfactory agreement exists between two estimates when the directions of Delta V are collinear and their Delta V components (magnitude) differ by no more than 2.5 mph or 10 percent, whichever is greater. When the agreement is not satisfactory, the data associated with each option should be reviewed for accuracy.

Possible sources of error include:

Vehicle damage: Review the crush measurements and ensure they are consistent with the damage photos. Review the wheel and tire conditions to ensure they reflect the best estimates of their contribution to steering and drag.

Scene Evidence: Review the impact and rest positions and the trajectory path. Review the surface coefficient of friction. Make sure directions of rotation, points on the paths, and end-of-rotation points are specified correctly.

After reviewing these sources, subsequent runs should be made if adjustments to the input are rational. ADJUSTMENTS SHOULD NOT BE MADE WITHOUT BASIS FOR UNCERTAINTY IN THE ADJUSTED VARIABLES. If agreement cannot be reached between the two methods, the case should be flagged for special review by the Zone Center, who will then complete variables V87 through V91.

Researchers will find it convenient when uncertainty exists in some variables such as friction coefficient and other scene evidence, to identify the range of rational error that may exist before initiating a reconstruction run.

If agreement does not occur, the RERUN execution on the reconstruction program can then be initiated at a considerable savings in time devoted to changing the input variables.

In any case, when both options--DAMAGE and TRAJECTORY--have been executed and agreement has been obtained, the two results for Delta V should be averaged after making the force direction collinear and this averaged value entered in V88 through V91.

For known occupants with unknown weights, use the occupant's age or age group in the table below to determine the appropriate weight to add.\*

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Male	17	25	30	35	39	43	48	53	59	66	73	83	93	105
Female	16	24	29	33	37	41	45	51	59	67	77	86	97	106
Age	14	15	16	17	18-24	25-34	35-44	45-54	55-64	65-97				
Male	119	131	142	149	161	172	176	175	170	163				
Female	115	121	124	125	128	132	139	145	144	142				
Age Group	Child (0-12)				Adolescent (13-17)				Adult (18-97)					
Male	50**				130***				170					
Female					120***				137					

\* Sources of Information:

- Weight and Heights of Adults 18-74 Years of Age: United States, 1971-1974. Vital and Health Statistics: Series 11, Data from the National Health Survey; Number 211. DHEW publication (PHS) 79-1659. Table 4, page 17; data based on 50th percentile.
- NCHS Growth Curves for Children Birth-18 years: United States. Vital and Health Statistics: Series 11, Data from the National Health Survey; Number 165. DHEW publication (PHS) 79-1650. Tables 10, page 34, and 14, page 38; data based on 50th percentile at half year age to the nearest pound.

\*\* Based on 6 and 7 year olds rounded to the nearest 5 pounds.

\*\*\* Based on 15 year olds rounded to the nearest 5 pounds.

MISSING VEHICLE ALGORITHM ("OLDMISS")

The data for the Missing Vehicle Algorithm ("OLDMISS") is entered in the same manner as the data is entered for CRASH 3 "Damage Only" Algorithm.

The following guidelines must be followed when using the missing vehicle algorithm ("OLDMISS").

Since the "OLDMISS" algorithm is based on the "CRASH 3" algorithm the same basic CRASH 3 assumptions must not be violated. Due to violations in the basic "CRASH 3" assumptions or the collision condition being outside of the scope of OLDMISS, the following collision types are not applicable to "OLDMISS":

- o Side to side collisions
- o Sideswipe
- o Severe underride/override
- o Non-horizontal force
- o Undercarriage damage
- o Collisions with vehicles "out of scope" (Stiffness, size)
- o Multiple impacts to the same area on the known vehicle
- o Insufficient data

Information required on "unknown vehicle"

1. Size and stiffness category
2. Approximate "D" dimension
3. Curb weight ( $\pm$  200 lbs.)
4. Heading angle at impact (approximate)
5. Area of damage (Third Character of CDC - "Area of Deformation")

Warnings:

(1) When using the "OLDMISS" algorithm for pickups and vans you must know additional information for a valid run.

- a. Wheelbase [to determine size and stiffness (side impacts)]
- b. Curb weight ( $\pm$  200 lbs.)
- c. Stiffness (rear impacts: Vehicle must have OEM bumper.  
Front Impacts: Vehicle cannot have add on equipment (example: plow, winch, Nerf bars, etc.).

Warnings (cont'd)

(2) "OLDMISS" results that are too high or low should not be entered on the file.

(3) Don't confuse the heading angle with the PDOF.

(4) Check the PDOF result for the unknown vehicle. This PDOF should be the collinear angle for this collision. Example: Known vehicle is 11 o'clock, unknown should be 02 o'clock in a right angle collision with both vehicles in motion.

YIELDING OBJECT ALGORITHM (POLES)

The Yielding Object Algorithm is not used in 1987.



Variable Name: Basis for Total Delta V (highest)

Format: 1 column - numeric

Beginning  
Column 188

Element Values:

Delta V calculated

- 1 CRASH program damage-only routine
- 2 CRASH program damaged and trajectory routine
- 3 Missing vehicle algorithm
- 4 Yielding object algorithm
- 5 Other technique used

Delta V not calculated

- 6 At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program: regardless of collision conditions.
- 7 All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction techniques: regardless of the adequacy of damage data.
- 8 All vehicles and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

Source: Researcher determined -- inputs include CRASH output (if applicable), vehicle inspection, scene inspection, police report, and photographs.

Remarks:

This variable is used to indicate what reconstruction algorithm or technique was used to compute this vehicle's highest Delta V (results coded in variable V88-V91), or the reason a reconstruction program was not applied to the most severe impact.

Code "1" (CRASH program damage-only routine) means that the CRASH 3 output (coded in variables V88-V91) is based upon vehicle damage only.

Code "2" (CRASH program damage and trajectory routine) means that the CRASH 3 output (coded in variables V88 - V91) is based on trajectory evidence documented at the scene, in addition to vehicle damage.

Code "3" (Missing vehicle algorithm) means that in a two vehicle impact that one vehicle is inspected (damage measurements and CDC are obtained) but for the other vehicle the damage measurements (including CDC) are missing but enough data is available to use the missing vehicle algorithm.

Variable Name: Basis for Total Delta V (highest) (cont'd.)

Code "4" (Yielding object algorithm) is not used in 1987.

Code "5" (Other technique used) is not used in 1987.

Code "6" (At least one vehicle...) means that one of the vehicles (including this vehicle) involved in this vehicle's most severe collision cannot be adequately represented by the parameters in an acceptable reconstruction size/stiffness categories (e.g., large truck, motorcycle, bus, etc.). As a general rule in NASS, any vehicle that is not applicable for CDC is not applicable for an acceptable reconstruction program.

Code "7" (All vehicles within scope...) means that the involved vehicles fit the vehicle parameters for an acceptable reconstruction program; however, the collision type is beyond the scope of the program (e.g., rollover, sideswipe, etc.).

Code "8" (All vehicles and collision...) means that the involved vehicles and the collision type are applicable for an acceptable reconstruction program ("1" through "5" above), but due to insufficient data on one (or both) of the vehicles an acceptable reconstruction program ("1" through "5" above) cannot be used.

The table below indicates the proper coding conventions for variables V87-V91. See remarks for V88-V91 for further details.

V87	V88	V89-V90	V91
1 - 5	00 - 97	-97 - +97	0000 - 9997
6,7,or 8	99	_99	9999

The character "\_" means leave the first space "blank."

Variable Name: Total Delta V

Format: 2 columns - numeric

Beginning  
Column 189

Element Values:

Range: 00 through 97, 99

Nearest m.p.h.

00 Less than 0.5 m.p.h.  
97 96.5 m.p.h. and above  
99 Unknown

Source: Reconstruction Program.

Remarks:

Complete an acceptable reconstruction program (where applicable) for all impacts in the accident. The results may then be used to classify the corresponding CDCs by severity, for variables V40-V57 of the Vehicle Form. If a CDC is entered in row variables V42-V47 and it was used in exercising the reconstruction program, code the Total Delta V as shown in the results.

Code this variable as "99" (Unknown), if results for the most severe impact are unobtainable. If the CDC associated with the reconstruction program was only entered in row variables V51-V56 (secondary), enter the Total Delta V as shown in the results on the space available in the secondary (noncoded) column of this variable.

Variable Name: Longitudinal Component of Delta V

Format: 3 columns - numeric

Beginning  
Column 191

Element Values:

Range: -97 m.p.h. through +97 m.p.h., \_99

Nearest m.p.h.

±00 Greater than -0.5 and less than 0.5 m.p.h.

±97 96.5 m.p.h. and above

\_99 Unknown

Source: Reconstruction Program.

Remarks:

Complete an acceptable reconstruction program (where applicable) for all impacts in the accident. The results may then be used to classify the corresponding CDCs by severity for variables V40-V57 of the Vehicle Form. If a CDC is entered in row variables V42-V47 (highest) and it was used in exercising the reconstruction program, code the Longitudinal Component of Delta V as shown in the results.

Code this variable as "99" (Unknown), if the results for the most severe impact are unobtainable. If the CDC associated with the reconstruction program was only entered in row variables V51-V56 (secondary), enter the Longitudinal Component of Delta V as shown in the results on the space available in the secondary (noncoded) column of this variable.

The character "\_" means leave the first space "blank."

Variable Name: Lateral Component of Delta V

Format: 3 columns - numeric

Beginning  
Column 194

Element Values:

Range: -97 m.p.h. through +97 m.p.h., \_99

Nearest m.p.h.

±00 Greater than -0.5 and less than 0.5 m.p.h.

±97 96.5 m.p.h. and above

\_99 Unknown

Source: Reconstruction Program.

Remarks:

Complete an acceptable reconstruction program (where applicable) for all impacts in the accident. The results may then be used to classify the corresponding CDCs by severity for variables V40-V57 of the Vehicle Form. If a CDC is entered in row variables V42-V47 (highest) and it was used in exercising the reconstruction program, code the Lateral Component of Delta V as shown in the results.

Code this variable as "99" (Unknown), if the results for the most severe impact are unobtainable. If the CDC associated with the reconstruction program was only entered in row variables V51-V56 (secondary), enter the Lateral Component of Delta V as shown in the results on the space available in the secondary (noncoded) column of this variable.

The character "\_" means leave the first space "blank."

Variable Name: Energy Absorption

Format: 4 columns - numeric

Beginning  
Column 197

Element Values:

Range: 0000 through 9997, 9999 foot-pounds

Nearest 100 foot-pounds

0000 Less than 50 foot-pounds

9997 999,650 foot-pounds or more

9999 Unknown

Source: Reconstruction Program.

Remarks:

Complete an acceptable reconstruction program (where applicable) for all impacts in the accident. The results may then be used to classify the corresponding CDCs by severity for variables V40-V57 of the Vehicle Form. If a CDC is entered in row variables V42-V47 (highest) and it was used in exercising the reconstruction program, code the Energy Absorption as shown in the results.

Code this variable as "9999" (Unknown), if the results for the most severe impact are unobtainable. If the CDC associated with the reconstruction program was only entered in row variables V51-V56 (secondary), enter the Energy Absorption as shown in the results on the space available in the secondary (noncoded) column of this variable.

If the reconstruction program is exercised and the amount of energy absorbed exceeds 999,650 ft-lbs., code "9997".

Variable Name: Police Reported Travel Speed

Format: 2 columns - numeric

Beginning  
Column 201

Element Values:

Range: 00 through 97, 99

Nearest m.p.h.

00 Stopped or less than 0.5 m.p.h.

97 96.5 m.p.h. or higher

99 Unknown

Source: Police report only.

Remarks:

Code the travel speed for this vehicle if indicated on the police report by the investigating officer. Do not use estimates by drivers or witnesses.

Code to the nearest m.p.h. as in the examples:

Reported Speed: 40 m.p.h.  
Code: 40

Reported Speed: 40.2 m.p.h.  
Code: 40

Reported Speed: 40.5 m.p.h.  
Code: 41

Code "00" if stopped or less than 0.5 m.p.h.

Code "97" if 96.5 m.p.h. or greater.

Code "99" if the estimated travel speed is unknown.

If the travel speed is reported as a range, code the average. For example, if reported as 55-60 m.p.h., code "58".



**Driver Data**

<p>1 Primary Sampling Unit Number <span style="float: right;">1 2</span></p> <p>2 Case Number-Stratification <span style="float: right;">3 4 5 6</span></p> <p>3 Record Number <span style="float: right;">4 7</span></p> <p>4 Transaction Code <span style="float: right;">8</span></p> <p>5 Version Number <span style="float: right;">0 9</span></p> <p>6 Investigator I.D. Number <span style="float: right;">10</span></p>	<p>11. Estimated Mileage This Vehicle (Estimated total mileage that driver has driven in this specific accident involved vehicle.)</p> <p>_____ miles to the nearest 100</p> <p>___ (001) Less than 150 miles</p> <p>___ (997) 99,650 miles or more</p> <p>___ (999) Unknown <span style="float: right;">0 0</span></p> <p style="text-align: right;">18 19 20</p>
<b>IDENTIFICATION</b>	
<p>7. Vehicle Number <span style="float: right;">11 12</span></p> <p>8 Number of Occupants This Vehicle</p> <p>_____ occupant(s) - Code the actual number of persons (including the driver if present) that were occupants of this vehicle. The number of OCCUPANT FORMS does not have to equal this value.</p> <p>___ (97) 97 or more</p> <p>___ (99) Unknown <span style="float: right;">13 14</span></p> <p>9 Driver Presence In Vehicle</p> <p>___ (1) Driver present</p> <p>___ (2) Driver not present <span style="float: right;">15</span></p> <p>(NOTE: If no driver was present in this vehicle, indicate and subsequently leave blank the remaining nonenvironmental questions (variables D10-D33) on this form. Do code the environmental elements. No OCCUPANT FORM for the driver is required. Remember, if the person who had been driving this motor vehicle prior to the accident was injured outside of this vehicle, that person is handled on the PEDESTRIAN &amp; NON-MOTORIST FORM.)</p>	<p>12. Total Mileage All Vehicles (Past Twelve Months)</p> <p>_____ miles to the nearest 100</p> <p>___ (001) Less than 150 miles</p> <p>___ (997) 99,650 miles or more</p> <p>___ (999) Unknown <span style="float: right;">0 0</span></p> <p style="text-align: right;">21 22 23</p> <p>13. Driver Education</p> <p><b>Automobile or Light Truck Driver Training</b></p> <p>___ (0) No formal driver training</p> <p>___ (1) High school driver training</p> <p>___ (2) Commercial driver training</p> <p>___ (8) Other formal driver training (e.g., college, military, etc.) (specify) _____</p> <p>___ (9) Unknown</p> <p><b>Motorcycle Driver Training</b></p> <p>___ (0) No formal driver training</p> <p>___ (5) Motorcycle driver training</p> <p>___ (8) Other formal driver training (e.g., college, military, etc.) (specify) _____</p> <p>___ (9) Unknown</p> <p><b>Medium/Heavy Vehicle Driver Training (&gt;10,000 lbs GVWR)</b></p> <p>___ (0) No formal driver training</p> <p>___ (1) High school driver training</p> <p>___ (2) Commercial driver training</p> <p>___ (3) Motor carrier program - On-the-Job-Training</p> <p>___ (4) Vocational training (CETA, Job Corps, other government sponsored training, etc.)</p> <p>___ (8) Other formal driver training (e.g., college, military, etc.) (specify) _____</p> <p>___ (9) Unknown <span style="float: right;">24</span></p>
<b>DRIVER INTERVIEW</b>	
<p>10 Months Driving Experience This Class of Vehicle (e.g., passenger car, light truck, motorcycle, etc.)</p> <p>_____ months - Code actual months of previous driving experience up to 60. (NOTE: 44 days or less equals 1 month; a month and a half equals 2 months.)</p> <p>___ (61) Greater than five years</p> <p>___ (99) Unknown <span style="float: right;">16 17</span></p>	



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**ACCIDENT DESCRIPTION INSTRUCTIONS**

Do not interrupt person during general description (narrative), unless he/she requests your assistance. Attempt to summarize the narrative while minimizing any disruptions of the person's internal logic. Specific questions may be asked later. Write these questions down in the space below or on the other side of the paper, prior to the interview.

SPECIFIC QUESTION \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

GENERAL DESCRIPTION OF ACCIDENT SEQUENCE

(This represents a synopsis of an uninterrupted narrative by the driver.)

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

Estimated Travel Speed  
 (NOTE: Record as obtained from interviewee in increments of 5 m.p.h.; note information source e.g., speedometer, estimate, etc.)

- Stopped                       Less than 5 m.p.h.
- Actual speed (in increments)
- Not applicable                 Unknown

Estimated Impact Speed  
 (NOTE: Record as obtained from interviewee in increments of 5 m.p.h.; note information source e.g., speedometer, estimate, etc.)

- Stopped                       Less than 5 m.p.h.
- Actual speed (in increments)
- Not applicable                 Unknown

*INFORMATION SOURCE*

Delete After Case Review

National Accident Sampling System – Continuous Sampling Subsystem: Driver Data

NCI

<p style="text-align: center;"><b>PRE-CRASH</b></p> <p>Direction of Travel</p> <p> <input type="checkbox"/> North                      <input type="checkbox"/> Southeast  <input type="checkbox"/> East                         <input type="checkbox"/> Northwest  <input type="checkbox"/> South                        <input type="checkbox"/> Southwest  <input type="checkbox"/> West                         <input type="checkbox"/> Not applicable  <input type="checkbox"/> Northeast                 <input type="checkbox"/> Unknown         </p>	<p><b>Travel Lane</b></p> <p>(NOTE: Lane one is the curb or shoulder lane, lane two is the next lane, etc to the median or centerline. Opposing lanes are numbered similarly and distinguished by direction of travel.)</p> <p> <input type="checkbox"/> 1st lane                      <input type="checkbox"/> On shoulder  <input type="checkbox"/> 2nd lane                      <input type="checkbox"/> On trafficway  <input type="checkbox"/> 3rd lane                      <input type="checkbox"/> Off road  <input type="checkbox"/> 4th lane                      <input type="checkbox"/> Outside trafficway  <input type="checkbox"/> 5th or additional lane      <input type="checkbox"/> Not applicable               <input type="checkbox"/> Unknown         </p>
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<p><sup>1</sup> Object Contacted</p> <p> <input checked="" type="checkbox"/> Motor vehicle  <input type="checkbox"/> Guardrail  <input type="checkbox"/> Ditch  <input type="checkbox"/> Ground  <input type="checkbox"/> Tree  <input type="checkbox"/> Pole  <input type="checkbox"/> Sign  <input type="checkbox"/> Pedacyclist  <input type="checkbox"/> Pedestrian  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Unknown         </p>	<p><sup>2</sup>Vehicle Impact Location</p> <p> <input type="checkbox"/> Front  <input type="checkbox"/> Right side  <input type="checkbox"/> Rear  <input type="checkbox"/> Left side  <input type="checkbox"/> Top  <input type="checkbox"/> Undercarriage  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Not applicable  <input type="checkbox"/> Unknown         </p>	<p><sup>3</sup>Vehicle Orientation</p> <p> <input type="checkbox"/> Tracking, no skidding (includes controlled turn)  <input type="checkbox"/> Tracking, skidding  <input type="checkbox"/> Rotated clockwise to path of travel  <input type="checkbox"/> Rotated counterclockwise to path of travel  <input type="checkbox"/> Rolling over  <input type="checkbox"/> Jackknifed  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Not applicable  <input type="checkbox"/> Unknown         </p>
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**DRIVER VIEW of TOTAL ACCIDENT CONTACT SEQUENCE**

Did More Than Six Impacts Occur?  Unknown,  No,  Yes: code the six severest impacts.

Event Number (Driver)	Final Event Number (Investigator)	Object Contacted <sup>1</sup>	One Vehicle			Other Vehicle—if applicable		
			Vehicle Number	Event Location <sup>2</sup>	Vehicle Orientation <sup>3</sup>	Vehicle Number	Event Location <sup>2</sup>	Vehicle Orientation <sup>3</sup>
1	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—

<p style="text-align: center;"><b>POST-CRASH</b></p> <p>Final Rest Position</p> <p> <input type="checkbox"/> On roadway  <input type="checkbox"/> On shoulder  <input type="checkbox"/> In parking lane  <input type="checkbox"/> In median  <input type="checkbox"/> Off road (beyond shoulder area)  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Not applicable  <input type="checkbox"/> Unknown         </p>	<p><b>Driver Inputs Between Last Point-of-Impact and Final Rest Position</b></p> <p> <input type="checkbox"/> None                                      <input type="checkbox"/> Braking  <input type="checkbox"/> Steering left                              <input type="checkbox"/> Steering right  <input type="checkbox"/> Braking and steering left  <input type="checkbox"/> Braking and steering right  <input type="checkbox"/> Acceleration followed by braking  <input type="checkbox"/> Acceleration followed by braking and steering  <input type="checkbox"/> Releasing brake  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Not applicable                              <input type="checkbox"/> Unknown         </p>
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If multiple impacts occurred, describe driver inputs between initial and last point-of-impact

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**ACCIDENT DIAGRAM**

Draw a rough sketch of the accident sequence as described by the driver. Note impact and final rest positions carefully. If possible, relate these to some identifiable object in the area, and record vehicle and pedestrian or nonmotorist headings relative to an object, as well

Indicate North



Any luggage or other cargo in vehicle when accident occurred? Estimated Weight \_\_\_\_\_ lbs.

Describe \_\_\_\_\_

Hazardous cargo in vehicle?  No  Yes If yes, specify: \_\_\_\_\_

Present location of vehicle (if not yet inspected)? \_\_\_\_\_

Did any of the Following Restrictions of the Road Exist Prior to the Accident

- None
- Narrow bridge (as defined)
- Previous accident
- Maintenance, repair, or construction activity on roadway
- Roadway immersion (standing water)
- Unknown

Road Surface Condition

- Dry
- Snow or slush
- Wet
- Ice
- Sand, dirt or oil
- Unknown

Category	Configuration	ACCIDENT TYPES (Includes Intent)									
I Single Driver	A. Right Roadside Departure	01 DRIVE OFF ROAD	02 CONTROL/ TRACTION LOSS	03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN					
	B. Left Roadside Departure	06 DRIVE OFF ROAD	07 CONTROL/ TRACTION LOSS	08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN					
	C. Forward Impact	11 PARKED VEH.	12 STA. OBJECT	13 PEDESTRIAN/ ANIMAL	14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN				
II Same Trafficway Same Direction	D. Rear-End	20 STOPPED 21, 22, 23	22 SLOWER 25, 26, 27	24 DECEL. 28, 30, 31	26 AVOID COLLISION WITH VEH.	28 AVOID COLLISION WITH OBJECT	(EACH • 32) SPECIFICS OTHER	(EACH • 33) SPECIFICS UNKNOWN			
	E. Forward Impact	34 CONTROL/ TRACTION LOSS	36 CONTROL/ TRACTION LOSS	38 AVOID COLLISION WITH VEH.	40 AVOID COLLISION WITH OBJECT	35 CONTROL/ TRACTION LOSS	37 CONTROL/ TRACTION LOSS	39 AVOID COLLISION WITH VEH.	41 AVOID COLLISION WITH OBJECT	(EACH • 42) SPECIFICS OTHER	(EACH • 43) SPECIFICS UNKNOWN
	F. Sideswipe/Angle	44 LATERAL MOVE	45 LATERAL MOVE	(EACH • 46) SPECIFICS OTHER	(EACH • 47) SPECIFICS UNKNOWN						
III Same Trafficway Opposite Direction	G. Head-On	50 LATERAL MOVE	51 LATERAL MOVE	(EACH • 52) SPECIFICS OTHER	(EACH • 53) SPECIFICS UNKNOWN						
	H. Forward Impact	54 CONTROL/ TRACTION LOSS	56 CONTROL/ TRACTION LOSS	58 AVOID COLLISION WITH VEH.	60 AVOID COLLISION WITH OBJECT	55 CONTROL/ TRACTION LOSS	57 CONTROL/ TRACTION LOSS	59 AVOID COLLISION WITH VEH.	61 AVOID COLLISION WITH OBJECT	(EACH • 62) SPECIFICS OTHER	(EACH • 63) SPECIFICS UNKNOWN
	I. Sideswipe/Angle	64 LATERAL MOVE	66 LATERAL MOVE	(EACH • 66) SPECIFICS OTHER	(EACH • 67) SPECIFICS UNKNOWN						
IV Change Trafficway Vehicle Turning	J. Turn Across Path	68 INITIAL OPPOSITE DIRECTIONS	69 INITIAL SAME DIRECTIONS	70 TURN ACROSS PATH	71 TURN ACROSS PATH	72 TURN ACROSS PATH	73 TURN ACROSS PATH	(EACH • 74) SPECIFICS OTHER	(EACH • 75) SPECIFICS UNKNOWN		
	K. Turn Into Path	76 TURN INTO SAME DIRECTION	77 TURN INTO SAME DIRECTION	78 TURN INTO SAME DIRECTION	79 TURN INTO SAME DIRECTION	80 TURN INTO OPPOSITE DIRECTIONS	81 TURN INTO OPPOSITE DIRECTIONS	82 TURN INTO OPPOSITE DIRECTIONS	83 TURN INTO OPPOSITE DIRECTIONS	(EACH • 84) SPECIFICS OTHER	(EACH • 85) SPECIFICS UNKNOWN
V Intersecting Paths (Vehicle Damage)	L. Straight Paths	86 INTERSECTING PATHS	87 INTERSECTING PATHS	88 INTERSECTING PATHS	(EACH • 90) SPECIFICS OTHER	(EACH • 91) SPECIFICS UNKNOWN					
VI Miscellaneous	M. Backing Etc	92 BACKING VEH.	93 OTHER VEH. OR OBJECT	98 Other Accident Type		99 Unknown Accident Type		00 No Impact			

14. Time Since Last Driver Training  
 \_\_\_ (0) No formal driver training  
 \_\_\_ (1) In training at time of accident  
 \_\_\_ (2) Less than five years  
 \_\_\_ (3) Five to ten years  
 \_\_\_ (4) More than ten years  
 \_\_\_ (9) Unknown 25

15. Frequency Driving Road

Familiar with Road  
 \_\_\_ (1) Daily  
 \_\_\_ (2) Weekly  
 \_\_\_ (3) Monthly  
 \_\_\_ (4) Less than once a month  
 \_\_\_ (5) Unfamiliar with road  
 \_\_\_ (9) Unknown 26

**TRUCK/BUS OPERATIONS**

16 Type of Operation or Carrier  
 \_\_\_ (0) Noncommercial or automobile, motorcycle, or other vehicle (V17=01-29, 80-89)  
 \_\_\_ (1) For hire/common carrier  
 \_\_\_ (2) For hire/contract carrier  
 \_\_\_ (3) Private carrier of property or passengers  
 \_\_\_ (4) Carrier of ICC exempt commodities  
 \_\_\_ (5) U.S. mail carrier  
 \_\_\_ (8) Other (specify): \_\_\_\_\_  
 \_\_\_ (9) Unknown 27

