State of Colorado

STRAC

DR 3447 CRASH FORM CHANGES

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How Crash Data is Used

Each and every year, hundreds of millions of dollars are spent in Colorado to reduce the frequency and severity of crashes.

The primary goal of the traffic safety community – to ***reduce the frequency and severity of crashes***.

A critical component of the quest to reduce crashes is to use solid data to

- Identify traffic safety concerns; where and how are crashes occurring, and
- Select counter-measures; what actions can be taken to keep those crashes from happening.

Many, many entities throughout the state and even nationally use the crash data that you collect in the crash reports to address various factors that contribute to crashes:

- Departments of Transportation and Public Works, to improve the roadways,
- Automobile manufacturers and NHTSA, to improve the vehicle,
- Law enforcement, to address negative driver behavior,
- Departments of Health and medical institutions, to address injury and trauma concerns, and
- Many other agencies and entities

As an example of the level of investment influenced by crash data analysis, CDOT alone is spending around $140 Million in 2018[1] on traffic safety. Law enforcement agencies, cities and counties, and other agencies spend millions more on roadway improvements, enforcement campaigns, interventions, etc.

To be confident that such funds are being spent where it can have the biggest impact, the decision-makers rely on information that can be gleaned from the crash data. The data that you provide when filling out the crash reports.

Passing Along Your Knowledge

You who fill out the DR3447 Crash Report have first-hand experience with the crashes, and the factors that contribute to why they occur. The DR3447 Crash Report is **the** mechanism for you to pass your understanding of why crashes occur to those that perform the analysis. The people that make the

[1] From the 2018-2019 budget; $11M for Highway Safety Education, $67M for FASTER Safety projects, $2.2M for Hot Spots, $3.4 M for Railway-Highway Crossing, and $43.1 M for Highway Safety Improvement Program.

decisions as to where to invest the funds to reduce crashes rely on the crash forms that you fill out to provide them the support for their decisions.

The Most Critical Crash Report Fields

While all fields on the DR 3447 crash report form has value to the different users of the data, it is important to call attention to some specific fields that are most critical:

- Location
  - ➢ You may have heard of the term “geo-location” which means one of several ways to identify a specific location. Three of the most common ways to pinpoint a location are: a) GPS coordinates (lat/long), b) Route and milepoint, and c) relative to an intersection.
  - ➢ In order to correctly identify hot-spots (locations with high crash counts), it is critical that the crashes have valid and accurate locations.
- Contributing factors
  - ➢ Driver behavior contributes to the vast majority of crashes. From impairment to driver distraction to improper restraint, it is important to know how often different contributing factors come into play, in order to prioritize actions to reduce them.
- Intersection movement
  - ➢ When crashes occur at intersections, it’s important for the traffic engineers to know which kind of vehicle movements are involved, as that can help them identify the corrective actions to take. They need to know which direction (or “leg”) a vehicle came from, and whether it went straight or turned left or right.
  - ➢ Such information is also critical to know what changes can be made to reduce the likelihood of non-motorist crashes, the vast majority of which occur at intersections.