17 Federal Safety Regulated  
 \_\_\_ (0) Noncommercial or automobile, motorcycle, or other vehicle (V17=01-29, 80-89)  
 \_\_\_ (1) Motor carrier not subject to U.S. DOT (BMCS) regulations

Motor Carrier Subject to U.S. DOT (BMCS) regulations  
 \_\_\_ (2) Intercity operations  
 \_\_\_ (3) Local pickup or delivery  
 \_\_\_ (9) Unknown 28

18 Driver's Classification  
 \_\_\_ (0) Noncommercial or automobile, motorcycle, other vehicle (V17=01-29, 80-89)  
 \_\_\_ (1) Full time employee  
 \_\_\_ (2) Part time employee  
 \_\_\_ (3) Owner operator  
 \_\_\_ (4) Leased (from labor contractor)  
 \_\_\_ (8) Other (specify) \_\_\_\_\_  
 \_\_\_ (9) Unknown 29

**ACCIDENT PRE-CRASH INFORMATION**

Inter-viewee	Investigator
19. Accident Type	
___ (00) No impact	___
___ Code the number of the diagram that best describes the accident circumstance (See reverse of preceding page for diagrams)	___
___ (98) Other accident type (specify) _____	___
___ (99) Unknown	___ <span style="float: right;">30 31</span>
20. Attempted Avoidance Maneuver	
___ (00) No impact	___
___ (01) No avoidance actions	___
___ (02) Braking (no lockup)	___
___ (03) Braking (lockup)	___
___ (04) Braking (lockup unknown)	___
___ (05) Releasing brakes	___
___ (06) Steering left	___
___ (07) Steering right	___
___ (08) Braking and steering left	___
___ (09) Braking and steering right	___
___ (10) Accelerating	___
___ (11) Accelerating and steering left	___
___ (12) Accelerating and steering right	___
___ (98) Other action (specify): _____	___
___ (99) Unknown	___ <span style="float: right;">32 33</span>

INVESTIGATOR DETERMINED	OFFICIAL RECORDS
<p>21 Driver Related Factors</p> <p><input type="checkbox"/> (00) No impact</p> <p><input type="checkbox"/> (01) No driver related factors - inappropriate</p> <p><input type="checkbox"/> (02) Being pursued by police - police chase</p> <p><input type="checkbox"/> (03) Over speed limit</p> <p><input type="checkbox"/> (04) Too fast for conditions</p> <p><input type="checkbox"/> (05) Excessive or erratic acceleration</p> <p><input type="checkbox"/> (06) Erratic lane changing - cutting in and out of traffic</p> <p><input type="checkbox"/> (07) Following too closely (tailgating)</p> <p><input type="checkbox"/> (08) Passing in no-passing zone</p> <p><input type="checkbox"/> (09) Not yielding right-of-way</p> <p><input type="checkbox"/> (10) Failure to yield to an emergency vehicle</p> <p><input type="checkbox"/> (11) Disobeying stop sign</p> <p><input type="checkbox"/> (12) Disobeying traffic signal</p> <p><input type="checkbox"/> (13) Failure to obey other traffic sign or signal (specify): _____</p> <p><input type="checkbox"/> (14) Driving over or on the centerline</p> <p><input type="checkbox"/> (15) Driving over or on the median</p> <p><input type="checkbox"/> (16) Driving on road shoulder</p> <p><input type="checkbox"/> (17) Driving wrong way on 1-way street or entrance/exit ramp</p> <p><input type="checkbox"/> (18) Driving in parking lane</p> <p><input type="checkbox"/> (19) Pulling in front of traffic from a roadway or driveway</p> <p><input type="checkbox"/> (20) Turning left or U-turning in front of oncoming traffic</p> <p><input type="checkbox"/> (21) Improper lane change - cutting into another vehicle's path</p> <p><input type="checkbox"/> (22) Making right turn from left lane, or left turn from right lane</p> <p><input type="checkbox"/> (23) Making other improper turn (specify): _____</p> <p><input type="checkbox"/> (24) Passing with close oncoming traffic</p> <p><input type="checkbox"/> (25) Proceeding despite view obstruction</p> <p><input type="checkbox"/> (26) Passing on blind curve or hill</p> <p><input type="checkbox"/> (27) Passing on wrong side of vehicle being overtaken</p> <p><input type="checkbox"/> (28) Illegally parked</p> <p><input type="checkbox"/> (29) Driving too slow or less than minimum speed</p> <p><input type="checkbox"/> (30) Braking rapidly and unnecessarily (slowing but not to stop)</p> <p><input type="checkbox"/> (31) An abrupt stop without warning</p> <p><input type="checkbox"/> (32) Wrong signal given for maneuver executed</p> <p><input type="checkbox"/> (33) Turning without giving a turn signal</p> <p><input type="checkbox"/> (34) Headlights not used when required</p> <p><input type="checkbox"/> (35) Hazard lights not used when appropriate or required</p> <p><input type="checkbox"/> (36) Failure to dim lights for oncoming traffic</p> <p><input type="checkbox"/> (37) Operator inexperience with vehicle</p> <p><input type="checkbox"/> (38) Operator unfamiliar with roadway</p> <p><input type="checkbox"/> (39) Overloading or improper loading of passengers and/or cargo</p> <p><input type="checkbox"/> (98) Other driver related factor (specify): _____</p> <p><input type="checkbox"/> (99) Unknown</p>	<p>22. 23. Traffic Violation Charged Against This Driver</p> <p>1st 2nd</p> <p><input type="checkbox"/> (00) No violation charged</p> <p><input type="checkbox"/> (01) Speeding</p> <p><input type="checkbox"/> (02) Driving while intoxicated (or DUIL)</p> <p><input type="checkbox"/> (03) Reckless driving</p> <p><input type="checkbox"/> (04) Driving with suspended or revoked license</p> <p><input type="checkbox"/> (05) Failure to yield right-of-way</p> <p><input type="checkbox"/> (06) Following too closely</p> <p><input type="checkbox"/> (07) Running a traffic signal or stop sign</p> <p><input type="checkbox"/> (08) License restriction not complied with</p> <p><input type="checkbox"/> (98) Other violation charged (specify): _____</p> <p><input type="checkbox"/> (99) Unknown</p> <p style="text-align: right;">(1st) <u>36</u> <u>37</u></p> <p style="text-align: right;">(2nd) <u>38</u> <u>39</u></p> <p>24. Police Reported Alcohol Presence</p> <p><input type="checkbox"/> (0) No (alcohol not present)</p> <p><input type="checkbox"/> (1) Yes (alcohol present)</p> <p><input type="checkbox"/> (8) Not reported</p> <p><input type="checkbox"/> (9) Unknown</p> <p style="text-align: right;"><u>40</u></p> <p>25. Alcohol Test Result</p> <p>_____ Actual value (decimal implied before first digital - 0.xx)</p> <p><input type="checkbox"/> (95) Test refused</p> <p><input type="checkbox"/> (96) None given</p> <p><input type="checkbox"/> (97) AC test performed, results unknown</p> <p><input type="checkbox"/> (99) Unknown</p> <p style="text-align: right;"><u>41</u> <u>42</u></p> <p>26. Driver License Status (Irrespective of Vehicle being Driven)</p> <p>No Valid License</p> <p><input type="checkbox"/> (0) Not licensed</p> <p><input type="checkbox"/> (1) Suspended</p> <p><input type="checkbox"/> (2) Revoked</p> <p><input type="checkbox"/> (3) Expired</p> <p><input type="checkbox"/> (4) Canceled or denied</p> <p>Valid License</p> <p><input type="checkbox"/> (5) Single class license (specify): _____</p> <p><input type="checkbox"/> (6) Multiple class license (specify): _____</p> <p><input type="checkbox"/> (7) Learner's permit</p> <p><input type="checkbox"/> (8) Temporary</p> <p><input type="checkbox"/> (9) Unknown</p> <p style="text-align: right;"><u>43</u></p>
<u>34</u> <u>35</u>	<u>43</u>

<p>27. Driver License Type Compliance (For This Class Vehicle)</p> <p><input type="checkbox"/> (0) Not licensed</p> <p><input type="checkbox"/> (1) No license required for this class vehicle</p> <p><input type="checkbox"/> (2) No valid license for this class vehicle</p> <p><input type="checkbox"/> (3) Valid license for this class vehicle</p> <p><input type="checkbox"/> (9) Unknown <span style="float: right;">44</span></p> <p>28 Driver License Restriction</p> <p><input type="checkbox"/> (0) No license restrictions</p> <p><input type="checkbox"/> (1) Corrective (or contact) lenses only</p> <p><input type="checkbox"/> (2) Corrective lenses and outside mirror</p> <p><input type="checkbox"/> (3) Corrective lenses and limited to daylight</p> <p><input type="checkbox"/> (4) Corrective lenses and other (specify): _____</p> <p><input type="checkbox"/> (5) Outside mirror only</p> <p><input type="checkbox"/> (6) Limited to daylight only</p> <p><input type="checkbox"/> (7) Limited to employment only</p> <p><input type="checkbox"/> (8) Other (specify). _____</p> <p><input type="checkbox"/> (9) Unknown <span style="float: right;">45</span></p> <p>Code in the space provided the actual number of recorded convictions/suspensions/accidents that occurred within the last three (3) years (as measured from the date of the accident). If 8 or more convictions/suspensions or accidents, then code 8. Be sure that the actual value is recorded in the space provided near the question number. If unknown, code 9 for each of questions 29 through 33.</p> <p>29 <input type="checkbox"/> Previous Speeding Convictions <span style="float: right;">46</span></p> <p>30 <input type="checkbox"/> Previous Other Harmful Moving Violations or Convictions (specify): _____ <span style="float: right;">47</span></p> <p>31 <input type="checkbox"/> Previous Driving While Intoxicated Convictions (or DUIL) <span style="float: right;">48</span></p> <p>32 <input type="checkbox"/> Previous Recorded Suspensions and Revocations <span style="float: right;">49</span></p> <p>33 <input type="checkbox"/> Previous Recorded Accidents <span style="float: right;">50</span></p>	<p style="text-align: center;"><b>ADMINISTRATIVE ITEMS</b></p> <p>34. Federal Aid System</p> <p><input type="checkbox"/> (1) Interstate</p> <p><input type="checkbox"/> (2) Federal-aid primary (other than interstate)</p> <p><input type="checkbox"/> (3) Federal-aid urban</p> <p><input type="checkbox"/> (4) Federal-aid secondary (rural only)</p> <p><input type="checkbox"/> (5) Nonfederal-aid</p> <p><input type="checkbox"/> (9) Unknown <span style="float: right;">51</span></p> <p>35. Class Trafficway</p> <p><input type="checkbox"/> (1) Interstate</p> <p><input type="checkbox"/> (2) U.S. Highway</p> <p><input type="checkbox"/> (3) State Highway</p> <p><input type="checkbox"/> (4) County road</p> <p>Local Street</p> <p><input type="checkbox"/> (5) Township</p> <p><input type="checkbox"/> (6) Municipality</p> <p><input type="checkbox"/> (8) Other (specify): _____</p> <p><input type="checkbox"/> (9) Unknown <span style="float: right;">52</span></p> <p>36. Roadway Function Class</p> <p>Rural</p> <p><input type="checkbox"/> (01) Principal arterial-interstate</p> <p><input type="checkbox"/> (02) Principal arterial-other</p> <p><input type="checkbox"/> (03) Minor arterial</p> <p><input type="checkbox"/> (04) Major collector</p> <p><input type="checkbox"/> (05) Minor collector</p> <p><input type="checkbox"/> (06) Local road or street</p> <p><input type="checkbox"/> (09) Unknown rural</p> <p>Urban</p> <p><input type="checkbox"/> (11) Principal arterial-interstate</p> <p><input type="checkbox"/> (12) Principal arterial-other freeways or expressways</p> <p><input type="checkbox"/> (13) Other principal arterial</p> <p><input type="checkbox"/> (14) Minor arterial</p> <p><input type="checkbox"/> (15) Collector</p> <p><input type="checkbox"/> (16) Local road or street</p> <p><input type="checkbox"/> (19) Unknown urban</p> <p><input type="checkbox"/> (99) Unknown <span style="float: right;">53 54</span></p> <p style="text-align: center;"><b>WAS THE DRIVER'S VEHICLE IN A SCHOOL ZONE?</b> (FOR USE IN CODING A20)</p> <p style="text-align: center;">Yes <input type="checkbox"/></p> <p style="text-align: center;">No <input type="checkbox"/></p>
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ENVIRONMENTAL DATA	
<p>37 Number of Travel Lanes</p> <p>___ (1) One      ___ (5) Five</p> <p>___ (2) Two      ___ (6) Six</p> <p>___ (3) Three     ___ (7) Seven or more</p> <p>___ (4) Four      ___ (9) Unknown</p> <p style="text-align: right;">_____ 55</p> <p>38 Lane Width</p> <p>___ Code actual measured value to nearest tenth of a foot</p> <p>___ (999) Unknown</p> <p style="text-align: right;">_____ 56 57 58</p> <p>39 Median Type</p> <p>___ (0) No median</p> <p>___ (1) Curbed with positive barrier</p> <p>___ (2) Positive barrier</p> <p>___ (3) Curbed</p> <p>___ (4) Unprotected</p> <p>___ (9) Unknown</p> <p style="text-align: right;">_____ 59</p> <p>40 Median Width</p> <p>___ (00) No median</p> <p>___ Code actual measured value up to 96 feet</p> <p>___ (97) 96.5 feet or above</p> <p>___ (99) Unknown</p> <p style="text-align: right;">_____ 60 61</p> <p>41 Access Control</p> <p>___ (1) Full</p> <p>___ (2) Partial</p> <p>___ (3) Uncontrolled</p> <p>___ (9) Unknown</p> <p style="text-align: right;">_____ 62</p> <p>42 Trafficway Flow</p> <p>___ (0) Not physically divided (two way traffic)</p> <p>___ (1) Divided trafficway - median strip without positive barrier</p> <p>___ (2) Divided trafficway - median strip with positive barrier</p> <p>___ (3) One way trafficway</p> <p>___ (9) Unknown</p> <p style="text-align: right;">_____ 63</p>	<p>43. 44. Shoulder Type</p> <p style="padding-left: 20px;">L R</p> <p>___ (0) No shoulder</p> <p>___ (1) Surfaced 2-6 feet</p> <p>___ (2) Surfaced &gt; 6 feet</p> <p>___ (3) Gravel or other granular material 2-6 feet</p> <p>___ (4) Gravel or other granular material &gt; 6 feet</p> <p>___ (5) Natural earth, with or without turf 2-6 feet</p> <p>___ (6) Natural earth, with or without turf &gt; 6 feet</p> <p style="text-align: right;">L R</p> <p>___ (9) Unknown</p> <p style="text-align: right;">_____ 64 65</p> <p>45. Roadway Alignment</p> <p>___ (1) Straight</p> <p>___ (2) Curve right</p> <p>___ (3) Curve left</p> <p>___ (9) Unknown</p> <p style="text-align: right;">_____ 66</p> <p>46. Cross Slope</p> <p>___ (1) Flat</p> <p>___ (2) Normal crown</p> <p>___ (3) Superelevation</p> <p>___ (4) Negative superelevation</p> <p>___ (8) Other (specify): _____</p> <p>___ (9) Unknown</p> <p style="text-align: right;">_____ 67</p> <p>47. Superelevation</p> <p>___ (+00) Normal crown/flat</p> <p>___ Code actual value to the nearest hundredth</p> <p>___ ( _ 98) Not a curve</p> <p style="text-align: right;">+</p> <p>___ ( _ 99) Unknown</p> <p style="text-align: right;">_____ 68 69 70</p> <p>48. Degree of Curvature</p> <p>___ (000) Not curved - straight</p> <p>___ Code calculated value to nearest tenth of a degree (See coding manual for formula)</p> <p>___ (997) 99.65 degrees or more</p> <p>___ (999) Unknown</p> <p style="text-align: right;">0</p> <p style="text-align: right;">_____ 71 72 73</p> <p style="padding-left: 40px;">Length of chord. _____ ft.</p> <p style="padding-left: 40px;">Middle ordinate: _____ inches</p>



**National Accident Sampling System—Continuous Sampling Subsystem: Driver Data**

<p>49. Grade Measurement                  ____ (+00) No grade - level                  ____ Code actual value to the nearest hundredth +                  ____ (_99) Unknown <span style="float: right;">____ 74 75 76</span></p> <p>slope                  measurement. (v=____)/(h=____)</p> <p>50 Roadway Profile                  ____ (1) Level                  ____ (2) Grade (≥ 2%)                  ____ (3) Hillcrest                  ____ (4) Sag                  ____ (9) Unknown <span style="float: right;">____ 77</span></p> <p>51 Roadway Surface Type                  ____ (1) Concrete                  ____ (2) Bituminous                  ____ (3) Brick or block                  ____ (4) Slag, gravel or stone                  ____ (5) Dirt                  ____ (8) Other (specify): _____                  ____ (9) Unknown <span style="float: right;">____ 78</span></p>	<p>52. Roadway Surface Condition                  ____ (1) Dry                  ____ (2) Wet                  ____ (3) Snow or slush                  ____ (4) Ice                  ____ (5) Sand, dirt or oil                  ____ (8) Other (specify): _____                  ____ (9) Unknown <span style="float: right;">____ 79</span></p> <p>53. Speed Limit                  ____ (00) No statutory limit                  ____ m.p.h. - Code actual posted or                  statutory speed limit                  ____ (99) Unknown <span style="float: right;">____ 80 81</span></p> <p>54 Restriction of Roadway at Scene (NOTE The                  restriction must have existed prior to this acci-                  dent.)                  ____ (0) No restrictions                  ____ (1) Narrow bridge (as defined)                  ____ (2) Previous accident on roadway                  ____ (3) Maintenance, repair or construction ac-                  tivity on roadway.                  ____ (4) Roadway immersion (e.g., standing                  water)                  ____ (5) Vehicle stopped on roadway                  ____ (6) Snow                  ____ (8) Other roadway obstruction (specify): _____                  ____ (9) Unknown <span style="float: right;">____ 82</span></p> <p>(NOTE: If more than one restriction exists, choose                  the restriction in the order in which they are                  numbered.)</p>
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## 55 Traffic Control Device

\_\_\_ (00) No controls

## Not at railroad grade crossing

## Highway traffic signals (Active)

- \_\_\_ (01) Traffic control signal (on colors) without pedestrian signal
- \_\_\_ (02) Traffic control signal (on colors) with pedestrian signal
- \_\_\_ (03) Traffic control signal (on colors) not known whether or not pedestrian signal
- \_\_\_ (04) Flashing traffic control signal
- \_\_\_ (05) Flashing beacon
- \_\_\_ (06) Flashing highway traffic signal, type unknown or other than traffic control or beacon
- \_\_\_ (07) Lane use control signal
- \_\_\_ (08) Other highway traffic signal (specify).

## Regulatory signs (Passive)

- \_\_\_ (20) Stop sign
- \_\_\_ (21) Yield sign
- \_\_\_ (28) Other regulatory sign (specify)
- \_\_\_ (29) Unknown type regulatory sign

## School zone signs (Passive)

- \_\_\_ (30) School speed limit sign
- \_\_\_ (31) School advance or crossing sign
- \_\_\_ (38) Other school related sign (specify)
- \_\_\_ (39) Unknown type school zone sign

## Warning signs (Passive)

- \_\_\_ (40) Construction warning sign
- \_\_\_ (41) Other warning sign (specify)

## Miscellaneous (Active)

- \_\_\_ (50) Officer, crossing guard, flagman, etc.

## At railroad grade crossing

## Active Devices

- \_\_\_ (60) Gates
- \_\_\_ (61) Flashing lights
- \_\_\_ (62) Traffic control signal
- \_\_\_ (63) Wigwags
- \_\_\_ (64) Bells
- \_\_\_ (65) Special warning device - watchman, flagged by crew.
- \_\_\_ (68) Other active device (specify)
- \_\_\_ (69) Active device, type unknown

## Passive Devices

- \_\_\_ (70) Crossbucks
- \_\_\_ (71) Stop sign
- \_\_\_ (72) Other railroad crossing sign (specify)
- \_\_\_ (78) Other passive device (specify):
- \_\_\_ (79) Passive device, type unknown

## Miscellaneous controls

- \_\_\_ (80) Grade crossing control type unknown

## Whether or Not at Railroad Grade Crossing

## Pavement marking (Passive)

- \_\_\_ (90) Lane line
- \_\_\_ (91) Center line
- \_\_\_ (92) No passing line
- \_\_\_ (93) Edge line
- \_\_\_ (94) Other pavement marking (specify)
- \_\_\_ (95) Unknown pavement marking type
- \_\_\_ (98) Other
- \_\_\_ (99) Unknown

83 84

## 56. Traffic Control Device Functioning

## Active Device (D55 = 01-08, 50-69)

- \_\_\_ (0) No traffic control
- \_\_\_ (1) Traffic control not functioning
- \_\_\_ (2) Traffic control functioning - functioning improperly
- \_\_\_ (3) Traffic control functioning properly

## Passive Device (D55 = 20-41, 70-95)

- \_\_\_ (4) Traffic control device defaced, badly worn, etc.
- \_\_\_ (5) Traffic control device obscured (e.g., covered with snow)
- \_\_\_ (6) No abnormal condition of traffic control device
- \_\_\_ (9) Unknown

85

## 57 Designated Truck System

- \_\_\_ (0) No
- \_\_\_ (1) Yes
- \_\_\_ (9) Unknown

86

National Accident Sampling System—Continuous Sampling Subsystem: Driver Data

INVESTIGATOR DETERMINED	
<p>58 Environmental Related Factors</p> <p>___ (00) No environmental related factors</p> <p>Vision Obscured By</p> <p>___ (01) Rain, snow, fog, smoke, sand, dust</p> <p>___ (02) Reflected glare, bright sunlight, headlights</p> <p>___ (03) Curve, hill or other design features (including traffic signs, embankment)</p> <p>___ (04) Building, billboard, etc.</p> <p>___ (05) Trees, crops, vegetation</p> <p>___ (06) Moving vehicle (including load)</p> <p>___ (07) Splash or spray of passing vehicle</p> <p>___ (08) Parked vehicle</p> <p>___ (09) Other object not classifiable above (specify). _____</p> <p>Swerving or Loss of Control Due to:</p> <p>___ (20) Severe crosswind</p> <p>___ (21) Wind from passing truck</p> <p>___ (22) Slippery surface</p> <p>___ (23) Avoiding debris or objects in roadway</p> <p>___ (24) Ruts, holes, bumps in roadway</p> <p>___ (25) Avoiding animal(s) in roadway</p> <p>___ (26) Avoiding vehicle in roadway</p> <p>___ (27) Avoiding pedestrian, pedalcyclist, or other nonmotorist in roadway</p> <p>___ (28) Avoiding standing water, snow, oilslick or ice patch on roadway</p> <p>Roadway Features</p> <p>___ (30) Inadequate warning of exits, lanes narrowing, traffic controls, etc.</p> <p>___ (31) Pavement marking obscured or absent</p> <p>___ (32) Surface washed out (caved in, road slippage)</p> <p>___ (33) Shoulder too low or high</p> <p>___ (34) Inadequate construction or poor design of roadway, bridge, etc.</p> <p>___ (35) Vehicle unattended in roadway</p> <p>___ (98) Other (specify) _____</p> <p>___ (99) Unknown</p>	

COMPLETED BY TEAM

1. Primary Sampling Unit Number 7 2

2. Case Number-Stratification 3 4 5 6

3. Record Number 4  
7

4. Transaction Code 8

5. Version Number 0  
9

6. Investigator I.D. Number 10

DRIVER INTERVIEW

7. Vehicle Number 11 12

8. Driver's Occupant Number  
(NOTE: If no driver was present, code "00") 13 14

9. Type of Driver Interview Data Obtained  
 (0) Driver not present  
 (1) No data obtained  
 (2) Driver history only  
 (3) Accident circumstances only  
 (4) Driver history and accident circumstances 15

10. Source of Driver Data  
 (0) Driver not present  
 (1) No data obtained  
 (2) Driver  
 (3) Other occupant  
 (4) Relative or friend  
 (5) Eyewitness  
 (6) Combination of 3, 4 or 5  
 (7) Other (specify): \_\_\_\_\_ 16

11. Result  
 (00) Driver not present  
 (01) Unable to contact or locate  
 (02) Hit and run  
 (03) Fatal - surrogate not available  
 (04) In intensive care - surrogate not available  
 (05) Out-of-state resident  
 (06) Refused interview for other than on advice of attorney or insurance company (specify): \_\_\_\_\_  
 (07) Insurance company refusal  
 (08) Attorney refusal or litigation  
 (09) Other (specify): \_\_\_\_\_  
 (10) No return of letter questionnaire  
 (11) Return of letter questionnaire (completed)  
 (12) Partial or complete interview 17 18

12. Date Interview Completed 19 20 21 22 8 23 24

13. Completing person 25

14. Reason Official Driver Records are Not Obtainable  
 (0) Driver not present  
 (1) Record obtained  
 (2) Hit and run driver  
 (3) Records not found  
 (4) Driver not licensed  
 (5) License number incorrect  
 (6) No information on driver  
 (7) Out-of-state or foreign driver  
 (8) To be updated  
 (9) Record not received before file closed 26

COMPLETED BY ZONE CENTER

15. Date Official Driver Record Update Received 27 28 29 30 8 31 32

16. Reviewed By 33 34

ERROR TALLY (Completed By Zone Center)																		
Blank - Not in error and not missing	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Response	36	38	37	38	38	40	41	42	43	44	45	46	47	48	48	50	51
0 - RDE system error	Variable	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1 - Error (not correctable)	Response	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
2 - Error (correctable)	Variable	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
3 - Error (correctable)	Response	68	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
6 - Sequencing errors in CDC s or injury data	Variable	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
8 - Data entry error	Response	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
9 - Unknown coded on field form	Variable	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
A - Hardcopy change with no error -- not automated	Response	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102



**DRIVER UPDATE RECORD**

**This section must be completed prior to initial case submission**

1 Primary Sampling Unit Number	<u>1</u> <u>2</u>	DRIVER'S NAME: _____
2 Case Number-Stratification	<u>3</u> <u>4</u> <u>5</u> <u>6</u>	ADDRESS: _____
3 Record Number	<u>4</u> <u>7</u>	State Driver License No. _____
4 Transaction Code	<u>2</u> <u>8</u>	Date of Birth. <u> / </u> <u> / </u>
5 Version Number	<u>0</u> <u>9</u>	(Delete before submission)
6 Investigator I D Number	<u>10</u>	
7 Vehicle Number	<u>11</u> <u>12</u>	

**Circle the number of each variable to be updated and complete upon receipt of this data**  
(or reason data not obtained (see response for log variable 14)\_\_\_\_\_)

25 Alcohol Test Results	<u>41</u> <u>42</u>
26 Driver License Status (Irrespective of Vehicle being Driven)	<u>43</u>
27 Driver License Type Compliance (For this Class Vehicle)	<u>44</u>
28 Driver License Restrictions	<u>45</u>
29 Previous Speeding Convictions	<u>46</u>
30 Previous Other Harmful Moving Violations or Convictions (specify) _____	<u>47</u>
31 Previous <u>D</u> ri <u>v</u> ing <u>W</u> hile <u>I</u> ntoxicated Convictions (or DUIL)	<u>48</u>
32 Previous Recorded Suspensions and Revocations	<u>49</u>
33 Previous Recorded Accidents	<u>50</u>

SOURCE OF DATA ON WHICH UPDATE IS BASED

\_\_\_\_\_

Variable Name: Investigator I.D. Number

Format: 1 column - numeric

Beginning  
Column 10

Element Values:

Range: 1 through 9

Source: Zone center.

Remarks:

The person who was primarily responsible for the completion of the Driver Form shall enter his/her unique number.

Each researcher's unique number is assigned by the PSU's Zone Center.

This variable is a mandatory variable and cannot be changed.

Variable Name: Vehicle Number

Format: 2 columns - numeric

Beginning  
Column 11

Element Values:

Range: 01 through 30

Source: Researcher determined--inputs include police report and driver or interview.

Remarks:

For each and every Vehicle Form, there must be an accompanying Driver Form.

The value coded here must be the same as that coded for the vehicle in which this driver is associated.

This variable is a mandatory variable and cannot be changed.



Variable Name: Number of Occupants This Motor Vehicle

Format: 2 columns - numeric

Beginning  
Column 13

Element Values:

Range: 00 through 97  
97 97 or more  
99 Unknown

Source: Primary source is driver interview, secondary sources include the police report, an occupant interviewee, and witnesses other than any occupant interviewee.

Remarks:

This variable tells the system how many occupants (including the driver) were present in this driver's vehicle. Code the actual number of persons (including the driver, if present) that were occupants of this vehicle. The number of OCCUPANT FORMS does not have to equal this value (See Remarks section V08, Number of Occupant Forms Submitted.)

Code "99" (Unknown) if the Actual Number of occupants present is unknown.

Code "99" (Unknown) is also used in 1987 for all "non-light vehicles" (i.e., V17-20-29, 30-39, 70-79, 80-89, and 99) regardless of whether or not the actual number of occupants in the vehicle is known.

Variable Name: Driver Presence in Vehicle

Format: 1 column - numeric

Beginning  
Column 15

Element Values:

- 1 Driver present
- 2 Driver not present

Source: Researcher determined--inputs include the police report and any driver interviews or person interviews.

Remarks:

This variable serves as a flag to identify driverless motor vehicles in transport. If no driver was physically in the vehicle at the time it was struck, then code "2" (Driver not present) should be coded. In addition, variables D10 through D33 should be left "blank". If no driver was present, then no Occupant Form for this driver is required. On the other hand, a code of "1" implies that an Occupant Form will be present for this driver.

If this motor vehicle was a "hit-and-run" vehicle, as defined on the Vehicle Form (V11), then the driver was present ("1").

This variable is a mandatory variable and cannot be changed.

Variable Name: Months Driving Experience This Class of Vehicle

Format: 2 columns - numeric

Beginning  
Column 16

Element Values:

Blank - Driver not present (D09)  
99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown); however, if no driver was present, then code "Blank".



Variable Name: Total Mileage All Vehicles (Past Twelve Months)

Format: 3 columns - numeric

Beginning  
Column 21

Element Values:

Blank - Driver not present (D09)  
999 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "999" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Driver Education

Format: 1 column - numeric

Beginning  
Column 24

Element Values:

Blank - Driver not present (D09)  
9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

DRIVER VIEW OF TOTAL ACCIDENT CONTACT SEQUENCE

Record all impact events in the sequence that they occurred. For each impact event, record: [a] its number, [b] the object contacted (from codes below), [c] the number of the impacting vehicle, [d] the location of the impact event on that vehicle (from below codes), and [e] the vehicle's orientation (from below codes). If the impact event involved another vehicle, list [f] its number, [g] location of the impact event on the vehicle and [h] the vehicle's orientation. List up to six impact events. Place a check mark in the box for "object contacted" for that impact event to indicate it was with another motor vehicle. If a vehicle is stopped at impact, use code 7 for Vehicle Orientation and write in "stopped", "parked", etc.

Have the driver sketch the accident sequence. For telephone interviews the researcher must sketch the accident sequence as described by the driver. It is not necessary that all the drivers involved in a multicar/multi-impact event accident know the actual sequence of impact events. It is important to get each driver to describe how the accident occurred; each driver could provide a new insight into the dynamics of the collision. Hence, the sketch drawn in each Driver Form should reflect the perceptions of that particular driver, and not the researcher's overall determination, of the actual accident configuration.

Very few accidents will involve more than six impact events, but for those that do, the researcher must select the six most severe impact events from the total number and then list them in sequence. (Example: If there are a total of nine (9) impact events out of which the 3rd, 6th, and 7th impacts are minor compared to the rest, the researcher would list impacts 1, 2, 4, 5, 8, and 9 as per the driver's narration of sequence.) In these cases it is recommended that the researcher record the additional impact events on the reverse side of page 3 of the Driver Form and annotate as to his/her basis for selecting the six (6) most severe impact events. Although in the above example there will be nine (9) events, each involved driver may not have knowledge of all nine (9) separate and distinct events.

Also, it should always be kept in mind that the event number is unique to an accident and not to a driver/vehicle.

Example: An accident involving four vehicles

Sketches and information of the accident sequence as recorded from each driver interview are shown in the next six pages. These sketches and impacts are recorded based on information given by each driver. A final accident sequence diagram is then reconstructed, based on scene inspection, vehicle inspections, police report and interviews. Then using this information the researcher determines the overall accident sequence (event numbers) and records the correct event number on each Driver Form.

Assume you got the following information from each driver's interview.

Driver #1: The driver tells you that he hit two trees before his vehicle was hit by another vehicle (vehicle #2) which made him spin around into the path of vehicle #3 and was hit in the left side by vehicle #3. The other vehicle (vehicle #2) then hit vehicle #4 head-on.

Driver #2: This driver tells you that vehicle #1 skidded into his path and caused his vehicle to hit vehicle #1 in the right side. Then his vehicle (#2) skidded into impact with vehicle #4 head-on. He then tells you that he heard vehicle #1 impacting vehicle #3.

Driver #3: This driver gives you a similar type of description as driver #2 except she feels that vehicle #1 hit her vehicle before vehicle #2 impacted vehicle #4.

Driver #4: This driver tells you that all he knows about the accident is that vehicle #2 hit his vehicle head-on.



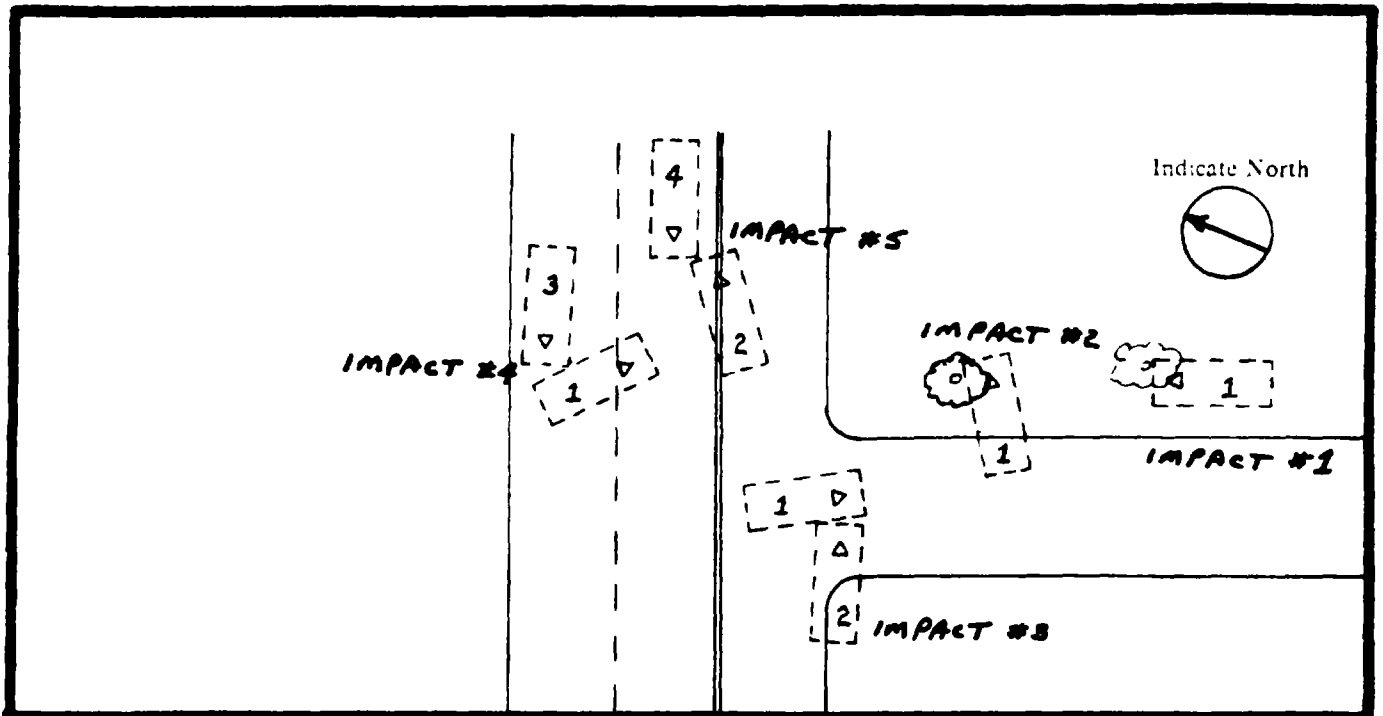








FINAL DIAGRAM BASED ON ALL INTERVIEWS, POLICE  
AND SCENE INSPECTION



Based upon the final accident dynamics as determined by the res archer; drawing on his/her knowledge of scene inspection, vehicle inspection, police report, and interviews; the actual impact event sequence [Final Event Number (Researcher)] is determined as shown above and entered in the corresponding Driver Forms. (See next page.)



Variable Name: Frequency Driving Road

Format: 1 column - numeric

Beginning  
Column 26

Element Values:

Blank - Driver not present (D09)  
9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Time Since Last Driver Training

Format: 1 column - numeric

Beginning  
Column 25

Element Values:

Blank - Driver no present (D09)

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".



Variable Name: Type of Operation or Carrier

Format: 1 column - numeric

Beginning  
Column 27

Element Values:

Blank - Driver not present (D09)

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Federal Safety Regulated

Format: 1 column - numeric

Beginning  
Column 28

Element Values:

Blank - Driver not present (D09)  
9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Driver's Classification

Format: 1 column - numeric

Beginning  
Column 29

Element Values:

Blank - Driver not present (D09)  
9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Accident Type

Format: 2 columns - numeric

Beginning  
Column 30

Element Values:

Blank	- Driver not present (D09)
00	No impact
01-93	Code the number of the diagram that best describes the accident circumstance
98	Other accident type (specify):
99	Unknown

Diagrams (see next page)

Source: Researcher determined - inputs include police report, scene inspection, vehicle inspection and interview.

Remarks:

"Blank" indicates that no driver was present.

This variable is used for categorizing the collisions of drivers involved in accidents. A collision is defined here as the first harmful event between the vehicle and some object, accompanied by property damage or human injury. The object may be another vehicle, a person, an animal, a fixed object, the road surface, or the ground. If the first collision is a rollover, the impact is with the ground or road surface. The collision may also involve plowing into soft ground, if severe vehicle deceleration results in damage or injury. A road departure without damage or injury is not defined as a collision.

For accurate coding, determine the collision code in the following three step sequence. (Refer to Figure 1.)

Step 1 - Determine the appropriate category (i.e. I-VI).

Step 2 - Determine the appropriate configuration (i.e. A-M).

A. & B. Roadside departure - single driver, vehicle departed either right or left side of road with impact occurring off the road. Right versus left is based on the side of the road departed immediately prior to the first harmful event.

D19 Figure 1

ACCIDENT TYPES (Includes Intent)

Category	Configuration	ACCIDENT TYPES (Includes Intent)				
I Single Driver	A Right Roadside Departure	01 DRIVE OFF ROAD	02 CONTROL/ TRACTION LOSS	03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN
	B Left Roadside Departure	06 DRIVE OFF ROAD	07 CONTROL/ TRACTION LOSS	08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN
	C Forward Impact	11 PARKED VEH	12 STA OBJECT	13 PEDESTRIAN/ ANIMAL	14 END DEPARTURE	15 SPECIFICS OTHER
II Same Trafficway Same Direction	D Rear-End	20 STOPPED 21, 22, 23	24 SLOWER 25, 26, 27	28 DECEL. 29, 30, 31	(EACH • 32) SPECIFICS OTHER	(EACH • 33) SPECIFICS UNKNOWN
	E Forward Impact	34 CONTROL/ TRACTION LOSS	36 CONTROL/ TRACTION LOSS	38 AVOID COLLISION WITH VEH.	40 AVOID COLLISION WITH OBJECT	(EACH • 42) (EACH • 43) SPECIFICS OTHER SPECIFICS UNKNOWN
	F Sideswipe/Angle	44 LATERAL MOVE	(EACH • 46) SPECIFICS OTHER	(EACH • 47) SPECIFICS UNKNOWN		
III Same Trafficway Opposite Direction	G Head-On	50 LATERAL MOVE	(EACH • 52) SPECIFICS OTHER	(EACH • 53) SPECIFICS UNKNOWN		
	H Forward Impact	54 CONTROL/ TRACTION LOSS	56 CONTROL/ TRACTION LOSS	58 AVOID COLLISION WITH VEH.	60 AVOID COLLISION WITH OBJECT	(EACH • 62) (EACH • 63) SPECIFICS OTHER SPECIFICS UNKNOWN
	I Sideswipe/Angle	64 LATERAL MOVE	(EACH • 66) SPECIFICS OTHER	(EACH • 67) SPECIFICS UNKNOWN		
IV Change Trafficway Vehicle Turning	J Turn Across Path	68 INITIAL OPPOSITE DIRECTIONS	70 INITIAL SAME DIRECTIONS	(EACH • 74) (EACH • 75) SPECIFICS OTHER SPECIFICS UNKNOWN		
	K Turn Into Path	77 TURN INTO SAME DIRECTION	79 TURN INTO OPPOSITE DIRECTIONS	(EACH • 84) (EACH • 85) SPECIFICS OTHER SPECIFICS UNKNOWN		
V Incorrecting Paths (Vehicle Damage)	L Straight Paths	87 STRAIGHT PATHS	(EACH • 89) SPECIFICS OTHER	(EACH • 91) SPECIFICS UNKNOWN		
VI Miscellaneous	M Backing Etc.	92 BACKING VEH	93 OTHER VEH. OR OBJECT	94 Other Accident Type	95 Unknown Accident Type	96 No Impact

Variable Name: Accident Type (cont'd.)

- C. Forward impact - single driver, vehicle impacted object on road or off end of trafficway.

NOTE: First, the phrase "Single Driver" in category I means Single In-Transport Motor Vehicle (involved in the first harmful event). Second, in categories II-VI the specific combinations must occur together as pairs (i.e., the pair code defines the Accident Type). Thus, the combination "20", "32" is not valid. Further, the combination "20", Blank is similarly not valid since "20" only has meaning if it is linked to codes "21"- "23". When an accident occurs that involves a vehicle impacting (striking or struck) a "driverless in transport vehicle" the best fit will be the appropriate configuration-category "Specifics other" code and "blank". For example, for a vehicle which impacts the rear of a driverless in transport vehicle the code would be: "32", "Blank". Third, code all category I without regard to the location of the impact on the vehicle.

- D. Rear-end - front of overtaking vehicle impacted rear of other.

NOTE: Even if the forward vehicle had started to make a turn, code here (not in category IV).

- E. Forward impact - front of overtaking vehicle impacted rear of other, following a steering maneuver around an object or non-involved vehicle.

- F. Same-direction sideswipe/angle - a sideswipe is a shallow, glancing impact involving the side of one or both vehicles.

Note. In some situations, a sideswipe CDC cannot be assigned as some of the CDC rules prohibit a sideswipe to be coded (i.e., snagging, etc.). For the purpose of this variable, sideswipe should be encoded here.

- G. Head-on - frontal area of one vehicle impacted frontal area of other.

- H. Forward impact - frontal area of one vehicle impacted frontal area of other, following a steering maneuver around an object or noninvolved vehicle.

Variable Name: Accident Type (cont'd.)

- I. Opposite-direction sideswipe/angle - see definition in Configuration F.
- J. Turn across path - two vehicles initially on same trafficway. One tried to turn onto another trafficway and pulled in front of second vehicle.
- Note. Even if the turning vehicle was hit in the rear by the second vehicle, code here.
- K. Turn into path - two vehicles initially on different trafficways. One attempted to turn onto the same trafficway as the other.

Step 3 - Determine the specific two-digit code (i.e., codes "01" - "93").

The specific role of the driver's vehicle is determined by reference to the accident type diagrams (Figure 1). Only types requiring special clarification are discussed here.

Code "01" or "06" (Drive off road) when the vehicle departed the road under a controlled situation (i.e., the driver was distracted, fell asleep, intentionally departed, etc.).

Code "02" or "07" (Control loss) if there is some evidence that the vehicle lost traction or in some other manner "got away" from the driver (i.e., the vehicle spun off the road as a result of surface conditions, oversteer phenomena, or mechanical malfunctions). If in doubt, this should be coded "01" or "06" (Drive off road).

Code "03" or "08" (Avoid collision with vehicle, pedestrian, animal) when the vehicle departed the road as a result of avoiding something in the road. "Phantom" situations should be included here.

Codes "03", "08" and "13" include the P08 - "1", "2", "3" and "8" element value items: pedestrians, bicyclists, other cyclists, and other nonmotorists. Use codes "04" or "09" for any other stationary or nonstationary objects if the avoidance characteristics of codes "03" or "08" are present.

In codes "11", "12", and "13" the objects may be on either side of the road.

Code "12" (Stationary object) includes a hole in the road, an overhanging object (e.g., overpass) or an object projecting over road edge (e.g., support column of elevated railway).

Variable Name: Accident Type (cont'd.)

Code "13" for accidents involving a pedestrian or nonmotorist when the pedestrian or nonmotorist is impacted during a turning maneuver of the vehicle.

Code "15" for impacted (striking or struck) trains and other nonstationary objects on the road.

Distinguish codes "44" and "45" based on the relative vehicle position. Code "44" refers to a vehicle to the left of the other vehicle involved in a sideswipe or angle collision, configuration F. Likewise, code "45" refers to a vehicle to the right of the other vehicle involved in a collision of the configuration F type. Finally, use codes "44" and "45" when (1) the right sides of two vehicles impact following a 180 degree rotation of the vehicle on the right, or (2) the left sides of the vehicles impact following a 180 degree rotation of the vehicle on the left.

Code "46" describes sideswipe and angle collisions. Use code "46" if one vehicle was behind the other prior to their category II, configuration F collision. For example, code "46" (Specifics other) when two vehicles are on the same trafficway/same direction and one loses control and is struck in the side by the front of the other vehicle. However, should one vehicle rotate such that the impact is front to front, use code "98".

Code "64" refers to the infringing vehicle in a category III, configuration I collision.

NOTE: Vehicle action is the controlling factor in configurations J and K; the plane of contact is irrelevant.

Codes "68"- "73" (Turn across path) may include rear-end collisions which do not belong in Configuration D or E.

Codes "76"- "79" (Turn into same direction), in rare cases, may involve the turning vehicle running into the rear of the other. These are to coded as "76"- "79", unless the act of turning had been completed when the impact occurred, in which case Configurations D or E would apply.

Code "82" (Left turn into opposite direction) applies to the driver's vehicle which was in the act of making a left turn (e.g., from a driveway, parking lot or intersection). Do not confuse this situation with Configuration L. The driver's intended path is the prime concern.

Codes "86"- "89" [Straight (intersecting) paths] should not be confused with any types in Configuration K. In all cases the vehicles are proceeding (or attempting to proceed) straight ahead, usually at a junction.

Code "98" (Other accident typ ) is used for those collisions which do not reasonably fit any of the specified types. Code "98" for rollovers (including overturned motorcycles) on the road.



## Variable Name: Accident Type (cont'd.)

In multiple vehicle accidents (involving more than two vehicles) or in collision sequences involving a combination of vehicle-to-object-to-vehicle impacts, code the Accident Type for the vehicle(s) involved in the first harmful event. All other vehicles are coded "98".

The investigator should keep in mind that intended actions may play a role in the coding scheme. For example, accident type 26 (slower, turning left) would be selected over type 25 (slower, straight ahead) if the subject vehicle was traveling slower with the intention of turning left. Note, the turning action may not have been initiated prior to the collision.

The only configurations where control/traction loss or an avoidance maneuver is to be considered are A, B, E and H.

Adopt codes that best fit the collision situation when one vehicle is making a U-turn.

Variable Name: Attempted Avoidance Maneuver

Format: 2 columns - numeric

Beginning  
Column 32

Element Values:

Blank - Driver not present (D09)  
00 No impact  
01 No avoidance actions  
02 Braking (no lockup)  
03 Braking (lockup)  
04 Braking (lockup unknown)  
05 Releasing brakes  
06 Steering left  
07 Steering right  
08 Braking and steering left  
09 Braking and steering right  
10 Accelerating  
11 Accelerating and steering left  
12 Accelerating and steering right  
98 Other action (specify)  
99 Unknown

Source: Researcher determined--inputs include the driver interview, police report, and the scene inspection.

Remarks:

"Blank" indicates that no driver was present.

Attempted avoidance maneuvers (pre-crash) are movements/actions taken by the driver to avoid the impending crash after realization of an impending danger but before the actual crash (impact).

Code the attribute which best describes the actions taken by the driver.

Code "01" (No avoidance action) is used whenever the driver did not attempt any evasive (Pre-Crash) maneuvers.

Variable Name: Driver Related Factors

Format: 2 columns - numeric

Beginning  
Column 34

Element Values:

Blank - Driver not present (D09)  
99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown); however, if no driver was present, then code "Blank".

D22

D23

Variable Name: Traffic Violation Charged Against This Driver

Format: 2 columns - numeric

Beginning

Column 36

38

Element Values:

Blank - Driver not present (D09)

99 Unknown

Source:

Remarks:

These variables are not collected in 1987. Code "99"s (Unknown); however, if no driver was present, then code "Blanks".

Variable Name: Police Reported Alcohol Presence

Format: 1 column - numeric

Beginning  
Column 40

Element Values:

Blank - Driver not present (D09)  
0 No (alcohol not present)  
1 Yes (alcohol present)  
8 Not reported  
9 Unknown

Source: Police report.

Remarks:

"Blank" indicates that no driver was present.

Find the location on the police report that indicates the investigating officer's assessment with respect to whether or not alcohol was present in the driver in this accident. If the police report explicitly states or implies that alcohol was present or used by the driver prior to the accident, then code "1" [Yes (alcohol present)]. If there is no specific variable concerning alcohol presence, see if it is addressed in the narrative description of the accident.

The phrase "alcohol present" means that the driver had consumed an alcoholic beverage. Presence is not an indication that alcohol was in any way a cause of the accident, even though it may have been. Finding opened or unopened alcoholic beverages in the vehicle does not by itself constitute presence.

Code "1" [Yes (alcohol present)] if the police indicate alcohol presence in the driver via a specific data element on the police report form and/or if the police charges the driver with DWI or DUIL and/or if the police mention in the narrative section of the report that the driver had been drinking (or alcohol was present or involved) and/or the police report has a positive BAC test result (BAC > .00).

Code "0" [No (alcohol not present)] if the investigating officer's assessment (as reported on the police report) is that no alcohol was present in the driver.

Code "8" (Not reported) if there is a specific location on the police report for assessment of alcohol presence but the investigating officer fails to make either a positive or negative assessment of alcohol presence.

**Variable Name: Police Reported Alcohol Presence (cont'd.)**

Code "9" (Unknown) if the alcohol presence is unknown. In general police reports have blocks to check either positive or negative alcohol presence, hence one of the codes "0", "1", or "8" is the appropriate response. But if a police report has provision for the investigating officer to respond "unknown alcohol presence", then code "9" (Unknown).

If the PAR has a block which is labeled "Alcohol/Drugs", then use any other information on the PAR to determine what was present, alcohol or some other type of drug. If no other information is available, then code "9" (Unknown) should be used.

Hit-and-run drivers should be coded "9" (Unknown) for this variable unless clear evidence to the contrary exists.

Variable Name: Alcohol Test Results

Format: 2 columns - numeric

Beginning  
Column 41

Element Values:

Range: 00-49; 95-97; 99

Code actual reported number representing fraction of alcohol present  
(decimal implied before first digit 0.xx).

Blank - Driver not present (D09)

95 Test refused

96 None given

97 AC test performed, results unknown

99 Unknown

Source: Police report, medical reports, or other official sources.

Remarks:

"Blank" indicates that no driver was present.

A blood alcohol concentration (BAC) test could be a blood, breath, or urine test. No psychomotor (police observation of driver actions) test results are to be coded here. These preliminary tests include instrumented field screening tests which indicate the presence of alcohol, but not necessarily the particular content level. These devices are designed to segregate candidates for further testing from those persons where the suspected presence of alcohol is either nonexistent or too low for additional tests.

Code "95" (Test refused) when the person refuses to voluntarily take a BAC test and no subsequent test is given. If the person refuses, but a test is performed, code the reported BAC or "97" (AC test performed, results unknown).

Code "96" (None given) includes those instances when an instrumented field screening test was given and it determined that no BAC test was required.

If an instrumented field screening test was given and it was determined that a BAC test was required, code either the reported BAC from the subsequent test or "97" (AC test performed, results unknown) if the precise level was not obtained. Researchers should obtain BAC test results whenever possible. Code "97" should be used only after all available sources have been exhausted. Verbal BACs obtained from official sources are acceptable if written approval (or approval via the message system) has been obtained from the Zone Center.

## Variable Name: Alcohol Test Results (cont'd.)

If the results are not available at the time the NASS case is initially submitted, code "97" (AC test performed, results unknown), circle the variable number, and update this variable when the results are obtained.

If the BAC was given on the police report or subsequently added after the case was initiated, code the reported value. If the BAC was obtained from a medical report or any other official record, code the reported value. In essence, if any BAC is obtained, code the reported value.

Blood Alcohol Content (BAC) measures the percentage (expressed as a decimal) of the number of grams of alcohol in a liter of blood. The standard measure is expressed as the number of milligrams per deciliter (tenth of a liter) (e.g., .05 = 50 mg/100 ml; .15 = 150 mg/100 ml).



Variable Name: Driver License Status (Irrespective of Vehicle Being Driven)

Format: 1 column - numeric

Beginning  
Column 43

Element Values:

Blank - Driver not present (D09)

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Driver License Type Compliance (for this class vehicle)

Format: 1 column - numeric

Beginning  
Column 44

Element Values:

Blank - Driver not present (D09)

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Driver License Restrictions

Format: 1 column - numeric

Beginning  
Column 45

Element Values:

Blank - Driver not present (D09)  
9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Previous Speeding Convictions

Format: 1 column - numeric

Beginning  
Column 46

Element Values:

Blank - Driver not present (D09)  
9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Previous Other Harmful Moving Violation Convictions

Format: 1 column - numeric

Beginning  
Column 47

Element Values:

Blank - Driver not present (D09)

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Previous Driving While Intoxicated Convictions (or DUIL)

Format: 1 column - numeric

Beginning  
Column 48

Element Values:

Blank - Driver not present (D09)

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Previous Recorded Suspensions and Revocations

Format: 1 column - numeric

Beginning  
Column 49

Element Values:

Blank - Driver not present (D09)  
9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".

Variable Name: Previous Recorded Accidents

Format: 1 column - numeric

Beginning  
Column 50

Element Values:

Blank - Driver not present (D09)  
9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown); however, if no driver was present, then code "Blank".



Variable Name: Federal Aid System

Format: 1 column - numeric

Beginning  
Column 51

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Class Trafficway

Format: 1 column - numeric

Beginning  
Column 52

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Roadway Function Class

Format: 2 column - numeric

Beginning  
Column 53

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).

Variable Name: Number of Travel Lanes

Format: 1 column - numeric

Beginning  
Column 55

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Lane Width

Format: 3 columns - numeric

Beginning  
Column 56

Element Values:

999 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "999" (Unknown).

Variable Name: Median Type

Format: 1 column - numeric

Beginning  
Column 59

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Median Width

Format: 2 columns - numeric

Beginning  
Column 60

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).

Variable Name: Access Control

Format: 1 column - numeric

Beginning  
Column 62

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).



Variable Name: Trafficway Flow

Format: 1 column - numeric

Beginning  
Column 63

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

D43

D44

Variable Name: Shoulder Type - Left  
Shoulder Type - Right

Format: 1 column - numeric

Beginning  
Column 64  
65

Element Values:

9 Unknown

Source:

Remarks:

These variables are not collected in 1987. Code "9"s (Unknown).

Variable Name: Roadway Alignment

Format: 1 column - numeric

Beginning  
Column 66

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Cross Slope

Format: 1 column - numeric

Beginning  
Column 67

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Superelevation

Format: 3 columns - numeric

Beginning  
Column 68

Element Values:

\_99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "\_99" (Unknown).

Variable Name: Degree of Curvature

Format: 3 columns - numeric

Beginning  
Column 71

Element Values:

990 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "990" (Unknown).

Variable Name: Grade Measurement

Format: 3 columns - numeric

Beginning  
Column 74

Element Values:

\_99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "\_99" (Unknown).

Variable Name: Roadway Profile

Format: 1 column - numeric

Beginning  
Column 77

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).



Variable Name: Roadway Surface Type

Format: 1 column - numeric

Beginning  
Column 78

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Roadway Surface Condition

Format: 1 column - numeric

Beginning  
Column 79

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Speed Limit

Format: 2 columns - numeric

Beginning  
Column 80

Element Values:

Range: 00 through 55

00 No statutory limit

Code actual posted or statutory speed limit in m.p.h.

99 Unknown

Source: Primary sources are scene inspection or statutory law. Do not use the police report for selecting this variable's value.

Remarks:

A roadway is that part of a trafficway where vehicles travel. A divided trafficway is composed of two or more roadways.

If the collision occurred other than in a junction, code the value on the basis of the most representative description of this driver's roadway leading to the location of this vehicle's first harmful event.

If the first harmful event occurs off the roadway, code the value on the basis of the most representative description of the roadway leading to the point of departure.

If the first harmful event is located in the junction of two or more roadways, code the speed limit on the basis of the most representative description of the approach leg to the junction for this vehicle.

Disregard advisory or other speed signs which do not indicate the legal speed limit. Furthermore, do not confuse advisory signs on entrance/exit ramps or near intersections with the actual legal maximum speed limit.

If no speed limit sign is posted within a "reasonable" distance from the location of the first harmful event along the approach leg of the vehicle, the researcher should reference state statutes to obtain the applicable statutory maximum for the scene (local or state).

If a state has a statute that uniformly reduces the maximum allowable speed within or near a construction zone, then code the indicated reduced limit.

Code "00" (No statutory limit) should be used on roadways which are neither posted nor which have a statutory limit (e.g., parking lot roadways or entrance/exits, service station entrance/exits, or driveways, etc.).

Variable Name: Restriction of Roadway at Scene  
(The restriction must have existed prior to this accident.)

Format: 1 column - numeric

Beginning  
Column 82

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Traffic Control Device

Format: 2 columns - numeric

Beginning  
Column 83

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).

Variable Name: Traffic Control Device Functioning

Format: 1 column - numeric

Beginning  
Column 85

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Designated Truck System

Format: 1 column - numeric

Beginning  
Column 86

Element Values:

9 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "9" (Unknown).

Variable Name: Environmental Related Factors

Format: 2 columns - numeric

Beginning  
Column 87

Element Values:

99 Unknown

Source:

Remarks:

This variable is not collected in 1987. Code "99" (Unknown).





**Occupant Data**

1 Primary Sampling Unit Number	<u>    </u> <u>    </u>
2 Case Number-Stratification	<u>    </u> <u>    </u> <u>    </u> <u>    </u>
3 Record Number	<u>    </u> <u>    </u>
4 Transaction Code	<u>    </u>
5 Version Number	<u>    </u>
6 Investigator I D Number	<u>    </u>

**IDENTIFICATION**

7 Vehicle Number	<u>    </u> <u>    </u>
8 Occupant Number	<u>    </u> <u>    </u>

**OCCUPANT INTERVIEW**

9 Occupant's Age ____ year(s) - Code actual age at time of accident ____ (00) Less than one year old ____ (97) 97 years and older ____ (99) Unknown	<u>    </u> <u>    </u>
10 Occupant's Sex ____ (1) Male ____ (2) Female ____ (9) Unknown	<u>    </u>
11 Occupant's Height ____ inches - Code actual height to the nearest inch ____ (99) Unknown	<u>    </u> <u>    </u>
12 Occupant's Weight ____ pounds - Code actual weight to the nearest pound ____ (999) Unknown	<u>    </u> <u>    </u> <u>    </u>
13 Occupant's Role ____ (1) Driver ____ (2) Passenger ____ (9) Unknown	<u>    </u>

**14. Occupant's Seat Position**

- \_\_\_\_ (01) Front seat - left side
- \_\_\_\_ (02) Front seat - middle
- \_\_\_\_ (03) Front seat - right side
- \_\_\_\_ (04) Second seat - left side
- \_\_\_\_ (05) Second seat - middle
- \_\_\_\_ (06) Second seat - right side
- \_\_\_\_ (07) Third seat - left side
- \_\_\_\_ (08) Third seat - middle
- \_\_\_\_ (09) Third seat - right side
- \_\_\_\_ (10) Front seat - additional passenger
- \_\_\_\_ (11) Second seat or beyond - additional passenger
- \_\_\_\_ (12) Truck-tractor sleeping section
- \_\_\_\_ (13) Other enclosed area (specify)  
\_\_\_\_\_
- \_\_\_\_ (14) In or on unenclosed area (specify area type): \_\_\_\_\_
- \_\_\_\_ (15) In or on trailing unit (specify unit type): \_\_\_\_\_
- \_\_\_\_ (99) Unknown

**INVESTIGATOR DETERMINED**

(NOTE. INVESTIGATOR as used below refers to the product of individual observation, police reports, and any other sources used that culminated in the assessment which represents the final opinion of the investigator )

<u>Inter- viewee</u>	<u>Investigator</u>
--------------------------	---------------------

**15 Entrapment**

(NOTE Entrapped means that part of the occupant was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment )

- |                        |             |
|------------------------|-------------|
| ____ (0) Not entrapped | <u>    </u> |
| ____ (1) Entrapped     | <u>    </u> |
| ____ (9) Unknown       | <u>    </u> |





National Accident Sampling System - Continuous Sampling Subsystem: Occupant Data

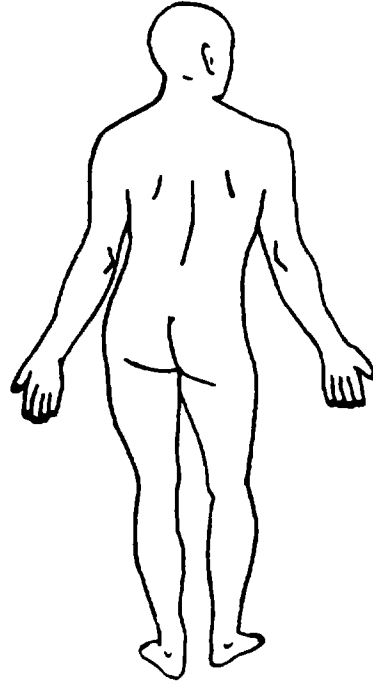
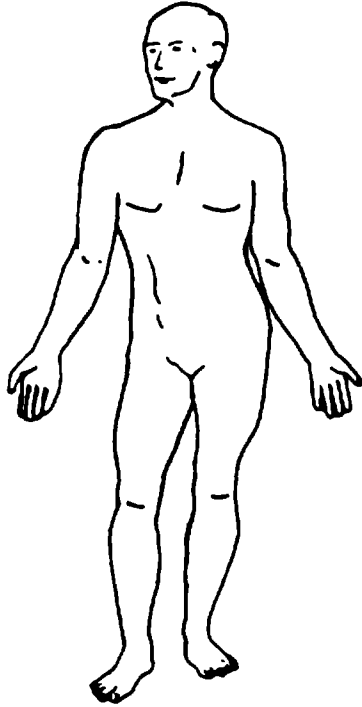
NCI

**INJURY DATA FROM INTERVIEWEE OR UNOFFICIAL SOURCE**

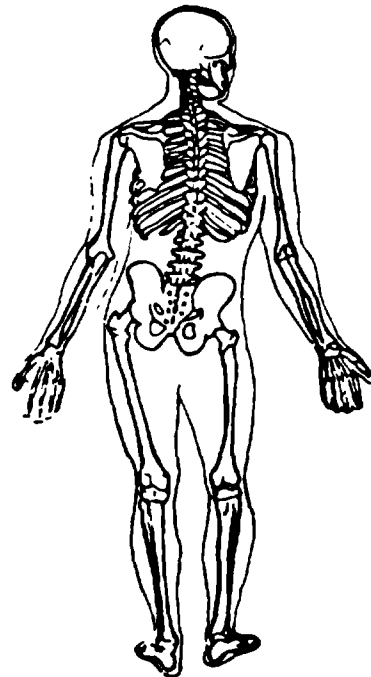
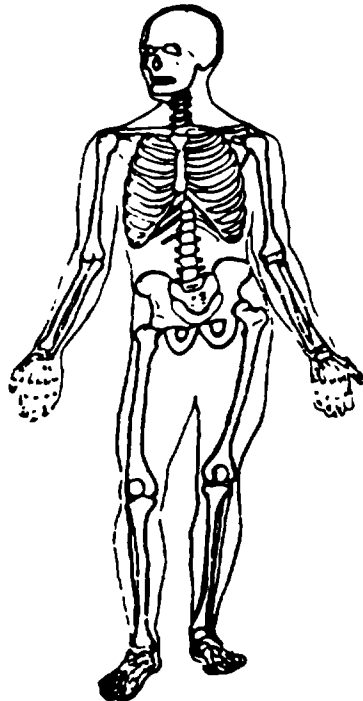
Indicate the *Nature, Location, and injury Source* of all injuries.

Specify Source: \_\_\_\_\_

**Soft Tissue Injuries**



**Skeletal Injuries**

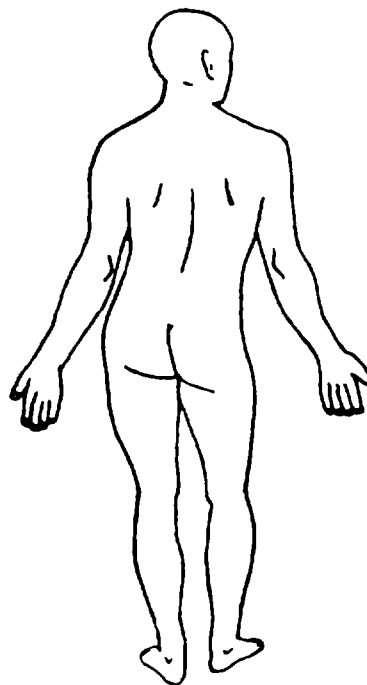
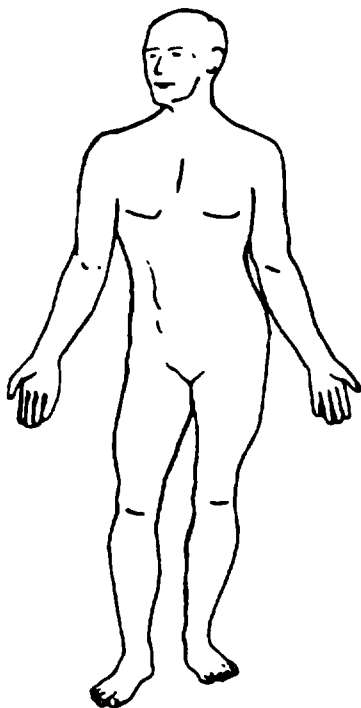


NCI

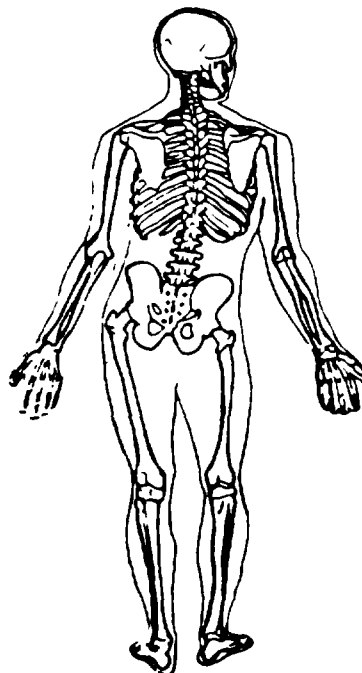
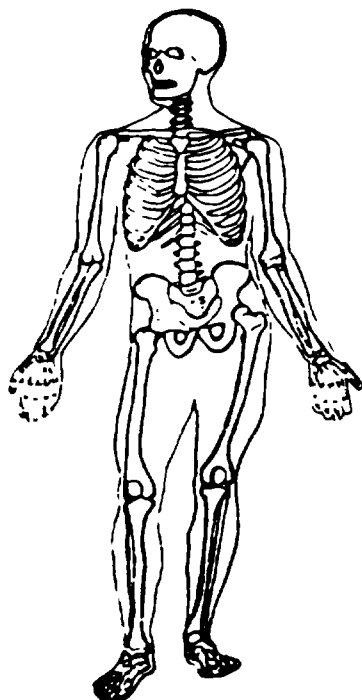
### OFFICIAL INJURY DATA

Indicate the *Nature, Location, and injury Source* of all injuries.

#### Soft Tissue Injuries



#### Skeletal Injuries



Write additional medical record injury data on reverse of this page



**National Accident Sampling System—Continuous Sampling Subsystem: Occupant Data**

NCI

**OCCUPANT INJURY CLASSIFICATION**

Consider all injuries which are reported from both unofficial and official sources. The information from official sources takes precedence over similar injuries reported by any other source. In other words, do not list the same injury twice, supersede the interview data with official data in the case of similar injuries. List all injuries by official medical sources first. Police reported injuries may be used, but only when no other source of injury information is available.

Were more than ten (10) injuries sustained? \_\_\_ Unknown, \_\_\_ No, \_\_\_ Yes — If more than ten dissimilar injuries were identified during the interview, from collection of official data, and from other unofficial sources (excluding police). List those from the official records first, exhausting that level of data before listing those from the interviewee or other sources

	<u>I.S.S. Body Region</u>	<u>O.I.C. Body Region</u>	<u>Aspect</u>	<u>Lesion</u>	<u>System/ Organ</u>	<u>A.I.S. Severity</u>	<u>Injury Source</u>	<u>Direct/ Indirect Injury</u>	<u>Source of Data</u>
1	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—

Source of Data

Official

(01) Autopsy records with or without hospital/medical records

(02) Hospital medical records other than emergency room (e.g. discharge summary)

(03) Emergency room records only (including associated x-rays or other lab reports)

(04) Private physician, walk-in or emergency clinic

Unofficial

(05) Lay coroner report

(06) E M S personnel

(07) Interviewee

(08) Other source

---

(09) Police

(99) Unknown if injured

(00) Not injured

<u>I S S Body Region</u>	<u>Aspect of Injury</u>	<u>System/Organ</u>
(1) Head or neck	(A) Anterior - front	(W) All systems in region
(2) Face	(C) Central	(A) Arteries - veins
(3) Chest	(I) Inferior - lower	(B) Brain
(4) Abdominal or pelvic contents	(U) Injured, unknown aspect	(D) Digestive
(5) Extremities or pelvic girdle	(L) Left	(E) Ears
(6) General (external)	(P) Posterior - back	(O) Eye
(0) Not injured	(R) Right	(H) Heart
(9) Unknown	(S) Superior - upper	(U) Injured, unknown system
	(W) Whole region	(I) Integumentary
<u>O I C Body Region</u>	(0) Not injured	(J) Joints
(M) Abdomen	(9) Unknown if injured	(K) Kidneys
(Q) Ankle - foot		(L) Liver
(A) Arm (upper)	<u>Lesion</u>	(M) Muscles
(B) Back - thoracolumbar spine	(A) Abrasion	(N) Nervous system
(C) Chest	(M) Amputation	(P) Pulmonary - lungs
(E) Elbow	(V) Avulsion	(R) Respiratory
(F) Face	(B) Burn	(S) Skeletal
(R) Forearm	(K) Concussion	(C) Spinal cord
(H) Head - skull	(C) Contusion	(Q) Spleen
(U) Injured, unknown region	(N) Crush	(T) Thyroid, other endocrine gland
(K) Knee	(G) Detachment, separation	(G) Urogenital
(L) Leg (lower)	(D) Dislocation	(V) Vertebrae
(Y) Lower limb(s) (whole or unknown part)	(F) Fracture	(0) Not injured
(N) Neck - cervical spine	(Z) Fracture and dislocation	(9) Unknown if injured
(P) Pelvic - hip	(U) Injured, unknown lesion	
(S) Shoulder	(L) Laceration	<u>Abbreviated Injury Scale</u>
(T) Thigh	(O) Other	(1) Minor injury
(X) Upper limb(s) (whole or unknown part)	(P) Perforation, puncture	(2) Moderate injury
(0) Whole body	(R) Rupture	(3) Serious injury
(W) Wrist - hand	(S) Sprain	(4) Severe injury
(0) Not injured	(T) Strain	(5) Critical injury
(9) Unknown if injured	(E) Total severance transection	(6) Maximum (untreatable)
	(0) Not injured	(7) Injured, unknown severity
	(9) Unknown if injured	(0) Not injured
		(9) Unknown if injured

**National Accident Sampling System—Continous Sampling Subsystem: Occupant Data**

- |  |   |   |
|--|---|---|
| <p><b>Injury Source</b><br/>(00) No injury</p> <p><b>FRONT</b><br/>(01) Windshield<br/>(02) Mirror<br/>(03) Sunvisor<br/>(04) Steering wheel rim<br/>(05) Steering wheel hub/spoke<br/>(06) Steering wheel (combination of codes 04 and 05)<br/>(07) Steering column transmission selector lever other attachment<br/>(08) Add on equipment (e.g. CB tape deck air conditioner)<br/>(09) Left instrument panel and below<br/>(10) Center instrument panel and below<br/>(11) Right instrument panel and below<br/>(12) Other front object (specify) _____</p> <p><b>SIDE</b><br/>(13) Side interior surface excluding hardware or armrest<br/>(14) Side hardware or armrest<br/>(15) A pillar<br/>(16) B pillar<br/>(17) Other pillar (specify) _____</p> <p>(18) Window glass or frame<br/>(19) Other side object (specify) _____</p> <p><b>INTERIOR</b><br/>(21) Seat back support<br/>(22) Belt restraint system<br/>(23) Head restraint system<br/>(24) Air cushion<br/>(25) Other occupants (specify) _____</p> <p>(26) Interior loose objects<br/>(29) Other interior object (specify) _____</p> | <p><b>ROOF</b><br/>(31) Front header<br/>(32) Rear header<br/>(33) Roof side rails<br/>(34) Roof or convertible top</p> <p><b>FLOOR</b><br/>(41) Floor<br/>(42) Floor or console mounted transmission lever, including console<br/>(43) Parking brake handle<br/>(44) Foot controls including parking brake</p> <p><b>REAR</b><br/>(45) Backlight (rear window)<br/>(46) Backlight storage rack door etc<br/>(49) Other rear object (specify) _____</p> <p><b>EXTERIOR of NONMOTORIST'S VEHICLE</b><br/>Noncycle<br/>(51) Hood<br/>(52) Outside hardware (e.g. outside mirror, antenna)<br/>(53) Other exterior surface or tires (specify) _____<br/>(59) Unknown exterior objects</p> <p>Cycle<br/>(61) Handle bars or attachments<br/>(62) Frame or suspension component or fender<br/>(63) Seat<br/>(64) Foot pedal foot rest foot pegs<br/>(65) Wheel or tire<br/>(66) Engine or transmission<br/>(67) Gas tank gas tank filler cap or neck<br/>(69) Other cycle part (specify) _____</p> | <p><b>EXTERIOR of STRIKING MOTOR VEHICLE</b><br/>(71) Front bumper<br/>(72) Hood edge<br/>(73) Other front of vehicle (specify) _____</p> <p>(74) Hood<br/>(75) Hood ornament<br/>(76) Windshield, roof rail A-pillar<br/>(77) Side surface<br/>(78) Side mirrors<br/>(79) Other side protrusions (specify) _____</p> <p>(80) Rear surface<br/>(81) Undercarriage<br/>(82) Tires and wheels<br/>(83) Other exterior of striking motor vehicle (specify) _____</p> <p>(84) Unknown exterior of striking motor vehicle</p> <p><b>OTHER VEHICLE or OBJECT in the ENVIRONMENT</b><br/>(86) Ground<br/>(87) Other vehicle or object (specify) _____</p> <p>(89) Unknown vehicle or object</p> <p><b>NONCONTACT INJURY</b><br/>(90) Noncontact injury source<br/>(97) Injured unknown source<br/>(99) Unknown if injured</p> <p><b>DIRECT/INDIRECT INJURY</b><br/>(0) No injury<br/>(1) Direct contact injury<br/>(2) Indirect contact injury<br/>(3) Noncontact injury<br/>(7) Injured unknown source<br/>(9) Unknown if injured</p> |
|--|---|---|

**OCCUPANT INJURY CLASSIFICATION**

If there are six or less injuries listed in the O I C reduction section, code all of the injuries ordered by Source of Data (1st-autopsy, 2nd-hospital/medical, 3rd-emergency room, 4th-private physician, or 5th-unofficial sources) and by A I S severity within source.

If there are more than six injuries, order the injuries by source and by A I S severity within source. Code this ordering, injury by injury. If a group of ordered injuries has the same source, the same A I S, and the group includes at least the sixth and seventh injuries in the ordering, then a choice must be made as to which injury or injuries to code.

Choose the injury or injuries that will enable the maximum number of different I S S body regions to be represented in the coded data. If no new I S S body region can be added, then simply code in accordance with the original ordering.

If the occupant has less than six injuries, then the number of rows required to be completed is equal to the number of injuries plus one (e.g., no injuries requires one row, i.e., columns 45 to 54). In the additional row "No Injury" will be coded for all variables, including A I S severity.

If you cannot increase the number of different I S S body regions or if you can choose between two or more injuries of the same source and A I S severity, any of which would constitute an additional I S S region, then choose the injury that has a known injury source.

Update Candidate  Yes  No

	I S S Body Region	O I C Body Region	Aspect	Lesion	System Organ	A I S Severity	Injury Source	Direct Indirect Injury	Source of Data
1st	___	31 ___ 46	32 ___ 46	33 ___ 47	34 ___ 46	35 ___ 46	36 ___ 50 51	37 ___ 52	38 ___ 53 54
2nd	___	39 ___ 56	40 ___ 56	41 ___ 57	42 ___ 58	43 ___ 58	44 ___ 60 61	45 ___ 62	46 ___ 63 64
3rd	___	47 ___ 66	48 ___ 66	49 ___ 67	50 ___ 68	51 ___ 68	52 ___ 70 71	53 ___ 72	54 ___ 73 74
4th	___	55 ___ 75	56 ___ 76	57 ___ 77	58 ___ 78	59 ___ 79	60 ___ 80 81	61 ___ 82	62 ___ 83 84
5th	___	63 ___ 85	64 ___ 86	65 ___ 87	66 ___ 88	67 ___ 88	68 ___ 90 91	69 ___ 92	70 ___ 93 94
6th	___	71 ___ 95	72 ___ 96	73 ___ 97	74 ___ 98	75 ___ 98	76 ___ 100 101	77 ___ 102	78 ___ 103 104

CODING SECTION



**OFFICIAL RECORDS**

**79. Injury Severity (Police Rating)**

- \_\_\_ (0) No injury (O)
- \_\_\_ (1) Possible injury (C)
- \_\_\_ (2) Nonincapacitating injury (B)
- \_\_\_ (3) Incapacitating injury (A)
- \_\_\_ (4) Killed (K)
- \_\_\_ (5) Injury, severity unknown
- \_\_\_ (6) Died prior to accident
- \_\_\_ (9) Unknown

105

**80. Time to Death**

- \_\_\_ (00) Not fatal

\_\_\_ Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

- \_\_\_ (96) Fatal - ruled disease
- \_\_\_ (99) Unknown

106 107

Delete Comments After Case Review

COMPLETED BY TEAM

1 Primary Sampling Unit Number	<u>1</u> <u>2</u>
2 Case Number--Stratification	<u>3</u> <u>4</u> <u>5</u> <u>6</u>
3 Record Number	<u>5</u> <u>7</u>
4 Transaction Code	<u>8</u>
5 Version Number	<u>0</u> <u>9</u>
6 Investigator I D Number	<u>10</u>

Used in Coding the Interview Contact Record Only

- 11a. Result of Contact Attempt Other than Last Contact Attempt
- (13) No answer (to phone call, no one at home, etc.)
  - (14) Other person at home, work, etc. - Interviewee to contact investigator
  - (15) Other person at home, work, etc. - Investigator to repeat call, visit, leave questionnaire, or try elsewhere
  - (16) Must obtain permission of attorney or insurance company
  - (17) Attorney or insurance company provided permission.
  - (18) Other (specify) \_\_\_\_\_

OCCUPANT INTERVIEW

7 Vehicle Number	<u>11</u> <u>12</u>
8 Occupant Number	<u>13</u> <u>14</u>
9 Is This Occupant a Driver? <input type="checkbox"/> (0) No <input type="checkbox"/> (1) Yes <input type="checkbox"/> (9) Unknown	<u>15</u>
10 Manner of Last Contact Attempt <input type="checkbox"/> (1) Telephone <input type="checkbox"/> (2) Personal visit to home, work, etc <input type="checkbox"/> (3) Letter (questionnaire) <input type="checkbox"/> (4) Other (specify) _____	<u>16</u>
11 Results of Last Contact Attempt <input type="checkbox"/> (01) Unable to contact or locate <input type="checkbox"/> (02) Hit and run <input type="checkbox"/> (03) Fatal - surrogate not available <input type="checkbox"/> (04) In intensive care - surrogate not available <input type="checkbox"/> (05) Out-of-state resident <input type="checkbox"/> (06) Refused interview for other than on advice of attorney or insurance company (specify) _____ <input type="checkbox"/> (07) Insurance company refusal <input type="checkbox"/> (08) Attorney refusal or litigation <input type="checkbox"/> (09) Other (specify) _____ <input type="checkbox"/> (10) No return of letter questionnaire <input type="checkbox"/> (11) Return of letter questionnaire (completed) <input type="checkbox"/> (12) Partial or complete interview	<u>17</u> <u>18</u>

12 Date Interview Completed 19 20 21 22 8 23 24

13 Completing person 25

- 14 Source of Interview Data
- (1) No data obtained
  - (2) Same person
  - (3) Other occupant (or driver)
  - (4) Relative or friend
  - (5) Eyewitness
  - (6) Combination of 3, 4 or 5
  - (7) Other (specify) \_\_\_\_\_
- 26

15. Reasons Medical Data Not Obtainable
- (00) Not medically treated
  - (01) No record of treatment at medical facility
  - (02) Medical release required - not obtained
  - (03) Nonaccident related injury
  - (04) Noncooperative hospital
  - (05) Hospital out of study area
  - (06) Private physician would not release information
  - (07) Unknown if medically treated
  - (08) To be updated
  - (09) Record not received before file closed
  - (10) Complete record obtained (autopsy, hospital discharge summary, other complete medical)
  - (11) Partial record obtained (i.e., some records exists but was not acquired or released)
- 27 28

INTERVIEW CONTACT RECORD  
(See Variables 11 and 11a above)

Contact Sequence	Month	Day	Year	Time of Contact	Contacting Person	Manner	Result
1st	---	---	<u>8</u> ---	---	---	---	---
2nd	---	---	<u>8</u> ---	---	---	---	---
3rd	---	---	<u>8</u> ---	---	---	---	---
4th	---	---	<u>8</u> ---	---	---	---	---
5th	---	---	<u>8</u> ---	---	---	---	---
6th	---	---	<u>8</u> ---	---	---	---	---

COMPLETED BY ZONE CENTER

16. Date Medical Record Update Received

29 30 31 32 8 33 34

17. Reviewed By

35 36

18. Interviewee or Unofficial Injury Documentation

- \_\_\_ (1) Complete - Injury descriptions are annotated in sufficient detail to enable independent OIC/AIS coding. The protocol for completing the injury diagram has been used and a contact mechanism or "unknown" is indicated.
- \_\_\_ (2) Partial - All coded injuries are described in adequate detail, however, additional annotation would have been helpful for independent OIC/AIS coding. Contact mechanism omitted for some injuries.
- \_\_\_ (3) Incomplete - Generally inadequate description of injuries or the coded injury does not correspond to the annotated injury.
- \_\_\_ (4) Not applicable - No interviewee reported injuries.

37

19. Official Injury Documentation

- \_\_\_ (1) Complete - All injuries reported in the medical data are annotated with sufficient detail to enable independent OIC/AIS coding. The protocol for completing the injury diagram has been used
- \_\_\_ (2) Partial - All coded injuries are described in adequate detail, however, additional annotation would have been helpful for independent OIC/AIS coding. Some minor injuries described in the medical data may be omitted.
- \_\_\_ (3) Incomplete - Generally inadequate or erroneous description of injuries and/or omitted major injuries described in the medical data
- \_\_\_ (4) Not applicable - No official medical data

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ERROR TALLY  
(Completed By Zone Center)

Blank - Not in error and not missing  
 0 - RDE system error  
 2 - Error (not correctable)  
 3 - Error (correctable)  
 6 - Sequencing errors in CDC's or injury data  
 8 - Data entry error  
 9 - Unknown coded on field form  
 A - Hardcopy change with no error - not automated

Variable	1	2	3	4	5	6	7	8	9	10	11	12			16	17	
Response	<u>39</u>	<u>40</u>	<u>41</u>	<u>42</u>	<u>43</u>	<u>44</u>	<u>45</u>	<u>46</u>	<u>47</u>	<u>48</u>	<u>49</u>	<u>50</u>			<u>54</u>	<u>55</u>	
Variable	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Response	<u>56</u>	<u>57</u>	<u>58</u>	<u>59</u>	<u>60</u>	<u>61</u>	<u>62</u>	<u>63</u>	<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>	<u>71</u>	<u>72</u>
Variable	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Response	<u>73</u>	<u>74</u>	<u>75</u>	<u>76</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>	<u>89</u>
Variable	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
Response	<u>90</u>	<u>91</u>	<u>92</u>	<u>93</u>	<u>94</u>	<u>95</u>	<u>96</u>	<u>97</u>	<u>98</u>	<u>99</u>	<u>100</u>	<u>101</u>	<u>102</u>	<u>103</u>	<u>104</u>	<u>105</u>	<u>106</u>
Variable	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
Response	<u>107</u>	<u>108</u>	<u>109</u>	<u>110</u>	<u>111</u>	<u>112</u>	<u>113</u>	<u>114</u>	<u>115</u>	<u>116</u>	<u>117</u>	<u>118</u>	<u>119</u>	<u>120</u>	<u>121</u>	<u>122</u>	<u>123</u>



**Occupant Update Record**

**This section must be completed prior to initial case submission**

1. Primary Sampling Unit Number	1	2
2. Case Number-Stratification	3	4 5 6
3. Record Number	5	7
4. Transaction Code	2	8
5. Version Number	0	9
6. Investigator I.D. Number		10
7. Vehicle Number	11	12
8. Occupant Number	13	14

**OCCUPANT'S NAME:**  
\_\_\_\_\_

Address: \_\_\_\_\_  
(Delete before submission)

9. Age \_\_\_\_

10. Sex \_\_\_\_

**DATA ON INITIAL SUBMISSION:**

20 Treatment-Mortality \_\_\_\_

21. Hospital Stay \_\_\_\_

22 Working Days Lost \_\_\_\_

80 Time to Death \_\_\_\_

ENTER RESPONSE FOR EACH VARIABLE WHERE DATA ON INITIAL SUBMISSION WAS UNKNOWN OR IS FELT TO BE IN ERROR. GIVEN RECEIPT OF OFFICIAL MEDICAL RECORD(S)

9. Occupant's Age \_\_\_\_  
15 16

10. Occupant's Sex \_\_\_\_  
17

20. Treatment-Mortality \_\_\_\_  
31

21. Hospital Stay \_\_\_\_  
32 33

22 Working Days Lost \_\_\_\_  
34 35

**Complete prior to initial case submission**

**INJURY DATA CODED ON INITIAL SUBMISSION**

31	32	33	34	35	36	37	38
39	40	41	42	43	44	45	46
47	48	49	50	51	52	53	54
55	56	57	58	59	60	61	62
63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78

**UPDATED INJURY DATA BASED ON SUBSEQUENTLY ACQUIRED OFFICIAL MEDICAL DATA**  
(or reason data not obtained (see response for log variable 15)\_\_\_\_\_)

1st	31	32	33	34	35	36	37	38
	45	46	47	48	49	50 51	52	53 54
2nd	39	40	41	42	43	44	45	46
	55	56	57	58	59	60 61	62	63 64
3rd	47	48	49	50	51	52	53	54
	65	66	67	68	69	70 71	72	73 74
4th	55	56	57	58	59	60	61	62
	75	76	77	78	79	80 81	82	83 84
5th	63	64	65	66	67	68	69	70
	85	86	87	88	89	90 91	92	93 94
6th	71	72	73	74	75	76	77	78
	95	96	97	98	99	100 101	102	103 104

80 Time to Death \_\_\_\_  
106 107

**INDICATE THE NATURE AND LOCATION OF ALL INJURIES FROM THE OFFICIAL MEDICAL REPORT(S) ON THE REVERSE SIDE AND ATTACH THE REPORT(S) TO THIS UPDATE**

Variable Name: Time to Death (cont'd.)

Codes "31" through "60" should identify occupants who die in the period of time between greater than twenty-four hours after the accident (24 hours and one minute is coded as "31" while 24 hours is coded as "24") and thirty days after the accident. (NOTE: One day = "31", two days = "32", ..., twenty-nine days = "59", and thirty days = "60.") The number of days should be rounded off to the nearest whole day except for code "60" which is used for the period between twenty-nine days and twelve hours and thirty days after the accident.

The exact time period which applies to each code is shown in the table below.

Code	Time period in hours	Code	Time period in days
01	0 - < 1 1/2	31	> 1 - < 1 1/2
02	1 1/2 - < 2 1/2	32	1 1/2 - < 2 1/2
03	2 1/2 - < 3 1/2	33	2 1/2 - < 3 1/2
04	3 1/2 - < 4 1/2	34	3 1/2 - < 4 1/2
05	4 1/2 - < 5 1/2	35	4 1/2 - < 5 1/2
06	5 1/2 - < 6 1/2	36	5 1/2 - < 6 1/2
07	6 1/2 - < 7 1/2	37	6 1/2 - < 7 1/2
08	7 1/2 - < 8 1/2	38	7 1/2 - < 8 1/2
09	8 1/2 - < 9 1/2	39	8 1/2 - < 9 1/2
10	9 1/2 - < 10 1/2	40	9 1/2 - < 10 1/2
11	10 1/2 - < 11 1/2	41	10 1/2 - < 11 1/2
12	11 1/2 - < 12 1/2	42	11 1/2 - < 12 1/2
13	12 1/2 - < 13 1/2	43	12 1/2 - < 13 1/2
14	13 1/2 - < 14 1/2	44	13 1/2 - < 14 1/2
15	14 1/2 - < 15 1/2	45	14 1/2 - < 15 1/2
16	15 1/2 - < 16 1/2	46	15 1/2 - < 16 1/2
17	16 1/2 - < 17 1/2	47	16 1/2 - < 17 1/2
18	17 1/2 - < 18 1/2	48	17 1/2 - < 18 1/2
19	18 1/2 - < 19 1/2	49	18 1/2 - < 19 1/2
20	19 1/2 - < 20 1/2	50	19 1/2 - < 20 1/2
21	20 1/2 - < 21 1/2	51	20 1/2 - < 21 1/2
22	21 1/2 - < 22 1/2	52	21 1/2 - < 22 1/2
23	22 1/2 - < 23 1/2	53	22 1/2 - < 23 1/2
24	23 1/2 - 24	54	23 1/2 - < 24 1/2
		55	24 1/2 - < 25 1/2
		56	25 1/2 - < 26 1/2
		57	26 1/2 - < 27 1/2
		58	27 1/2 - < 28 1/2
		59	28 1/2 - < 29 1/2
		60	29 1/2 - 30

Variable Name: Investigator I.D. Number

Format: 1 column - numeric

Beginning  
Column 10

Element Values:

Range: 1 through 9

Source: Zone Center.

Remarks:

The person who was primarily responsible for the completion of this Occupant Form shall enter his/her unique number.

Each researcher's unique number is assigned by the PSU's Zone Center.

This variable is a mandatory variable and cannot be changed.

Variable Name: Vehicle Number

Format: 2 columns - numeric

Beginning  
Column 11

Element Values:

Range: 01 through 30

Source: Researcher assigned.

Remarks:

Code the Vehicle Number for the vehicle in which this occupant was riding (i.e., as a driver or as a passenger--in or on the vehicle).

One and only occupant is assumed to be in a hit-and-run vehicle (unless reliable evidence to the contrary exists), and that one person is also assumed to be the driver.

This variable is a mandatory variable and cannot be changed.

Variable Name: Occupant Number

Format: 2 columns - numeric

Beginning  
Column 13

Element Values:

Range: 01 through 50

Source: Researcher assigned.

Remarks:

Occupant numbers must be assigned sequentially, beginning in the enclosed area with "01". No numbers may be skipped. Assign numbers left to right and front to back among occupants.

Assign numbers last to persons on the vehicle or in an unenclosed area. Persons appended to vehicle for motion (e.g., bicyclist holding onto vehicle) are either pedestrians or other nonmotorists.

Persons on a motorcycle are assigned numbers sequentially, starting with "01". Assign numbers from front to back among occupants. If there are occupants in a side car, they are to be coded after the motorcycle occupants by assigning numbers left to right and front to back among the remaining occupants.

Drivers do not have to be coded "01" (e.g., right hand drive vehicles containing left front occupant). However, code the assumed driver of a hit-and-run vehicle as "01".

An occupant on or in the lap of another person should be assigned a number one higher than the person whose lap they were on or in.

Occupants sharing a seating position should be assigned numbers using the guidelines stated in the first paragraph above.

This variable is a mandatory variable and cannot be changed.



Variable Name: Occupant's Age

Format: 2 columns - numeric

Beginning  
Column 15

Element Values:

Range: 00-97, 99  
00 Less than one year old  
97 97 years and older  
99 Unknown

Source: Primary sources are interviewee and driver license records; secondary sources include police reports, other official records (i.e., medical records).

Remarks:

Age is recorded at time of accident with respect to the occupant's last birthday.

For drivers, verify age with data on licensing file. Licensing file data takes precedence over police or interview data.

Variable Name: Occupant's Sex

Format: 1 column - numeric

Beginning  
Column 17

Element Values:

- 1 Male
- 2 Female
- 9 Unknown

Source: Primary source is interviewee; secondary sources include police report and official records (e.g., medical).

Remarks:

Self-explanatory.

Variable name: Occupant's Height

Format: 2 columns - numeric

Beginning  
Column 18

Element Values:

Range: 12 through 85 inches  
99 Unknown

Source: Researcher determined--inputs include interviewee or official records (e.g., medical).

Remarks:

Code actual height to nearest inch. Code "85" is used for any occupant whose height equals or exceeds seven feet one-half inch.

The PAR may be used as a source if it contains this data, but it is superceded if other data exists.

Autopsies often include this information; use it when present.

Variable Name: Occupant's Weight

Format: 3 columns - numeric

Beginning  
Column 20

Element Values:

Range: 005 through 300 pounds  
999 Unknown

Source: Researcher determined--inputs include interviewee or official records  
(e.g., medical)

Remarks:

Code actual weight to nearest pound. Code "300" is used for any occupant  
whose weight equals or exceeds 300 pounds.

The PAR may be used as a source if it contains this data, but it is  
superceded if other data exists.

Autopsies often include this information; use it when present.

Variable Name: Occupant's Role

Format: 1 column - numeric

Beginning  
Column 23

Element Values:

1 Driver  
2 Passenger  
9 Unknown

Source: Primary source is interviewee; secondary source is police report.

Remarks:

Hit-and-run vehicles are assumed to have only one occupant (unless reliable evidence to the contrary exists) and that person is assumed to be the driver.

Variable Name: Occupant's Seat Position

Format: 2 columns - numeric

Beginning  
Column 24

Element Values:

01	Front seat - left side	10	Front seat - additional passenger
02	Front seat - middle	11	Second seat or beyond - additional passenger
02	Front seat - middle	12	Truck-tractor sleeping section
03	Front seat - right side	13	Other enclosed area (specify)
04	Second seat - left side	14	In or on unenclosed area (specify)
05	Second seat - middle	15	In or on trailing unit (specify)
06	Second seat - right side	99	Unknown
07	Third seat - left side		
08	Third seat - middle		
09	Third seat - right side		

Source: Primary source is interviewee; secondary source is police report.

Remarks:

More than one person may have the same seating position (e.g., child on or in mother's lap).

In coupes and other cars designed for only 2 passengers in front or in back, use codes "01", "03", "04", "06", "07", or "09" when coding occupants.

Codes "10" and "11" can be used to record the position of someone sitting on the floor or lying across the seat. In addition, when two or more persons are sitting abreast of one another in the same seating location (as opposed to on or in someone's lap), since only one can be assigned the seat's position, the additional passenger codes "10" and "11" must be used. Assign the seat position to the person using the restraint; if no restraint was used, then assign the seat position to the older person (i.e., codes "01"- "09").

If the only real seat in the front seating area is a driver's seat and the occupant was in the area but not in the seat, code "10" (Front seat - additional passenger) should be used. This situation could occur because of design (e.g., an RV) or if a seat was removed. If a second or additional seating area can be identified and a person is in the area, but not in a designated seat, then code "11" (Second seat or beyond - additional passenger) should be used.

Code "01" should be assigned to the assumed driver of a hit-and-run vehicle unless evidence indicates a different position for the person or persons.

Variable Name: Occupant's Seat Position (cont'd.)

Codes "11" (Second seat or beyond - additional passenger) and "13" (Other enclosed area) are differentiated as follows:

Use Code "11" - for occupants in designated seating positions beyond the third seat as well as occupants additional to the second and third seats.

Use Code "13" - for occupants located in the enclosed area where no defined seating exists. Use this code for an occupant using a fold-down type seat in its folded down position.

Code "14" (In or on unenclosed area) includes those occupants riding on a fender, the boot of a convertible, the open cargo box on a light truck, etc. Persons appended to the vehicle for motion are either pedestrians or other nonmotorists.

## Coding of 015-019 (General Guideline)

Entrapment and Ejection

Using the guidelines given below, 015-019 may be coded for light vehicles based on PAR and accident severity when there is no vehicle inspection and no interview and the answer is obvious. If there is any doubt, annotate accordingly and code "9" (Unknown).

1. For occupants of hit-and-run light vehicles (V11-1), in general, 015-019 may be coded "0" (Not entrapped/No ejection).
2. For other light vehicles: (strata A to D)
  - (a) 015 (Entrapment) may be coded "0" (Not entrapped) if the PAR specifically so states for a given occupant. For all other occupants about whom the PAR is silent, code "9" (Unknown).

Recall, however, that if the PAR states that an occupant is entrapped, this is not sufficient to code Entrapment (because PAR definition of entrapment is different from NASS definition). Unless Entrapment is verified through other sources, 015 must be coded "9" (Unknown).

- (b) 016-019 (ejection) may be coded "0" (No ejection) if the PAR specifically so states for a given occupant. For all other occupants about whom the PAR is silent, code "9" (Unknown).

If the PAR indicates that an occupant is ejected, this is sufficient to code 016 "1" (Complete ejection) or "2" (Partial ejection) if the PAR so states. If complete versus partial ejection is not stated on the PAR, then code 016 equal "3" (Ejection, unknown degree) may be used.

Note, however, that 017-019 can be coded only if the PAR provides sufficient detail.



Variable Name: Entrapment

Format: 1 column - numeric

Beginning  
Column 26

Element Values:

0 Not entrapped  
1 Entrapped  
9 Unknown

Source: Researcher determined--inputs include the vehicle inspection, interviewee, and the police report.

Remarks:

Code "1" (Entrapped) means that part of the occupant was in the vehicle and mechanically restrained by a damaged vehicle component; jammed doors and immobilizing injuries, by themselves, are not sufficient to constitute entrapment. Entrapment by cargo shift is also not sufficient.

Persons who are completely or partially ejected and subsequently become pinned by their own vehicle and any surface other than their own vehicle are not considered entrapped.

If the vehicle is not inspected and/or the occupant is not interviewed but the police report states that the person was "trapped", the researcher must verify through the officer, emergency personnel, or other witnesses that the person was, in fact, in the vehicle and mechanically restrained. This is because the above definition is more restrictive than common usage of the term. Code "9" (Unknown) if unable to obtain verification in the above situation.

The margin indicator, which references the Vehicle Form, should be filled in with the applicable code or with a checkmark ( ) to indicate that the actual crosscheck back to the Vehicle Form has been made prior to coding the researcher's final opinion.

An occupant is not considered entrapped (015 - 1) when their seat belt buckle release mechanism is jammed as a result of their accident. A vehicle defects bulletin should be submitted, however, in these cases.

Variable Name: Ejection

Format: 1 column - numeric

Beginning  
Column 27

Element Value:

0	None
1	Complete ejection
2	Partial ejection
3	Ejection, unknown degree
9	Unknown

Source: Researcher determined--inputs include the vehicle inspection, interviewee, and the police report.

Remarks:

Code "0" (None) for any persons riding on the exterior of a vehicle, such as the fenders (this does not include pickup beds, boot of a convertible, and persons riding on open tailgates).

Ejection refers to persons being completely or partially thrown from the vehicle during the course of the crash.

Code "1" (Complete ejection) refers to a situation where the occupant's body is entirely outside the vehicle but may be in contact with the vehicle.

Code "2" (Partial ejection) refers to a situation where part of the occupant's body remains in the vehicle. This does not apply to occupants who are not initially in the seating compartment of the vehicle [e.g., pickup beds, boot of a convertible, and persons riding on open tailgates, since any ejection for them is coded as "1" (Complete ejection)].

Police reported ejections may be coded if there is no vehicle inspection or occupant interview, provided that the ejectee was in the seating compartment of the vehicle and there is no evidence which contradicts the reported ejection.

The margin indicator which references the Vehicle Form, should be filled in with the applicable code or with a checkmark ( ) to indicate that the actual crosscheck back to the Vehicle Form has been made prior to coding the researcher's final opinion.

Variable Name: Ejection Area

Format: 1 column - numeric

Beginning  
Column 28

Element Values:

- 0 No ejection
- 1 Windshield
- 2 Left front
- 3 Right front
- 4 Left rear
- 5 Right rear
- 6 Rear
- 7 Roof
- 8 Other area (e.g., sidocar, back of pickup, etc.) (specify)
- 9 Unknown

Source: Researcher determined--inputs include the vehicle inspection, interviewee, and the police report.

Remarks:

Code "0" (No ejection) applies to persons who are not ejected, or to persons riding on fenders.

Code "6" (Rear) is restricted to persons riding in a passenger compartment, who are ejected through the rear window, open tailgate (e.g., station wagon), hatchback, etc.

Code "1" through "7" are designated for use with areas designed for passenger protection (e.g., passenger cars, vans, light truck cabs, self-contained mini-RVs and mini-motor homes). Trailers, add-on campers, etc., are to be assigned code "8" (Other area).

Code "7" (Roof) applies to all hardtops, convertibles, sun roofs, t-bar roofs, and detachable hardtops (such as fiberglass tops) that are used to cover areas designed for passenger protection.

Examples of how variables 018 (Ejection Medium) and 019 (Medium Status) should be coded when 017 = 7 follows.

Variable Name: Ejection Area (cont'd.)

016	Roof Type	Roof Status	017	018	019
No ejection 0	Any roof	Open or closed	0	0	0
Ejection 1-3	Hardtop	Ripped open	7	8	4
Ejection 1-3	Hardtop	Detached	7	2	1
Ejection 1-3	Convertible	In down or open position	7	2	1
Ejection 1-3	Convertible	In closed position	7	8	3
Ejection 1-3	Sun or t-bar	Ripped open	7	8	4
Ejection 1-3	Sun or t-bar	Open/removed	7	2	1
Ejection 1-3	Sun or t-bar	Closed	7	8	3
Unknown 9	Any roof	Open or closed	9	9	9

Code "8" (Other area) also applies to persons riding on open tailgates.

Code "9" (Unknown) if the sole source for the ejection is the police report.

The margin indicator, which references the Vehicle Form, should be filled in with the applicable code or with a checkmark ( ) to indicate that the actual crosscheck back to the Vehicle Form has been made prior to coding the researcher's final opinion.

Variable Name: Ejection Medium

Format: 1 column - numeric

Beginning  
Column 29

Element Values:

- 0 No ejection
- 1 Door
- 2 Open roof structure
- 3 Fixed windows
- Operable Windows
- 4 Roll down type
- 5 Hinged type
- 6 Sliding type
- 7 Other type (specify)
- 8 Other medium (specify)
- 9 Unknown

Source: Researcher determined--inputs include the vehicle inspection, interviewee, and the police report.

Remarks:

Code "0" (No ejection) applies to persons who are not ejected, or to persons riding on fenders.

Code "2" (Open roof structure) applies only to convertibles, sun roofs, and t-bar roofs.

Codes "4"- "7" all refer to windows.

Code "8" (Other medium) applies to persons riding in pickup beds, on open tailgates, and for other situations which cannot be classified in codes "1"- "7", such as standard roofs which are torn open.

In addition, use "8" when someone is ejected from a trailer or from an add-on camper, etc.

Code "9" (Unknown) if the sole source for the ejection is the police report.

The margin indicator, which references the Vehicle Form, should be filled in with the applicable code or with a checkmark ( ) to indicate that the actual crosscheck back to the Vehicle Form has been made prior to coding the researcher's final opinion.

Variable Name: Medium Status

Format: 1 column - numeric

Beginning  
Column 30

Element Values:

0 No ejection  
1 Open  
2 Separation  
3 Closed, closed when damaged  
4 Integral structure ripped open  
9 Unknown

Source: Researcher determined--inputs include the vehicle inspection, interviewee, and the police report.

Remarks:

Code "0" (No ejection) applies to persons who are not ejected, or to persons riding on fenders.

Code "1" (Open) applies to convertible roofs, sun roofs, t-bar roofs, windows, doors or tailgates that are open immediately prior to impact, or to other open areas of vehicles such as pickup beds, etc.

Codes "1" (Open) and "3" (Closed, closed when damaged) refer to the status of the medium immediately prior to the impact.

Code "2" (Separation) is restricted to bonded windows, and it reflects a separation which may be attributable to either the forces of the collision or to internal contact.

Code "3" (Closed, closed when damaged) refers to a window that is closed or partially closed when damaged, or to a convertible, sun, or t-bar roof that is closed when damaged. Sun and t-bar roofs are coded here if the ejection occurred through the designed opening in the sun or t-bar roof. However, if the roof was of a sun or t-bar type but the ejection occurred because a sizeable opening was torn in the roof structure, then code "4" (Integral structure ripped open) should be used.

Code "3" (Closed, closed when damaged) also refers to a door that is closed, but when damaged, experiences latch and/or hinge failure causing the door to open.

Code "4" (Integral structure ripped open) should be used when any vehicle structure, not designed to be opened (e.g., standard roof), is torn open during the accident such as to permit ejection.

Variable Name: Medium Status (cont'd)

Code "9" (Unknown) if the sole source for the ejection is the police report.

The margin indicator, which references the Vehicle Form, should be filled in with the applicable code or with a checkmark ( ) to indicate that the actual crosscheck back to the Vehicle Form has been made prior to coding the researcher's final opinion.

Variable Name: Treatment - Mortality

Format: 1 column - numeric

Beginning  
Column 31

Element Values:

- 0 No treatment
- 1 Fatal
- 2 Fatal - ruled disease
- Nonfatal
- 3 Hospitalization
- 4 Transported and released
- 5 Treatment at scene - nontransported
- 6 Treatment later
- 8 Treatment - other (specify)
- 9 Unknown

Source: Researcher determined--inputs include interviewee, police report, and medical records.

Remarks:

Official sources (if they exist) take precedence over interview data.

Code "0" (No treatment) includes persons transported to a hospital but who refuse treatment.

Code "1" (Fatal) when death occurs within 30 days of the accident. Death must have occurred as a consequence of injuries sustained in the traffic accident. Interview information alone should not be sufficient to select this code.

Code "2" (Fatal - ruled disease) is used in two situations. The first is when the effects of a disease can be deemed as a cause of the accident. Cause means that the on-set of the disease occurred prior to the first harmful event. When determining the time of on-set (relative to the first harmful event), the researcher can use any information source available. The researcher makes his/her determination after weighing all the evidence. (NOTE: The use of all available information sources is restricted to the determination of when the on-set occurred.)

Additionally, code "2" (Fatal - ruled disease) is used when a medical examiner (or other official vested by the state to verify the cause of death) or an official medical report verifies that the death resulted from either (1) a diseased condition, or (2) not from accident related injuries.



Variable Name: Treatment - Mortality (cont'd.)

Code "3" (Hospitalization) when hospitalization occurs as a result of injury (need not be taken directly to a hospital). See Hospital Stay (021) for hospitalization criteria. Also use this code if a person is treated and released then subsequently hospitalized as a result of injuries sustained in the accident.

Code "4" (Transported and released) when the person went directly from the accident scene to a treatment facility (hospital, clinic, doctor's office, etc.), and the person is examined for injuries at the facility. The person need not have been injured. The means of transportation is not a consideration.

Code "5" (Treatment at scene - nontransported) includes treatment at scene such as: first aid, self-treatment, EMT treatment, doctor treatment, etc.--and the person is not transported or does not go to a treatment facility (e.g., doctor, clinic, hospital, etc.) as a result of injuries sustained in this accident.

Code "6" (Treatment later) includes only professional treatment (e.g., doctor, clinic, hospital, etc.) where the person (1) did not go directly from the scene to treatment, and (2) was treated and released. If a person is treated at the scene, is not transported from the scene, and subsequently receives later treatment (without being hospitalized), then use this code.

Code "8" (Treatment - other) includes nonprofessional treatment such as first aid, self-treatment, etc., not at the scene of the accident.

If a person survives the injuries and receives treatment at a hospital, but is not admitted for hospitalization, that person's treatment is to be coded as either "4" or "6", depending upon whether the person went directly or indirectly to the hospital. It does not matter if the person is treated for one hour or twelve, only that the person is released following treatment. Nor does it matter if the treatment begins prior to midnight and spans into the following day.

Variable Name: Hospital Stay

Format: 2 columns - numeric

Beginning  
Column 32

Element Values:

Range: 00-61, 99

00 Not hospitalized

Code the number of days (up through 60) that the occupant stayed in hospital

61 61 days or more

99 Unknown

Source: Researcher determined--inputs include interviewee and medical reports.

Remarks:

Official sources (if they exist) take precedence over interview data.

Code "00" (Not hospitalized) if not injured or injured but not admitted.

Code "00" (Not hospitalized) if fatal at scene, pronounced dead on arrival, or survival does not extend beyond the emergency room.

The basis for the number of days coded is an overnight criterion. Every time a person remains past midnight subsequent to admission, it is one day. One exception is when a person dies on the same day as the admission. The only other exception occurs when a person is admitted in the early morning hours (and thus after midnight), usually for observation, but is subsequently released later in the same day (usually late afternoon or early evening). Code "01" should be used because the person was hospitalized [O20, Treatment - Mortality, equals "3" (Hospitalized)].

In the event that the person survives the emergency room but dies subsequent to admission, then code at least "01", even if the person expires the same day as admitted.

If a person is admitted, lived four days in the hospital, then expired, code "04".

Variable Name: Working Days Lost

Format: 2 columns - numeric

Beginning  
Column 34

Element Values:

Range: 00-62, 97, 99

00 No working days lost

Code the number of days (up through 60) that the occupant lost from work due to the accident

61 61 days or more

62 Fatally injured

97 Not working prior to accident

99 Unknown

Source: Primary source is the interviewee; a secondary source is the person's employer.

Remarks:

Report the actual number of "work" days lost due to the accident by an employed person or a full-time college student. Children, adolescents, retirees, or unemployed persons are not included (code "97", Not working prior to accident).

Employed is defined to mean that the person was scheduled to work at least four hours on each of the days lost. Each such day is counted as a full day so long as the person was scheduled to work at least four hours on the day lost. Do not accumulate the hours and convert to equivalent full-time days; however, indicate on the form if the person works less than full-time but greater than four hours per day by annotating "part-time" or "PT".

If during the interview a reasonable projection of future days lost can be made, then add those days to those already known to have been lost. If a reasonable projection cannot be made, then code "99" (Unknown).

The days lost need not be due to injury.

Days lost include Saturdays, Sundays, and afternoon and evening shifts if so scheduled. Do not count double shifts or days at time and one-half pay, etc., as more than one day.

If a person is not employed, not a full-time college student, or works less than four hours per day, then code "97" (Not working prior to accident).

## Variable Name: Working Days Lost (cont'd.)

This code includes all persons (except fatals) who do not qualify to lose working days.

If a person is fatal - ruled disease, fatal at scene, pronounced dead on arrival, or survival does not extend beyond the emergency room, then code "62" (Fatally injured) is used.

If a person expires within thirty days following the accident, code "62" regardless of whether or not the person missed any working days.

If the reported work days lost includes a fraction, round one-half (1/2) day or greater up to a whole day. Less than one-half day should be excluded (rounded down).

If someone gets fired and loses their job as a result of the accident, count only the work days lost between the accident and the date of termination, inclusive.

Do not include days lost by persons who were not directly involved in the accident but who lost days because of it (e.g., husband who was not in accident but stayed home to take care of wife who was injured and required assistance).

If an involved person changes their work schedule as a result of an accident (e.g., to take care of someone injured in the accident), then the work time, which was given up as a result of the accident, shall not be considered as lost.

If no interview is obtained, there is a rebuttable presumption that persons over 65 or under 17 are not employed full-time; for these persons code "97" (Not working prior to accident) should be used unless the person is fatally injured [codes "1" (Fatal) or "2" (Fatal - ruled disease) for 020, Treatment - Mortality].

Variable Name: Infant or Child Restraint Make/Model

Format: 2 columns - numeric

Beginning  
Column 36

Element Values:

<u>Model</u>	<u>Code</u>	<u>Make/Model</u>	<u>Includes</u>	<u>Manufacturer</u>
	00	No infant or child restraint		
Infant Safety Seats				
	01	Love Seat	GM Love Seat, Ford Infant Carrier, Chrysler Infant Safety Carrier, Deluxe	Century
	02	Dyn-O-Mite		Questor/Kantwet
	03	Trav-L-Ette		Cosco/Peterson
	04	First Ride		Cosco/Peterson
	05	Swinger		Romer/KFS
	06	Cuddle Shuttle		Collier-Keyworth
	07	Rock 'N' Ride		Kolcraft
	08	Snug Seat		Graco
Toddler/Convertible Seats				
	20	Century 100	100 Series	Century
	21	Century 200	200 Series	Century
	22	Century 300	300 Series	Century
	23	Century 400	400 Series, XL	Century
	24	Child Love Seat	GM Child Love Seat	Century
	25	Strolee Wee Care	500 Series	Strolee
	26	Strolee Wee Care	600 Series	Strolee
	27	Safe-T-Seat		Cosco/Peterson
	28	Safe-T-Shield		Cosco/Peterson
	29	Safe-T-Mate		Cosco/Peterson
	30	Safe & Easy		Cosco/Peterson
	31	Safe & Snug		Cosco/Peterson
	32	Peterson Safety Shield		Cosco/Peterson
	33	Bobby Mac	Deluxe II, Champion, Super, Lite	Questor/Kantwet
	34	Kantwet One-Step		Questor/Kantwet
	35	Kantwet Care Seat		Questor/Kantwet
	36	Kantwet Safe Guard		Questor/Kantwet
	37	Hi-Rider XL		Kolcraft
	38	Redi-Rider		Kolcraft
	39	Quikstep		Kolcraft
	40	Teddy Tot Astroseat	9100/9300 Series	International
	41	Welsh Trav l Tot		Welsh
	42	Ford Tot Guard		Ford
	43	Nissan Child Saf ty Seat		Nissan

Variable Name: Infant or Child Restraint Make/Model [cont'd.]

<u>Model</u>	<u>Code</u>	<u>Make/Model</u>	<u>Includes</u>	<u>Manufacturer</u>
Toddler/Convertible Seats (cont'd.)				
	44	Safe & Sound	II	Collier-Keyworth
	45	Roundtripper		Collier-Keyworth
	46	Little Trav'ler	310,315	Graco
	47	Pride Ride	820,830	Pride-Trimble
	48	Peggy		Romer/KFS
	49	Tip-up		Romer/KFS
	50	Commuter		Cosco
	51	Fisher-Price		Fisher-Price
	52	GT 100		Graco
	53	Guardian		Gerry
Booster Safety Seats				
	70	Safe-T-Rider	II, Deluxe	Century
	71	Travel Hi-Lo	Deluxe High Back	Cosco/Peterson
	72	Teddy Tot Astrorider	6000 Series	International
	73	Tot Rider	XL, Quikstop	Kolcraft
	74	Wee Care Booster Seat	600 Series	Strolee
	75	Co-Pilot	II	Collier-Keyworth
	76	Wings by Bobby Mac		Questor/Kantwet
	77	#812	800 Series	Pride-Trimble
	78	Vario		Romer/KFS
	79	Britax Handicapped Safety Seat		Questor/Kantwet
	80	E-Z-On Vest		Rupert
	81	Child Cushion		Volvo
	82	Commander		Century
	83	Explorer		Cosco
	84	Flip 'N Go		Kolcraft
	85	Quick Click		Strolee
	86	Voyager		Collier-Keyworth
	97	Other make/model (specify)		
	98	Unknown make/model		
	99	Unknown if restraint available		

Source: Researcher determined--inputs include vehicle inspection, interviewee, and police report.

## Remarks:

Code "00" (No infant or child restraint) if (1) this person is not an infant or child (i.e., less than 50 pounds and less than 40 inches), or (2) this person is an infant or child, but no infant or child restraint was available. When trying to determine if this person is an infant or

Variable Name: Infant or Child Restraint Make/Model (cont'd.)

child and height and weight information is absent, then if the person is 6 years of age or older, use this code.

If a qualifying infant or child was in the vehicle and a child restraint device was available [see 027, Manual (Active) Restraint System Availability], then enter on this variable the make/model of the infant or child restraint. Select the name of the make/model from the list provided above and code the make/model's number.

If it can be determined from a reliable source that a hit-and-run vehicle contained an infant or child at the time of its involvement in the accident, then code this variable from available information. If no information is available on the hit-and-run occupants, then this variable is to be coded "00" (No infant or child restraint).

Code "97" (Other make/model) if a qualifying infant or child and a child restraint device are present but the make/model is not listed above.

Code "98" (Unknown make/model) if a qualifying infant or child and a child restraint device are present but the make/model is not known.

Code "99" (Unknown if restraint available) when it is unknown if the person under consideration is an infant or child or you do not know if an infant or child restraint was available.

Variable Name: Type of Infant or Child Restraint

Format: 1 column - numeric

Beginning  
Column 38

Element Values:

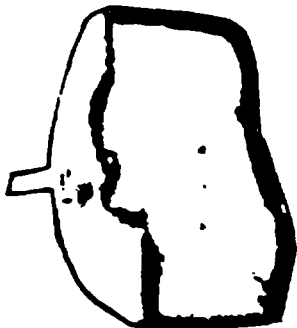
- 0 No infant or child restraint
- 1 Infant seat
- 2 Child seat
- 3 Convertible seat
- 4 Booster seat
- 7 Other type seat (specify)
- 8 Unknown type of restraint
- 9 Unknown if restraint available

Source: Researcher determined--inputs include vehicle inspection, interviewee, and police report.

Remarks:

Code "0" (No infant or child restraint) if (1) this person is not an infant or child (i.e., less than 50 pounds and less than 40 inches), or (2) this person is an infant or child, but no infant or child restraint was available. When trying to determine if this person is an infant or child and height and weight information is absent, then if the person is 6 years of age or older, use this code. Child carriers that are not designed as safety seats are to be classified as "no infant or child restraint." Examples of these child carriers are shown below.

If it can be determined from a reliable source that a hit-and-run vehicle contained an infant or child at the time of its involvement in the accident, then code this variable from available information. If no information is available on the hit-and-run occupants, then this variable is to be coded "00" (No infant or child restraint).



Kolcraft  
"Baby Dri"



Century  
"Kanga-Rocka-Roo"



Questor  
"Infanseat"



Variable Name: Type of Infant or Child Restraint (cont'd.)

Code "1" (Infant seat) if the seat is designed to only face the rear of the vehicle and the maximum capacity is 17-20 pounds (this information will usually be found on the manufacturer's label). Infant safety seats are equipped with a five-point harness (straps) to secure the infant to the safety seat and use the automobile's safety belt system to secure the seat to the car. The five-point infant seat system includes a pair of straps that go over the infant's shoulders, a crotch strap, and the car's belts as lap belts and to secure the seat to the car. The seat is tub-shaped and cradles the baby in a generally reclined position. Examples are shown below.

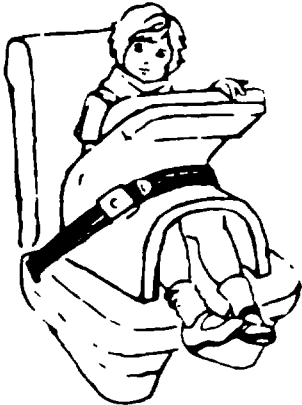


Cosco/Peterson  
"First Ride"

Questor  
"Dyn-o-mite"

Code "2" (Child seat) if the seat is designed to only face the front of the vehicle and to carry a child weighing approximately 20-50 pounds (this information will usually be found on the manufacturer's label). The child seat may also be referred to as a "Toddler seat". Most have a five-point harness system (straps) to secure the child to the seat. All models secure the safety seat to the car with the car's safety belts and, in addition, some models have a tether strap which must be attached to the rear safety belt or deck lid to prevent tipping forward. The child is restrained by a shield, a harness, or a combination of the two in a generally upright sitting position, although some seats have multiple positions. Examples are shown below.

Variable Name: Type of Infant or Child Restraint (cont'd.)



Shield Type



Harness Type



Code "3" (Convertible seat) if the seat is designed to face the front or the rear of the vehicle and to carry a child ranging from birth to approximately 50 pounds (this information will usually be found on the manufacturer's label). Again, most have a five-point harness system (straps) to secure the child to the seat. All models secure the safety seat to the the car with the car's safety belts and, in addition, some models have a tether strap which must be attached to the rear safety belt or deck lid to prevent tipping forward. The child is restrained by a shield, a harness, or a combination of the two in either a generally reclined rearward facing position (for small infants--birth to 20 pounds) or a generally upright forward sitting position (for larger children--20-50 pounds). Examples are shown below:



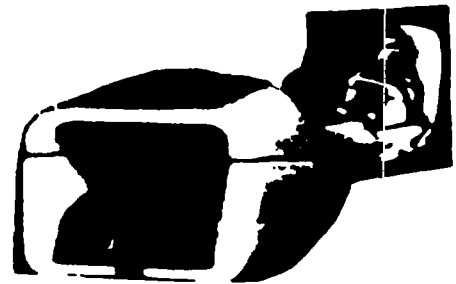
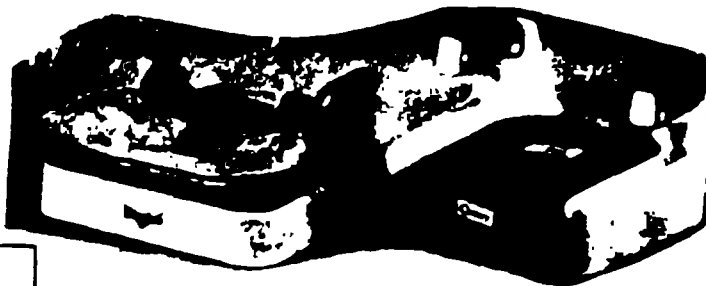
Harness Type  
Century "200"



Combination Harness and Shield  
Type Cosco/Peterson "SAFE & SNUG"

Variable Name: Type of Infant or Child Restraint (cont'd.)

Code "4" (Booster seat) if the seat is designed as a forward facing platform without a back (except for one Cosco/Peterson model which has a back) and adjusts to children up to 60 pounds. The seat restrains the child in a raised upright sitting position with either a harness or shield. Booster seats are designed primarily to fill the gap between when a child outgrows the standard child safety seat and when the child can use the adult belt and still see out the window. Some models can also be used for smaller children, as small as 20 pounds. Examples of booster seats are shown below.



Harness Types

Strolee  
"Wee Care"

Century  
"Safe-T-Rider"

Shield Types

Collier-Keyworth  
"Co-Pilot"

Some of the above infant, child, convertible and booster seats require a tether. For restraint devices placed in the vehicle's front seat, the tether should run over the top of the car seat and attach to a rear seat belt or possibly to one of the anchors for a front seat belt. For restraint devices placed in the vehicle's rear seat the tether should run over the top of the rear seat and attach to an anchor on the rear window shelf or possibly pass through the rear window shelf and attach to one of the anchors for a rear seat belt.

Proper Tether Use



Attached to Rear Seat Belt



Attached to Rear Window Shelf

Code "7" (Other type seat) if the infant or child safety seat does not fall into one of the categories coded 1 through 4. Specify the type.

Code "8" (Unknown type of restraint) if a qualifying infant or child and child restraint device are present but the type of child restraint device is unknown.

Code "9" (Unknown if restraint available) when it is unknown if the person under consideration is an infant or child or you do not know if an infant or child restraint was available.

Variable Name: Infant or Child Seat Orientation

Format: 1 column - numeric

Beginning  
Column 39

Element Values:

- 0 No infant or child seat
- 1 Rear facing
- 2 Forward facing
- 7 Other orientation (specify)
- 8 Unknown orientation
- 9 Unknown if restraint available

Source: Researcher determined--inputs include vehicle inspection, interviewee, and police report.

Remarks:

Code "0" (No infant or child seat) if (1) this person is not an infant or child (i.e., less than 50 pounds and less than 40 inches), or (2) this person is an infant, but no infant or child seat was available. When trying to determine if this person is an infant or child and height and weight information is absent, then if the person is 6 years of age or older, use this code.

If it can be determined from a reliable source that a hit-and-run vehicle contained an infant or child at the time of its involvement in the accident, then code this variable from available information. If no information is available on the hit-and-run occupants, then this variable is to be coded "00" (No infant or child restraint).

Code "1" (Rear facing) or "2" (Forward facing) if at the time of the accident the seat was facing the designed rear of the vehicle or the designed front of the vehicle, respectively. Do not code with respect to the vehicle's direction of travel (e.g., backing vehicle).

Code "7" (Other orientation) if the seat was facing other than rear or forward at the time of the accident (e.g., on the floor, sideways, on top or underneath something).

Code "8" (Unknown orientation) if a qualifying child and a child restraint seat are present but the orientation at the time of the accident is unknown (e.g., at the time of vehicle inspection the child seat is not present or is unattached and there is no information from an interview or the PAR).

Code "9" (Unknown if restraint available) when it is unknown if the person under consideration is an infant or child or you do not know if an infant or child restraint was available.

Variable Name: Infant or Child Restraint Harness/Shield Usage.

Format: 1 column - numeric

Beginning  
Column 40

Element Values:

- 0 No infant or child restraint
- 1 Harness/shield used
- 2 Harness/shield not used
- 8 Unknown harness/shield usage
- 9 Unknown if restraint available

Source: Researcher determined--inputs include vehicle inspection, interviewee, and police report.

Remarks:

Code "0" (No infant or child restraint) if (1) this person is not an infant or child (i.e., less than 50 pounds and less than 40 inches), or (2) this person is an infant, but no infant or child seat was available. When trying to determine if this person is an infant or child and height and weight information is absent, then if the person is 6 years of age or older, use this code.

If it can be determined from a reliable source that a hit-and-run vehicle contained an infant or child at the time of its involvement in the accident, then code this variable from available information. If no information is available on the hit-and-run occupants, then this variable is to be coded "00" (No infant or child restraint).

Code "1" (Harness/shield used) or "2" (Harness/shield not used) based on whether or not a harness or shield was used. Some models have one or the other. Some models have both. If your model has both a shield and a harness, report whether or not the harness was used.

Code "8" (Unknown harness/shield usage) if a qualifying child and a child restraint seat are present but the usage of a harness or shield is unknown.

Code "9" (Unknown if restraint available) when it is unknown if the person under consideration is an infant or child or you do not know if an infant or child restraint was available.

Variable Name: Manual (Active) Restraint System Availability

Format: 1 column - numeric

Beginning  
Column 41

Element Values:

- 0 None available
- 1 Shoulder belt
- 2 Lap belt
- 3 Lap belt and shoulder belt
- 4 Motorcycle helmet
- 5 Child safety seat (designed without tether or unknown design)
- 6 Child safety seat (designed with tether - tether not used) [specify]
- 7 Child safety seat (designed with tether - tether used)
- 8 Restraint available - type unknown or other (specify)
- 9 Unknown

Source: Researcher determined--inputs include vehicle inspection, interviewee, police report, and medical records.

Remarks:

Select the system which was available for use, if so desired, by the occupant. Restraints which were installed but subsequently removed or cut should not be considered to be available. In other words, availability is determined by presence and functional status; use is not to be considered in making this determination.

Belts which are knotted, buckled at the rear of the seat bench, stored below the bench, etc., should be considered as available if they were otherwise operative.

Persons such as children who are held by another person are not considered to be restrained, nor to have restraints available.

A motorcycle helmet (code "4") is not used in 1987.

Codes "5", "6", and "7" (Child safety seat...) is considered available if located so as to be retrievable by a person while in the passenger compartment (i.e., the safety seat is not in the trunk, trailer, etc.). It should be coded as available for all applicable children (i.e., less than 50 pounds and less than 40 inches) if it exists, even if there are more children than safety seats. However, if it is in use by a child, then it is available only to that person.

Variable Name: Manual (Active) Restraint System Availability [cont'd.]

Code "5" [Child safety seat (designed without tether or unknown design)] should be used when a child safety seat is designed to be restrained by means other (e.g., lap belt) than a tether or when an unknown design is available.

Code "7" [Child safety seat (designed with tether - tether used)] should be used when a child safety seat equipped with a tether--designed to be attached to a rear seat lap belt or to a special attachment mounted on the backlight package shelf--is available and is properly installed in the vehicle.

Code "7" may be used only when the tether-designed child seat is available and the tether is properly installed. If a child safety seat which is designed with a tether is improperly or incompletely installed (i.e., tether not used), then use code "6" [Child safety seat (designed with tether - tether not used)].

If the child seat is designed with tether but the properness of the installment is unknown and available information does not support improper installment, then code the restraint system availability as code "7" [Child safety seat (designed with tether - tether used)].

When assessing child safety seat tethers, seats designed with optional tethers should have the tethers coded according to their use (i.e., either codes "6" or "7").

Identify any "other" restraint if the variable is coded "8" (Restraint available - type unknown or other). If there is no vehicle inspection or interview but the PAR indicates that: (1) belts were used, or (2) belts were not used, then code "8" (Restraint available - type unknown or other) should be used. If the PAR indicates the type of belts available and there was no vehicle inspection or interview, then the appropriate code "1", "2", "3", "4", "5", may be used; however, codes "6" and "7" may not be coded strictly from the PAR since proper installation must be assessed.

The margin indicator, which references the Vehicle Form, should be filled in with the response from the Vehicle Form to aid the actual crosscheck prior to coding the researcher's final option.

Variable Name: Manual (Active) Restraint System Use

Format: 1 column - numeric

Beginning  
Column 42

Element Values:

- 0 None used
- 1 Shoulder belt
- 2 Lap belt
- 3 Lap and shoulder belt
- 4 Motorcycle helmet
- 5 Child safety seat - car lap belt used properly
- 6 Child safety seat - car lap belt used improperly (specify)
- 7 Child safety seat - unknown if car lap belt used properly
- 8 Restraint used - type unknown or other (specify)
- 9 Unknown

Source: Researcher determined--inputs include vehicle inspection, interviewee, police report (use caution), and medical records.

Remarks:

Code "3" (Lap and shoulder belt) is used when the occupant is "encompassed" both in the lap and upper torso region by a lap and shoulder belt combination. Defeated interlock or buzzer warning system, as well as maladjustment of the belts do not detract from the usage; however, if the inertia reel, retracting mechanism, or latch mechanism malfunctioned, the lap and/or shoulder belt which failed should not be considered as used. If a person has an integral lap and shoulder belt but is only "encompassed" by the lap portion (having the shoulder belt behind his or her back), code "2" (Lap belt).

Codes "1" (Shoulder belt) and "2" (Lap belt) must be similarly considered.

Code "4" (Motorcycle helmet) is not used in 1987.

Code "5" (Child safety seat - car lap belt used properly) is to be indicated only when the safety seat is installed so as to comply with the manufacturer's directions (i.e., seat must be integrated with the vehicle via the seat belts) and it is occupied by the child.

Code "6" (Child Safety Seat - car lap belt used improperly) is to be indicated when a child safety seat is not installed according to the manufacturer's directions, and it is occupied by the child. Specify how the belt was used improperly.



Variable Name: Manual (Active) Restraint System Use [cont'd.]

Code "7" (Child safety seat - unknown if car lap belt used properly) is to be indicated when a child safety seat is occupied by a child, but it is unknown if the seat was installed (using belts) according to the manufacturer's directions.

Code "8" (Restraint used - type unknown or other) if there is no vehicle inspection or interview and the PAR indicates "belts were used." However, code "0" (None used) if the PAR indicates "belts were not used."

The PAR is a legitimate source for belt usage only if no interview was conducted, no vehicle inspection was completed, and the PAR indicates both restraint availability and restraint usage. In most states these code(s) are collapsed and while they may be used for coding of restraint availability, they are too vague to actually indicate restraint usage. The team should consult their Zone Center for proper coding of restraint usage with the PAR as the sole source of data. A field response column is provided on the form for the researcher to indicate the assessment of restraint usage on the PAR.

The margin indicator, which references the Vehicle Form, should be filled in with the response from the Vehicle Form to aid in the actual cross-check prior to coding the researcher's final opinion.

Variable Name: Automatic (Passive) Restraint System Availability

Format: 1 column - numeric

Beginning  
Column 43

Element Values:

- 0 Not equipped
- 1 Airbag
- 2 Airbag disconnected
- 3 Airbag not reinstalled
- 4 2 point automatic belts
- 5 3 point automatic belts
- 6 Automatic belts destroyed or rendered inoperable
- 9 Unknown

Source: Researcher determined--inputs include vehicle inspection, interviewee, police report (if listed), and medical records.

Remarks:

Code "0" (Not equipped) if the vehicle did not have any automatic restraints. Automatic (passive) restraints are for front seat positions in post-1971 passenger cars. Thus, if the vehicle is not a post-1971 passenger car or the occupant is not in a front seat seating position, this variable should be coded with element value "0" (Not equipped).

Code "1" (Airbag) if the vehicle was equipped with an airbag. [Note: Deployment of airbag is considered in variable 030, Automatic (Passive) Restraint Function.]

Code "2" (Airbag disconnected) refers to a situation where components of the system are rendered inoperative prior to the collision (e.g., fuse removed).

Code "3" (Airbag not reinstalled) refers to a situation where the bag is not repositioned, the gas container is not charged, etc., following a deployment previous to the present accident.

Code "4" (2 point automatic belts) or "5" (3 point automatic belts) depending on how the vehicle was equipped. (Note: The 3 point system became available with certain 1980 model vehicles.)

Add-on passive restraints are available for pre-1972 model year vehicles. However, if a vehicle is not inspected and no interview is obtained, code

Variable Name: Automatic (Passive) Restraint System Availability [cont'd.]

"9" (Unknown) for front seat occupants of post-1971 passenger cars, and code "0" (Not equipped) for non-front seat occupants and occupants of all other vehicles.

The margin indicator, which references the Vehicle Form, should be filled in with the response from the Vehicle Form to aid in the actual crosscheck prior to coding the researcher's final opinion.

Variable Name: Automatic (Passive) Restraint Function

Format: 1 column - numeric

Beginning  
Column 44

Element Values:

0	Not equipped
1	Automatic belt in use
2	Automatic belt not in use
3	Deployed airbag
4	Nondeployed airbag
9	Unknown

Source: Researcher determined--inputs include vehicle inspection, interviewee, police report (if listed), and medical records.

Remarks:

Automatic (passive) restraints are for front seat positions in post-1971 passenger cars. Thus, if the vehicle is not a post-1971 passenger car or the occupant is not in a front seat seating position, this variable should be coded with element value "0" (Not equipped).

Code "2" (Automatic belt not in use) if the shoulder belt is disconnected or placed behind the person's back.

Code "3" (Deployed airbag) or "4" (Nondeployed airbag) solely on whether or not the airbag deployed. No consideration is to be made regarding whether or not it should have deployed. This determination will be made by your Zone Center or NCSA. (Note: An airbag is not designed to deploy in every collision.)

If the vehicle was not inspected and no interview was obtained, code "9" (Unknown) for front seat occupants of post-1971 passenger cars, and code "0" (Not equipped) for non-front seat occupants and occupants of all other vehicles.

The margin indicator, which references the Vehicle Form, should be filled in with the response from the Vehicle Form to aid in the actual crosscheck prior to coding the researcher's final opinion.

## Injury Data From Interviewee

This page is separated into four body diagrams: front and back soft tissue injuries and front and back skeletal injuries. These diagrams allow the documentation of all injuries sustained by an occupant in the accident, as stated by the interviewee.

The nature, location, and injury source should be documented as follows:

- Nature - As stated by the interviewee document the lesion sustained (e.g., laceration, fracture, concussion, etc.) and its extent (e.g., size, severity, depth, etc.). The terms used by the interviewee may not necessarily coincide with the terms found in the OIC, but the injury should be documented as stated by the interviewee for ease of completion of this form during the interview. Length of unconsciousness, or state of consciousness on first observation by a medical specialist, and whether unconsciousness was a result of a head contact, should be noted.
- Location - The location of the injury, as stated by the interviewee, should be documented in two ways:
- By arrows, shading, bracketing (for large areas) on the body diagram; and
  - By written description (e.g., left lower arm, right third rib, etc.). The written description may be abbreviated to aid in completion of the page during the interview. Refer to the Injury Coding Manual for standard abbreviations and symbols.
- Source - The interviewee should be queried as to the source of the injury. Information gained from the interviewee may aid in the (1) final coding of injury source in variables 036, 044, 052, 060, 068 and 072, (2) vehicle inspection (if not done previous to interview), and (3) accident reconstruction. The injury source should be written immediately below the nature and written location of the injury and delineated by a horizontal line. If the interviewee does not know the source of the injury, unknown should be documented on the form.

**Official Injury Data**  
**Specific Medical Record Data Used in Coding OIC/AIS**

The official injury data page contains the four body diagrams previously seen on page 4 (Injury Data from Interviewee). The same guidelines should be used to document the nature and the locations of all injuries, but medical records will be used as the only source of information. At times, the medical records will also aid in the determination of source of injuries (e.g., glass in wound) and should be documented on this page as stated in the description of source of injury for page 4.

On the official injury data page the injuries should be clearly and precisely located on the diagrams and the medical record classification of the injury and its extent should be completely annotated. All data used to code the OIC/AIS of injuries [e.g., size of lacerations, level of consciousness on first observation by a medical authority, length of unconsciousness, loss of consciousness, size of hematoma or hemothorax (in cc of blood), etc.], should be written with the diagram or, if the description is too long, written on the additional medical record data used in coding OIC/AIS (reverse of page 5).

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NASS Injury Coding Procedures

1. A through E below are given in the NASS field forms on how to select injuries for coding and are included here for the convenience of the researcher.
  - a. If there are six or less injuries listed in the OIC reduction section, code all of the injuries ordered by Source of Data (1st--autopsy, 2nd--hospital/medical, 3rd--emergency room, 4th--private physician, or 5th--unofficial sources) and by AIS severity within source. Order by source
  - b. If there are more than six injuries, order the injuries by source and by AIS severity within source. Code this ordering, injury-by-injury. If a group of ordered injuries has the same source, the same AIS, and the group includes at least the sixth and seventh injuries in the ordering, then a choice must be made as to which injury or injuries to code. Then by severity within source
  - c. Choose the injury or injuries that will enable the maximum number of different ISS body regions to be represented in the coded data. If no new ISS body region can be added, then proceed to (d.). Maximize ISS within that source and severity
  - d. If you cannot increase the number of different ISS body regions or if you can choose between two or more injuries of the same source and AIS severity any of which constitute the 3rd ISS region, then choose the injury that has a known occupant contact point. Maximize by contact points
  - e. If the occupant has less than six injuries, then the number of rows required to be completed is equal to the number of injuries plus one (e.g., no injuries requires one row). In the additional row "Not injured" will be coded for all variables including AIS severity. If < 6 rows, close out next row with zeros
2. An AIS-6 should be used only for injuries specifically coded AIS-6 in the Abbreviated Injury Scale and not because the victim died. Watch your "6"s
3. Try to associate contact points with individual injuries. List individual injured areas (i.e., body regions) if possible, instead of lumping them together into a code of X, Y, or O. For instance, if there are lacerations to both thigh and shin, code both TLLI-1 and LLLI-1 instead of YLLI-1. However, laceration to "left leg" would be coded as YLLI-1 since the regions of the leg that are injured are not specifically mentioned. Individualize Injuries
4. The researcher should take care not to code the same injury twice simply because information concerning it is available from two different sources. For example, if the interview is used in gathering data, only the injuries not already coded based upon medical records should be coded. Don't double count
5. Pain, asphyxia, and hemorrhage represent results of injuries and are not injuries, per se; therefore, they are not coded. The AIS-80 revision is designed to code the injury itself (e.g., MIUW-3, retroperitoneum injury involving hemorrhage). Pain, asphyxia and hemorrhage not valid
6. In NASS, "Not injured" is defined as AIS=0. Code "0" for all OIC variables, including AIS severity, for cases in which there are no injuries, or as the last injury listing for occupants sustaining less than six injuries. Closeout or no injury = 0

7. Definitions and procedures for MASS for coding Injury Source for direct, induced, and noncontact injuries are:

Injury Sources

direct injury - an injury to a particular OIC body region caused by the traumatic contact of that OIC body region with a vehicle component or other object. The vehicle component or other object is coded as the injury source for that injury.

indirect or induced injury - an injury to a particular OIC body region caused by a blow or a traumatic contact in some other OIC body region (e.g., knee/acetabulum). The injury source for an induced injury would be the vehicle component contacted by the other OIC body region (i.e., the occupant contact that initiates the injury mechanism).

Injury source is, therefore, defined as the vehicle component or object that initiated the injury mechanism (induced injury) or directly caused the injury (direct injury).

The noncontact injury source code ("90") is to be used only for the following specific types of injuries:

Noncontact Injury  
Injury Sources

- (1) head or neck injuries in which the torso is supported (e.g., by seat back or belt) and head or neck experiences traumatic forces due to inertial motion;
- (2) burns due to flame, chemicals, or gaseous inhalation; and
- (3) flying glass injuries.

The following examples should be helpful in illustrating the above definitions.

<u>Injury</u>	<u>Injury Mechanism Determined from Crash Evidence</u>	<u>Injury Source</u>
Example 1		
Neck strain NPTM-1	<ul style="list-style-type: none"> <li>a. head strikes windshield</li> <li>b. forehead hits roof or convertible top</li> <li>c. head strikes steering assembly</li> <li>d. back hits seatback, no head restraint, head rolls back over seat</li> <li>e. neck forced into lateral flexion by impact forces</li> <li>f. torso restrained by belt, head and neck inertia causes neck injury</li> </ul>	<ul style="list-style-type: none"> <li>a. (01) windshield</li> <li>b. (34) roof or convertible top</li> <li>c. (04-07) steering assembly</li> <li>d. (90) noncontact injury source</li> <li>e. (90) noncontact injury source</li> <li>f. (90) noncontact injury source</li> </ul>



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<u>Injury</u>	<u>Injury Mechanism Determined from Crash Evidence</u>	<u>Injury Source</u>
	g. back hits seat back, head hits head restraint, neck is injured	g. (23) head restraint
Example 2		
Hip Dislocation P.DJ-3	Knee strikes dash, forces transmitted along femur forcing femoral head out of the acetabulum	(09-11) instrument panel
Example 3		
Shoulder-elbow-wrist fracture/dislocation _2J-2	Occupant braced hands on instrument panel, transmitting forces to wrist, elbow, and shoulder	(09-11) instrument panel
Example 4		
Acute lumbar strain BITM-1	Jackknife over seat belt, rotation about seat belt stretches back muscles	(22) belt restraint

8. When no other injury information is available, data from the PAR are to be coded. If specific injuries are detailed, code accordingly. If only a PAR injury severity rating is assigned, code: "Injured, severity unknown". This implies the existence of an unspecified injury of unknown severity. Do not code: "Unknown if injured". This denotes lack of knowledge concerning the existence of injury, which is contrary to information documented in the PAR. Consider the five example situations below and code according to the instructions given, for example, in variable 031 et al. (1st O.I.C. - Body Region).

Coding PAR  
injury data

- a. No interview; no medical; PAR injury severity rating: "K", "A", "B", or "C"; code: "Injured, severity unknown" -- 9UUU797709.
- b. No interview; no medical; PAR injury severity rating: "U"; code: "Unknown if injured" -- 9999999999.
- c. No interview; no medical; PAR injury severity rating: "O"; code: "Not injured" -- 0000000000.
- d. No interview; no medical; PAR injury severity rating: "C", in addition, "laceration to forehead" is reported; code: 6FSL11 \_\_ \_ 09.
- e. No interview; no medical; no PAR mention of injury; hit-and-run vehicle/driver reported; code: "Unknown if injured" -- 9999999999.

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9. If the PAR is "blank" where the injury severity is accessed and the person was at the scene during the police investigation, code "No injury". However, if the person was not present during the police investigation, code "Unknown if injured". Presumption of "No injury" or "Unknown if injured" from Par
10. NASS does not code possible injuries, but injuries whose existence is considered to be probable are coded. If the words "possible" or "probable" are used, code accordingly (i.e., code the probable injuries only). If it is difficult to determine if an injury is probable or possible (i.e., use of other indistinct language such as "suspected", "appears to be", etc.), judge whether "possible" or "probable" based on the specific situation. Code "Probable" injuries

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(7)NASS Injury Coding Conventions

1. If an AIS is determined to be one of two consecutive numbers, but a clear indication cannot be made after reviewing all the information provided, assign the lower AIS. Uncertainty Rule #1--code lower AIS
  
2. When there is uncertainty about the location of minor multiple abrasions, contusions, and lacerations, etc. to the body surface, follow the guidelines below: Uncertainty Rule #2--whole body integumentary injuries
  - a. If any of the words multiple, numerous, several, or the plural of a lesion is used to describe the injuries, enter one line of code (e.g., multiple chest contusions--code CWC1-  ).
  - b. Multiple integumentary injuries with uncertainty of body region location; aggregate, regardless of location(s), into OW\_I-1.
  - c. If multiple contusions, abrasions, or lacerations occur to a single body region, code the body region and aspect W (e.g. multiple facial abrasions -- code FWAI-  ).
  - d. Multiple integumentary injuries located on one side of body (e.g., motorcyclists); aggregate into OL\_I-1 or OR\_I-1.
  - e. Single integumentary injury with uncertainty of location; Code UU\_I-1.
  - f. OW\_I-1 is the default if unknown which of the above situations (b-d) exists.
  
3. If the medical or interview information indicates a contused knee, elbow, wrist, ankle, etc., and does not specifically state whether the contusion is to the bone or joint, code the injury as integumentary,   CI-1. If the contusion is known to be to the bone, use   CS-  ; if to the joint, use   CJ-  . Example: contused knee, K.CI-1. Uncertainty Rule #3--most superficial system if unknown system/organ
  
4. Cervical spine strain may, in some cases, still be referred to as "whiplash". "Whiplash" is not a medical term and is not used in AIS-80. If an injury is described as "whiplash", it should be coded as cervical spine strain (no fracture or dislocation) NPTM-1, provided the guidelines below are followed: "Whiplash" NPTM-1
  - a. Interviewee reports: "Whiplash".  
ER reports: "Pain", "stiffness", or "limited ROM" in neck but does not diagnose strain.  
Code: Do not code whiplash since ER, in essence, ruled it out.
  - b. Interviewee reports: "Whiplash".  
ER reports: "Neck supple" and does not diagnose strain.  
Code: Do not code whiplash since ER, in essence, ruled it out.

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- c. Interviewee reports: "Whiplash".  
ER reports: (No medical attention sought.)  
Code: Code whiplash, data source 07 (since it is the only data available).
- d. Interviewee reports: "Whiplash".  
ER reports: (No indication that neck was specifically examined.)  
Code: Code whiplash, data source 07 (since ER did not rule out its possibility).
5. All internal structures of the mouth, with the exception of the teeth, are coded as part of the digestive system (D). Teeth are coded as skeletal (S). Mouth (except teeth) = D, Teeth = S
6. Body region code 0 (whole body) should be used only if 50% or more of the whole body surface (0) is affected. An exception is made for burns affecting more than one body region (see below). Aspect code W (whole region) is used only if 50% or more of the body region is affected. 50% rule
7. If a lesion involves more than one aspect of a body region: Aspect Whole (W) Code
- a. Try to determine if one of the aspects is predominant. If so, code that aspect.
- b. If not, use the aspect code W (whole).
8. Burn injuries should be coded using the following guidelines: Burn injuries and the rule of nines
- a. If only one body region is burned, use that body region code (e.g., ARBI-1, burned right upper arm 1<sup>o</sup>).
- b. If more than one body region is burned, but a single injury code will adequately describe the regions affected, use the single injury code (e.g., XRBI-2, burned right whole arm 2<sup>o</sup>).
- c. If more than one body region is burned and one injury code cannot be used to specify the body regions involved, the injury is coded OWBI-\_. This will be the most likely case coding burns.
- d. If both arms or legs are burned, use the code OWBI-\_.
- e. The Rule of Nines is used to assign the AIS severity level for (a), (b), (c), and (d) above. See the Rules of Nines diagram.
9. The following definitions have been used traditionally to differentiate "sprain" and "strain" injuries: Strain versus sprain
- sprain - a joint injury which causes pain and disability depending on the degree of injury to ligaments and muscle tendons near the joint.
- strain - an injury to a muscle or musculotendinous unit that results from overstretching and may be associated with a sprain or fracture.

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In common medical practice, however, physicians often do not adhere strictly to these definitions, and may use the terms interchangeably. AIS-80 distinguishes sprains from strains. Care should be exercised in selection of the proper code, use \_\_SJ for sprains (joint injuries) and \_\_TM-1 for strains (muscle injuries).

Neck injuries may sometimes be described as "strains" and sometimes as "sprains". For NASS purposes, neck injuries should be coded as "strains" (see above definitions).

No sprains to  
neck

## 10. Coding of substantiated anatomic lesions to the brain:

Anatomic Brain  
Lesions

- a. If there are no substantiated anatomic lesions to the brain, the OIC and AIS will be coded as they appear in the Diffuse Lesions section (see HEAD, Part C, Diffuse Lesions).
- b. If only one substantiated anatomic lesion to the brain and the length of unconsciousness are known, the OIC will consist of the four letters describing the injury as it is specified in the "Anatomic Lesions" section (see HEAD, Part B, Anatomic Lesions). The AIS assigned will be determined by comparing: (1) the AIS which accompanies the specified injury in the "Anatomic Lesions" section, with (2) the AIS of the comparable injury in the "Diffuse Lesions" section. The higher of the two AIS scores will be the one coded.
- c. If there are two or more substantiated anatomic lesions to the brain, the OIC and the AIS for each will be coded as they appear in the "Anatomic Lesions" section.

11. When an injury is described as a "           type of laceration" (e.g., avulsion type laceration, flap laceration) use the "V" (avulsion) lesion code. For all ambiguous situations, use "laceration" over puncture, perforation, or avulsion.

Laceration  
Type  
Injuries

12. The AIS codes individual injuries only. Injuries to body parts which are present on both sides of the body (bilateral) are coded as two separate injuries. It should be remembered that within the OIC, "Aspect" measures the location of the injury being reported. Therefore, bilateral is not used to code the occurrence of hemo- or pneumothorax (results) present bilaterally. Instead, an upgraded AIS will account for the presence of bilateral results.

Bilateral Not  
Used

13. The distinction in coding individual skull fractures versus subsuming them under the crush classification lies in the displacement of brain tissue. If it can be determined that brain matter is forcibly extracted or moved from the cranium in conjunction with extensive fracturing, then the term "crushed skull" is applicable. Lack of specificity regarding the displacement of brain tissue tells the researcher not to use the crush code and to code the fracturing as individual injuries. An HUUU-7 may be added if brain injuries are present but not specifically described.

Crushed Skull

14. If the injury description states only "tear", then:

Tears

- a. If involving internal organs, use lesion "laceration".

Sub/030  
(10)

- b. If involving the external integumentary system, use lesion "laceration" or "avulsion" as appropriate. If unknown which to choose, code "laceration".
15. For multiple fractures to the same bone: > 1 fracture in a bone
- a. If multiple fractures to the same bone are determined, code each separately.
- b. If the fractures cannot be differentiated, or if the fracture is nonspecific, then it should be considered as one comminuted fracture. Assign one OIC code with an upgraded AIS (where appropriate).
- c. Exception:
- o ribs - multiple fractures to the same rib are assigned one OIC code, but the AIS is not upgraded.
  - o pubis - multiple fractures to the pubis (right, left, inferior, and/or superior) are assigned one OIC code; upgrade AIS if appropriate.
16. For "seat belt bruises" due to a three-point system, code: Seat belt contusions
- S.CI-1 (. = R,L)  
C\_CI-1 (\_ = R,L,C,W)  
M\_CI-1 (\_ = R,L,C,S,I,W)
- Code S.CI-1, CCCI-1, and MCCI-1 if unspecified.  
(Note: Code only those injuries that are consistent with the type of restraint worn (e.g., do not code S.CI-1 or C\_CI-1 if only a lap belt was used).
17. For open (compound) fractures, do not code any accompanying laceration unless the laceration was not caused by the fracture. This is because, by definition, an open fracture penetrates the external skin. Simply raise the AIS for the open fracture, where permitted (by a footnote). Open fractures
- Exception: open fracture of skull lacerating brain matter (code as two codes).
18. If a deep laceration or puncture penetrates the soft tissue and it can be determined that it is associated with a similar lesion to a related internal structure, only the injury with the higher AIS (the internal injury) should be coded. Lesions involving skin and internal structures
- If in doubt that the external and internal lesion are related, code both.
19. In general, in order to code the higher AIS for "deep and/or extensive" lacerations or perforations to internal organs of the thorax and abdomen or the tongue, the medical report should specify one of the following terms: "Deep/extensive" internal lacerations/perforations
- "deep", "major", "extensive", "severe", "multiple", or synonymous.
- However, the final choice of whether or not to use the "superficial" or "deep" AIS levels depends on the term within the context of the entire injury description.

Sub/O30  
(11)

20. AIS codes for joint injuries (i.e., fracture, dislocation, or fracture and dislocation) occurring to the Extremities incorporate associated ligament/tendon lesions. Thus, do not code ligament/tendon injuries separately.
21. For multiple internal injuries to an organ of the thorax or abdomen, code one OIC code per lesion, choosing the highest AIS for each particular lesion.

Joint-ligament  
injuriesMultiple internal  
lesions

Example: contusion liver, one extensive laceration liver, one superficial laceration liver. Code contusion (MRCL-3) and laceration (MRLL-5).

For multiple injuries to an artery/vein located in the same region or the same region of the spinal cord (example: cervical), code only one OIC code, choosing the lesion with the highest AIS among all the lesions present.

Example: laceration aorta, severance aorta. Code only one code, severance (CCEA-6).

031  
039  
047  
055  
063  
071

Variable Name: 1st O.I.C. - Body Region  
2nd O.I.C. - Body Region  
3rd O.I.C. - Body Region  
4th O.I.C. - Body Region  
5th O.I.C. - Body Region  
6th O.I.C. - Body Region

Format: 1 column - alphanumeric

Beginning  
Column 45  
55  
65  
75  
85  
95

Element Values:

M	Abdomen	L	Leg (lower)
Q	Ankle - foot	Y	Lower limb(s) (whole or unknown part)
A	Arm (upper)	N	Neck - cervical spine
B	Back - thoracolumbar spine	P	Pelvic - hip
C	Chest	S	Shoulder
E	Elbow	T	Thigh
F	Face	X	Upper limb(s) (whole or unknown part)
R	Forearm	O	Whole body
H	Head - skull	W	Wrist - hand
U	Injured unknown region,	Ø	Not injured
K	Knee	9	Unknown if injured

Source: Variables 038, 046, 054, 062, 070, and 078 respectively.

Remarks:

The NASS Injury Coding Manual 1985 contains a listing of most injuries. Use the manual to code, for each injury, both its O.I.C. and I.S.S. body region and record them on the form. Ordering instructions are on page 7 of the Occupant Form.



031  
039  
047  
055  
063  
071  
(2)

Variable Name: 1st O.I.C. - Body Region (cont'd.)  
 2nd O.I.C. - Body Region (cont'd.)  
 3rd O.I.C. - Body Region (cont'd.)  
 4th O.I.C. - Body Region (cont'd.)  
 5th O.I.C. - Body Region (cont'd.)  
 6th O.I.C. - Body Region (cont'd.)

For coding the following situations, the correct procedure is:

	R	A	L	S	A	I	S	I	D	I	S	F
	E	S	E	Y	.	N	O	R	I	O		
	G	P	S	S	I	J	U	E	R	U	D	
	I	E	I	T	.	U	R	C	E	R	A	
	O	C	O	E	S	R	C	T	C	C	T	
	N	T	N	M	.	Y	E	/	T	E	A	
Not injured:	$\frac{0}{45}$	$\frac{0}{46}$	$\frac{0}{47}$	$\frac{0}{48}$	$\frac{0}{49}$	$\frac{0}{50}$	$\frac{0}{51}$	$\frac{0}{52}$	$\frac{0}{53}$	$\frac{0}{54}$		
Injured, severity unknown:	$\frac{U}{45}$	$\frac{U}{46}$	$\frac{U}{47}$	$\frac{U}{48}$	$\frac{7}{49}$	$\frac{9}{50}$	$\frac{7}{51}$	$\frac{7}{52}$	$\frac{0 \text{ or } 9}{53}$	$\frac{1, 2, 3, 4, 5, 6, 7, 8 \text{ or } 9}{54}$		
	$\frac{0}{55}$	$\frac{0}{56}$	$\frac{0}{57}$	$\frac{0}{58}$	$\frac{0}{59}$	$\frac{0}{60}$	$\frac{0}{61}$	$\frac{0}{62}$	$\frac{0}{63}$	$\frac{0}{64}$		
Unknown, if injured:	$\frac{9}{45}$	$\frac{9}{46}$	$\frac{9}{47}$	$\frac{9}{48}$	$\frac{9}{49}$	$\frac{9}{50}$	$\frac{9}{51}$	$\frac{9}{52}$	$\frac{9}{53}$	$\frac{9}{54}$		
	$\frac{0}{55}$	$\frac{0}{56}$	$\frac{0}{57}$	$\frac{0}{58}$	$\frac{0}{59}$	$\frac{0}{60}$	$\frac{0}{61}$	$\frac{0}{62}$	$\frac{0}{63}$	$\frac{0}{64}$		

Note: Be sure to complete one additional row with zeros ("0"s) when the person is injured but has less than six injuries. This is true even when the person is injured but the severity is unknown, or if it is unknown whether or not the person is injured. Refer to the last O.I.C. note on page 7 of Occupant Form.

When the person has several injuries from the same Source of Data, one of which is "injured, severity unknown", code this injury last.

032  
040  
048  
056  
064  
072

Variable Name: 1st O.I.C. - Aspect of Injury  
2nd O.I.C. - Aspect of Injury  
3rd O.I.C. - Aspect of Injury  
4th O.I.C. - Aspect of Injury  
5th O.I.C. - Aspect of Injury  
6th O.I.C. - Aspect of Injury

Format: 1 column - alphanumeric

Beginning  
Column 46  
56  
66  
76  
86  
96

Element Values:

A	Anterior - front	P	Posterior - back
C	Central	R	Right
I	Inferior - lower	S	Superior - upper
U	Injured, unknown aspect	W	Whole region
L	Left	Ø	Not injured
		9	Unknown if injured

Source: Variables 038, 046, 054, 062, 070, and 078 respectively.

Remarks:

The NASS Injury Coding Manual 1985 contains a listing of most injuries. Use the manual to code, for each injury, the aspect of the injury and record it on the form.

NOTE: Bilateral (B) was deleted from Aspect of Injury beginning with the 1983 CSS.

## OCCUPANT FORM

033  
041  
049  
057  
065  
073

Variable Name: 1st O.I.C. - Lesion  
2nd O.I.C. - Lesion  
3rd O.I.C. - Lesion  
4th O.I.C. - Lesion  
5th O.I.C. - Lesion  
6th O.I.C. - Lesion

Format: 1 column - alphanumeric

Beginning  
Column 47  
57  
67  
77  
87  
97

## Element Values:

A	Abrasion	U	Injured, unknown lesion
M	Amputation	L	Laceration
V	Avulsion	O	Other
B	Burn	P	Perforation, puncture
K	Concussion	R	Rupture
C	Contusion	S	Sprain
N	Crush	T	Strain
G	Detachment, separation	E	Total severance, transection
D	Dislocation	Ø	Not injured
F	Fracture	9	Unknown if injured
Z	Fracture and dislocation		

Source: Variables 038, 046, 054, 062, 070, and 078 respectively.

## Remarks:

The NASS Injury Coding Manual 1985 contains a listing of most injuries. Use the manual to code, for each injury, its lesion and record it on the form.

034  
042  
050  
058  
066  
074

Variable Name: 1st O.I.C. - System/Organ  
2nd O.I.C. - System/Organ  
3rd O.I.C. - System/Organ  
4th O.I.C. - System/Organ  
5th O.I.C. - System/Organ  
6th O.I.C. - System/Organ

Format: 1 column - alphanumeric

Beginning  
Column 48  
58  
68  
78  
88  
98

Element Values:

W	All systems in region	M	Muscles
A	Arteries - veins	N	Nervous system
B	Brain	P	Pulmonary - lungs
D	Digestive	R	Respiratory
E	Ears	S	Skeletal
O	Eye	C	Spinal Cord
H	Heart	Q	Spleen
U	Injured, unknown system	T	Thyroid, other endocrine gland
I	Integumentary	G	Urogenital
J	Joints	V	Vertebrae
K	Kidneys	Ø	Not injured
L	Liver	9	Unknown if injured

Source: Variables 038, 046, 054, 062, 070, and 078 respectively.

Remarks:

The NASS Injury Coding Manual 1985 contains a listing of most injuries. Use the manual to code, for each injury, its system/organ and record it on the form.

## OCCUPANT FCRM

035  
043  
051  
059  
067  
075

Variable Name: 1st O.I.C. - Abbreviated Injury Scale  
2nd O.I.C. - Abbreviated Injury Scale  
3rd O.I.C. - Abbreviated Injury Scale  
4th O.I.C. - Abbreviated Injury Scale  
5th O.I.C. - Abbreviated Injury Scale  
6th O.I.C. - Abbreviated Injury Scale

Format: 1 column - numeric

Beginning  
Column 49  
59  
69  
79  
89  
99

## Element Values:

0 Not injured  
1 Minor injury  
2 Moderate injury  
3 Serious injury  
4 Severe injury  
5 Critical injury  
6 Maximum (untreatable)  
7 Injured, unknown severity  
9 Unknown if injured

Source: Variables 038, 046, 054, 062, 070, and Q78 respectively.

## Remarks:

The NASS Injury Coding Manual 1985 contains a listing of most injuries. Use the manual to code, for each injury, its A.I.S. value and record it on the form.

036  
044  
052  
060  
068  
076

Variable Name: 1st O.I.C. - Injury Source  
2nd O.I.C. - Injury Source  
3rd O.I.C. - Injury Source  
4th O.I.C. - Injury Source  
5th O.I.C. - Injury Source  
6th O.I.C. - Injury Source

Format: 2 columns - numeric

Beginning  
Column 50  
60  
70  
80  
90  
100

Element Values:

00 Not injured

Front

01 Windshield  
02 Mirror  
03 Sunvisor  
04 Steering wheel rim  
05 Steering wheel hub/spoke  
06 Steering wheel (combination of codes 04 and 05)  
07 Steering column, transmission, selector lever, other attachment  
08 Add on equipment (e.g., CB, tape deck, air conditioner)  
09 Left instrument panel and below  
10 Center instrument panel and below  
11 Right instrument panel and below  
\*12 Other front object (specify)

Side

13 Side interior surface, excluding hardware or armrests  
14 Side hardware or armrests  
15 A pillar  
16 B pillar  
\*17 Other pillar (specify)  
18 Window glass or frame  
\*19 Other side object (specify)

036  
044  
052  
060  
068  
076  
(2)

Variable Name: 1st O.I.C. - Injury Source (cont'd.)  
2nd O.I.C. - Injury Source (cont'd.)  
3rd O.I.C. - Injury Source (cont'd.)  
4th O.I.C. - Injury Source (cont'd.)  
5th O.I.C. - Injury Source (cont'd.)  
6th O.I.C. - Injury Source (cont'd.)

#### Interior

21 Seat, back support  
22 Belt restraint system  
23 Head restraint  
24 Air cushion  
\*25 Other occupants (specify)  
26 Interior loose objects  
\*29 Other interior objects (specify)

#### Roof

31 Front header  
32 Rear header  
33 Roof side rails  
34 Roof or convertible top

#### Floor

41 Floor  
42 Floor or console mounted transmission lever, including console  
43 Parking brake handle  
44 Foot controls including parking brake

#### Rear

45 Backlight (rear window)  
46 Backlight storage rack, door, etc.  
\*49 Other rear object (specify)

#### Exterior of Occupant's Vehicle

##### Noncycle

51 Hood  
52 Outside hardware (e.g., outside mirror, antenna)  
\*53 Other exterior surface or tires (specify)  
59 Unknown exterior objects

##### Cycle

61 Handle bars or attachments  
62 Frame or suspension component or fender  
63 Seat

036  
044  
052  
060  
068  
076  
(3)

Variable Name: 1st O.I.C. - Injury Source (cont'd.)  
2nd O.I.C. - Injury Source (cont'd.)  
3rd O.I.C. - Injury Source (cont'd.)  
4th O.I.C. - Injury Source (cont'd.)  
5th O.I.C. - Injury Source (cont'd.)  
6th O.I.C. - Injury Source (cont'd.)

64 Foot pedal, foot rest, foot pegs  
65 Wheel or tire  
66 Engine or transmission  
67 Gas tank, gas tank filling cap or neck  
\*69 Other cycle part (specify)

Exterior of Striking Motor Vehicle

71 Front bumper  
72 Hood edge  
\*73 Other front of vehicle (specify)  
74 Hood  
75 Hood ornament  
76 Windshield, roof rail, A-pillar  
77 Side surface  
78 Side mirrors  
\*79 Other side protrusions (specify)  
80 Rear surface  
81 Undercarriage  
82 Tires and wheels  
\*83 Other exterior of striking motor vehicle (specify)  
84 Unknown exterior of striking motor vehicle

Other Vehicle or Object in the Environment

86 Ground  
\*87 Other vehicle or object (specify)  
89 Unknown vehicle or object

Noncontact Injury

90 Noncontact injury source  
  
97 Injured, unknown source  
99 Unknown, if injured

Source: Researcher determined--inputs include vehicle inspection, interview e, and medical records.



036  
044  
052  
060  
068  
076  
(4)

Variable Name: 1st O.I.C. - Injury Source (cont'd.)  
2nd O.I.C. - Injury Source (cont'd.)  
3rd O.I.C. - Injury Source (cont'd.)  
4th O.I.C. - Injury Source (cont'd.)  
5th O.I.C. - Injury Source (cont'd.)  
6th O.I.C. - Injury Source (cont'd.)

## Remarks:

Code "06" (Combination of hub and rim/spokes) when there is an unspecified steering wheel injury source.

Child restraining devices have caused confusion when they are the source of the injury. The child restraint (i.e., infant/child seat, booster seat, etc.) is considered to be an integral restraint (e.g., the whole seat is the restraint). When the restraint is used by an infant or child it should be coded as one unit. In the NASS, the analyst is concerned with the complete seat and its performance.

If the child restraint is used by a child and the vehicle's belt restraint system is used (properly or improperly) with the child restraint, then code the contact with the child restraint as follows: (a) for an infant or child restrained by the infant or child restraint, code "22" (Belt restraint system), or (b) for any passenger including an infant or child who contacts an infant or child restraint but is not restrained by that seat, code "29" (Other interior objects).

When any body member of an infant or child restrained by an infant or child restraint contacts an interior object other than the infant or child restraint, then code the appropriate interior object (i.e., Seat, back support - code "21"; Head restraint - code "23"; etc.)

Code "90" (Noncontact injury source) is used for injuries which resulted from impact force (no contact), heat or flame from fire, battery acid, interior flying glass, etc. Interior flying glass refers to the person being struck by glass which has already fractured and is airborne. This does not refer to a person causing glass to shatter upon impacting it. For a more detailed discussion see NASS Injury Coding Procedure number 7.

Use page 4 of the Occupant Form to record the interviewee reported injury source evidence, and page 7 of the Vehicle Form to record the physical injury source evidence. The researcher should record only those contact mechanisms which can be documented by some physical evidence (e.g., scuffs, hair, smudges, dents, cracks, etc.).

036  
044  
052  
060  
068  
076  
(5)

Variable Name: 1st O.I.C. - Injury Source (cont'd.)  
2nd O.I.C. - Injury Source (cont'd.)  
3rd O.I.C. - Injury Source (cont'd.)  
4th O.I.C. - Injury Source (cont'd.)  
5th O.I.C. - Injury Source (cont'd.)  
6th O.I.C. - Injury Source (cont'd.)

The element values encoded can be based on physical evidence, occupant kinematics, and interviewee information. Although physical evidence is preferred, it does not have to be present to support a contact mechanism.

If a parked (not in transport) vehicle is impacted by an occupant of a vehicle in transport, use the "87" (other vehicle or object) code.

\*Note: Whenever an "other" code (i.e., "12", "17", "19", "25", "29", "49", "53", "69", "73", "79", "83", or "87") is coded as injury source, clearly identify, in the space provided next to each code on page 7 of the form, a description of the "other" source.

## OCCUPANT FORM

037  
045  
053  
061  
069  
077

Variable Name: 1st O.I.C. - Direct/Indirect Injury  
2nd O.I.C. - Direct/Indirect Injury  
3rd O.I.C. - Direct/Indirect Injury  
4th O.I.C. - Direct/Indirect Injury  
5th O.I.C. - Direct/Indirect Injury  
6th O.I.C. - Direct/Indirect Injury

Format: 1 column - numeric

Beginning  
Column 52  
62  
72  
82  
92  
102

## Element Value:

0 No injury  
1 Direct contact injury  
2 Indirect contact injury  
3 Noncontact injury  
7 Injured, unknown source  
9 Unknown if injured

Source: Researcher determined--inputs include vehicle inspection, interviewee, and medical records.

## Remarks:

The distinction between direct and induced is covered in greater detail in NASS Injury Coding Procedure number 7.

Code "0" (No injury) is used whenever the respective injury source (036 et al.) is coded "00" (Not injured). Likewise, code "7" (Injured, unknown source) and code "9" (Unknown if injured) are used whenever the injury source is coded "97" (Injured, unknown source) and "99" (Unknown if injured), respectively. Finally, code "3" (Noncontact injury) is used when the respective 036 et al. equals "90" (Noncontact injury source).

037  
045  
053  
061  
069  
077  
(2)

Variable Name: 1st O.I.C. - Direct/Indirect Injury (cont'd.)  
2nd O.I.C. - Direct/Indirect Injury (cont'd.)  
3rd O.I.C. - Direct/Indirect Injury (cont'd.)  
4th O.I.C. - Direct/Indirect Injury (cont'd.)  
5th O.I.C. - Direct/Indirect Injury (cont'd.)  
6th O.I.C. - Direct/Indirect Injury (cont'd.)

Code "1" (Direct contact injury) if the coded injury results from a force impacted directly on the injured body region by the component/object coded as the injury source (036 et al.).

Code "2" (Indirect contact injury) if the coded injury results from a force transmitted from the component/object coded as the injury source (036 et al.) through another body region to the injured body region (e.g., knee contacts dash, force transmitted through knee and femur causing a fractured pelvis).

## OCCUPANT FCRM

C38  
C46  
C54  
C62  
C70  
C78

Variable Name: 1st O.I.C. - Source of Data  
2nd O.I.C. - Source of Data  
3rd O.I.C. - Source of Data  
4th O.I.C. - Source of Data  
5th O.I.C. - Source of Data  
6th O.I.C. - Source of Data

Format: 2 columns - numeric

Beginning  
Column 53  
63  
73  
83  
93  
103

## Element Values:

Official	Unofficial
01 Autopsy records with or without hospital/medical records	05 Lay coroner report
02 Hospital/medical records other than emergency room (e.g., discharge summary)	06 E.M.S. personnel
03 Emergency room records only (including associated x-rays or other lab reports)	07 Interviewee
04 Private physician, walk-in or emergency clinic	08 Other source (specify)
	09 Police
	99 Unknown if injured
	00 Not injured

Source: Element chosen

## Remarks:

Code "01" (Autopsy records with or without hospital/medical records) excludes records from lay, nonmedical personnel; they must be the result of an autopsy by a physician or other similarly qualified life scientist. A non-invasive external examination by a physician, though, should be coded either "02" (Hospital medical records other than emergency room) or "04" (Private physician, walk-in or emergency clinic) since it is generally a superficial listing of external injuries and possible internal injuries; therefore, injuries from a non-invasive exam should not be grouped with those from a thorough autopsy report.

Code "02" [Hospital/medical records other than emergency room (e.g., discharge summary)] is used whenever the injury is listed on the official

038  
046  
054  
062  
070  
078  
(2)

Variable Name: 1st O.I.C. - Source of Data (cont'd.)  
2nd O.I.C. - Source of Data (cont'd.)  
3rd O.I.C. - Source of Data (cont'd.)  
4th O.I.C. - Source of Data (cont'd.)  
5th O.I.C. - Source of Data (cont'd.)  
6th O.I.C. - Source of Data (cont'd.)

post-emergency room records of a hospital or medical facility. If the injury was also listed on a facility's associated emergency room records, then the "02" code takes precedence. If the injury is also contained in an autopsy record--where the autopsy was performed by a physician or similarly qualified life scientist--then, code "01" (Autopsy records with or without hospital/medical records) takes precedence. However, this code includes non-invasive (external) examinations conducted by a physician on a deceased victim and documented as a hospital or medical examiner's record.

Code "03" [Emergency room records only (including associated x-rays or other lab reports)] is used when the injury only appears on a facility's emergency room record or on records that were completed in support of the person's examination in an emergency room. For example, an x-ray report that was completed because the emergency room physician requested it as a part of his/her examination would be included under this code. This code should not be used if the injury is subsequently listed on a post-emergency room record on in a medical autopsy.

If both types of records (emergency room and post-emergency room) refer to the same injury, code "02" [Hospital/medical records other than emergency room (e.g., discharge summary)] is used as the code even if the detail provided on the emergency room records exceeds the detail provided on the post-emergency room records.

Code "04" (Private physician, walk-in or emergency clinic) refers to any physician (in private practice) who saw the injured person and who has records of that treatment (i.e., other than hospital or autopsy records). Also included in this code are non-invasive (external) examinations conducted by a private physician or similarly qualified life scientist on a deceased victim and documented as other than a hospital record (e.g., coroner's report).

In summary, examinations of deceased persons are distinguished first by qualifications of examiner [official (codes "01", "02", and "04") versus unofficial (code "05")], second by the type of examination [autopsy (code

038  
046  
054  
062  
070  
078  
(3)

Variable Name: 1st O.I.C. - Source of Data (cont'd.)  
2nd O.I.C. - Source of Data (cont'd.)  
3rd O.I.C. - Source of Data (cont'd.)  
4th O.I.C. - Source of Data (cont'd.)  
5th O.I.C. - Source of Data (cont'd.)  
6th O.I.C. - Source of Data (cont'd.)

"01") versus non-invasive (codes "02" or "04")], and third by type of examination record [hospital (code "02") versus other than hospital (code "04")].

Code "05" (Lay coroner report) is used if the injury data is contained in a report where a non-invasive examination of the deceased was performed by a non-physician, or lay coroner.

Code "06" (E.M.S. personnel) refers to a person certified by the state as trained in emergency medical service techniques. Code "06" should not be used for ambulance attendants, police, or other personnel not trained in E.M.S. techniques.

Code "07" (Interviewee) refers to the person who was interviewed to get the information on this form (not necessarily the person described on this form). The interviewee is defined in a log variable.

Code "08" (Other) is used when data are obtained from an unofficial source different from those explicitly listed above (e.g., chiropractors).

Code "09" (Police) can be used, but only when no other source of injury information is available. See last sentence of first paragraph on page 6, Occupant Form.

Code "00" (Not injured) is to be used when no injury was reported. In other words, this variable reports only the source of the injury information.

Variable Name: Injury Severity (Police Rating)

Format: 1 column - numeric

Beginning  
Column 105

Element Values:

0	No injury (O)
1	Possible injury (C)
2	Nonincapaciting injury (B)
3	Incapacitating injury (A)
4	Killed (K)
5	Injury, severity unknown
6	Died prior to accident
9	Unknown

Source: Police report.

Remarks:

Code the police reported injury severity for this occupant. It is possible that the police could have updated the PAR between the time it was stratified (A02, Case Number--Stratification) and when it was picked up. For example, a person might have been listed originally with incapacitating injuries ("3"). Later the person dies ("4"), and the PAR is changed accordingly. Therefore, use the latest information on the PAR at the time it was obtained from the police agency.

If the police report contains a detailed description of the injuries but does not translate the injuries into the KABCO codes, use the police method for doing so. For example, injuries which are considered to be of an incapacitating nature are classified as "A" (code "3"), nonincapacitating-evident injuries are classified as "B" (code "2"), and possible injuries are "C" (code "1"). Property damage only is classified as "0" (code "0").

Code "5" (Injury, severity unknown) if the police report indicates a "U" or in any other way communicates the idea that the person was injured but their severity is unknown.

Code "6" (Died prior to accident) should only be coded if the police explicitly so indicate.

As a general rule, if the PAR is "blank" where the injury severity is assessed and the person was at the scene during the police investigation, code "0" (No injury). If the PAR is "blank" and the person was not present during the police investigation, code "9" (Unknown).



Variable Name: Injury Severity (Police Rating) [cont'd.]

Not all states use the KABCOU scheme. Listed below, by state, are alternative schemes; a mapping to the NASS scheme is provided.

State	PAR Code/Definition	NASS Scheme/Code
Alabama	K - Killed	K - 4
	A - Visible or carried from scene	A - 3
	B - Bruise/abrasion/swelling	B - 2
	C - No visibility - has pain/faint	C - 1
	Blank - No documentation of driver or occupant injury - No set unknown code	Blank - 0 - 9
Arizona	1 - No injury	O - 0
	2 - Possible injury	C - 1
	3 - Nonincapacitating injury	B - 2
	4 - Incapacitating injury	A - 3
	5 - Fatal	K - 4
	6 - Unknown	U - 9
California	1 - Fatal	K - 4
	2 - Severe wound/distorted member	A - 3
	3 - Other visible injury	B - 2
	4 - Complaint of pain	C - 1
	Blank - Occupant present Blank - Occupant not present	O - 0 - 9
Colorado*	5 - Fatal	K - 4
	4 - Evident - incapacitating	A - 3
	3 - Evident - nonincapacitating	B - 2
	2 - Possible injury	C - 1
	1 - No injury	O - 0
Florida	1 - No injury	O - 0
	2 - Fatal "in 90 days" injury	K - 4
	3 - Incapacitating injury	A - 3
	4 - Nonincapacitating injury	B - 2
	5 - Possible injury	C - 1
	6 - Non-traffic fatality - No set unknown code	K - 4 - 9

\*There is a box at the top of the PAR indicating number of persons injured. If this box is marked 0 and the injury code is left "blank", assume "No injury". If the box is marked 1 (or more) pertaining to the vehicle occupants in question and the injury code is "blank", assume "Injured, severity unknown". If "blanks" are present in both the persons injured box and the injury code box, assume "Unknown".

Variable Name: Injury Severity (Police Rating) [cont'd.]

State	PAR Code/Definition			NASS Scheme/Code	
Indiana	<u>Nature of Most Severe Injury</u>	<u>Location of Most Severe Injury</u>	<u>Victim's Injury Status</u>		
	1-11 Any Entry	1-12 Any Entry	6 Dead	K - 4	
	1-11 Any Entry	1-12 Any Entry	2 Semiconscious 3 Incoherent 4 Unconscious	A - 3	
	1 Severed 2 Internal 4 Severe Burn 7 Severe Bleed (Arterial) 8 Fracture/dislocation	1-12 Any Entry	1 Conscious 5 Shock 7 Refused Med	A - 3	
	3 Minor Burn 6 Minor Bleed 10 Complaint of Pain 11 None Visible	3 Eye	1 Conscious 5 Shock 7 Refused Med	A - 3	
	3 Minor Burn 6 Minor Bleed	1-2, 4-12 (Any EXCEPT Eye)	1 Conscious 5 Shock 7 Refused Med	B - 2	
	5 Abrasion 9 Contusion/Bruise	1-12 Any Entry	1 Conscious 5 Shock 7 Refused Med	B - 2	
	10 Complaint of Pain 11 None Visible	1-2, 4-12 (Any EXCEPT Eye)	1 Conscious 5 Shock 7 Refused Med	C - 1	
	11 None Visible	Blank or Slashed	1 Conscious	0 - 0	
	Blank or Slashed	Blank or Slashed	Blank or Slashed	0 - 0	
	Unknown	Unknown	Unknown	U - 9	
	Maryland	5 - Fatal			K - 4
		4 - Incapacitating			A - 3
		3 - Nonincapacitating			B - 2
		2 - Possible injury			C - 1
1 - No injury/Damage only				0 - 0	
Blank - No documentation of driver or occupants on front of PAR					

Variable Name: Injury Severity (Police Rating) [cont'd.]

State	PAR Code/Definition			NASS Scheme/Code
Nebraska	4	- Fatal		K - 4
	3	- Incapacitating injury		A - 3
	2	- Nonincapacitating injury		B - 2
	1	- Possible injury		C - 1
	0	- No injury		O - 0
	Blank	- Occupant present		O - 0
	Blank	- Occupant not present		- 9
New York	Location of Injury	Type of Injury	Victim's Status	
	Any entry	Any entry	Apparent death	K - 4
	Any entry	Any entry	Unconscious, Semi-conscious, Incoherent	A - 3
	Any entry	amputation, con- cussion, internal, severe bleeding, severe burn, mod- erate burn, frac- ture - dislocation	Shock, Normal	A - 3
	Eye	minor bleeding, minor burn, complaint of pain	Shock, Normal	A - 3
	All but eye	minor bleeding, minor burn	Shock, Normal	B - 2
	Any entry	contusions-bruise, abrasion	Shock, Normal	B - 2
	All but eye	complaint of pain	Shock, Normal	C - 1
	-	-	-	O - 0
	X	X	X	- 9

Variable Name: Injury Severity (Police Rating) [cont'd.]

<u>State</u>	<u>PAR Code/Definition</u>	<u>Scheme/Code</u>
Pennsylvania	0 - No injury	O - 0
	1 - Death	K - 4
	2 - Major injury	A - 3
	3 - Moderate injury [and] Type of Apparent Injury	A - 3
	- amputation	
	- broken bone(s)	
	3 - Moderate injury [and] Type of Apparent Injury	B - 2
	- abrasions/contusions/bruises	
	- burns	
	- bleeding	
- concussion		
- other		
4 - Minor injury [and] Type of Apparent Injury	C - 1	
- complaint of pain		
- dizziness		
- shock		
Tennessee	4 - Dead at time of report	K - 4
	3 - Bleeding wound, distorted member	A - 3
	2 - Bruises, abrasions, swelling, limping, etc.	B - 2
	1 - Complaint of pain, no visible injury	C - 1
	Blank - No documentation of driver or occupants on front of PAR or on supplement	O - 0
Washington	1 - No injury	O - 0
	2 - Dead at scene	K - 4
	3 - Dead on arrival	K - 4
	4 - Died in hospital	K - 4
	5 - Disabling injury	A - 3
	6 - Nondisabling injury	B - 2
	7 - Possible injury	C - 1
	Blank - Unknown	- 9

Variable Name: Time to Death

Format: 2 columns - numeric

Beginning  
Column 106

Element Values:

Range: 00 through 24, 31 through 60, 96, 99

00 Not fatal

96 Fatal - ruled disease

99 Unknown

Source: Police report, hospital/medical records, autopsy report, or other official records for actual time of death for fatally injured occupants.

Remarks:

Code "00" should identify (from any source) all occupants who are not fatally injured (i.e., death does not occur, or death does not occur within thirty days of the accident). Occupants of hit-and-run vehicles are assumed not killed.

All occupants who die within thirty days of the accident should have their time-of-death recorded unless their death meets the criteria of the Fatal - ruled disease code "96".

Code "96" (Fatal - ruled disease) is used in two situations. The first is when the effects of a disease can be deemed as a cause of the accident. Cause means that the on-set of the disease occurred prior to the first harmful event. When determining the time of on-set (relative to the first harmful event), the researcher can use any information source available. The researcher makes his/her determination after weighing all the evidence. (NOTE: The use of all available information sources is restricted to the determination of when the on-set occurred.) Additionally, code "96" (Fatal - ruled disease) is used when a medical examiner (or other official vested by the state to verify the cause of death) or an official medical report verifies that the death resulted from either (1) a diseased condition, or (2) not from accident related injuries.

Code "01" should identify occupants who die within (less than) one and a half hours of the time of the accident.

Codes "02" through "24" should identify occupants who die in the period of time between one and a half hours from the time of the accident to twenty-four hours after the accident. The variable should be coded to the nearest hour except for code "24" which is used only for the period between twenty-three and a half hours after the accident and twenty-four hours after the accident.

Variable Name: Time to Death (cont'd.)

Codes "31" through "60" should identify occupants who die in the period of time between greater than twenty-four hours after the accident (24 hours and one minute is coded as "31" while 24 hours is coded as "24") and thirty days after the accident. (NOTE: One day = "31", two days = "32", ..., twenty-nine days = "59", and thirty days = "60.") The number of days should be rounded off to the nearest whole day except for code "60" which is used for the period between twenty-nine days and twelve hours and thirty days after the accident.

The exact time period which applies to each code is shown in the table below.

Code	Time period in hours	Code	Time period in days
01	0 - < 1 1/2	31	> 1 - < 1 1/2
02	1 1/2 - < 2 1/2	32	1 1/2 - < 2 1/2
03	2 1/2 - < 3 1/2	33	2 1/2 - < 3 1/2
04	3 1/2 - < 4 1/2	34	3 1/2 - < 4 1/2
05	4 1/2 - < 5 1/2	35	4 1/2 - < 5 1/2
06	5 1/2 - < 6 1/2	36	5 1/2 - < 6 1/2
07	6 1/2 - < 7 1/2	37	6 1/2 - < 7 1/2
08	7 1/2 - < 8 1/2	38	7 1/2 - < 8 1/2
09	8 1/2 - < 9 1/2	39	8 1/2 - < 9 1/2
10	9 1/2 - < 10 1/2	40	9 1/2 - < 10 1/2
11	10 1/2 - < 11 1/2	41	10 1/2 - < 11 1/2
12	11 1/2 - < 12 1/2	42	11 1/2 - < 12 1/2
13	12 1/2 - < 13 1/2	43	12 1/2 - < 13 1/2
14	13 1/2 - < 14 1/2	44	13 1/2 - < 14 1/2
15	14 1/2 - < 15 1/2	45	14 1/2 - < 15 1/2
16	15 1/2 - < 16 1/2	46	15 1/2 - < 16 1/2
17	16 1/2 - < 17 1/2	47	16 1/2 - < 17 1/2
18	17 1/2 - < 18 1/2	48	17 1/2 - < 18 1/2
19	18 1/2 - < 19 1/2	49	18 1/2 - < 19 1/2
20	19 1/2 - < 20 1/2	50	19 1/2 - < 20 1/2
21	20 1/2 - < 21 1/2	51	20 1/2 - < 21 1/2
22	21 1/2 - < 22 1/2	52	21 1/2 - < 22 1/2
23	22 1/2 - < 23 1/2	53	22 1/2 - < 23 1/2
24	23 1/2 - 24	54	23 1/2 - < 24 1/2
		55	24 1/2 - < 25 1/2
		56	25 1/2 - < 26 1/2
		57	26 1/2 - < 27 1/2
		58	27 1/2 - < 28 1/2
		59	28 1/2 - < 29 1/2
		60	29 1/2 - 30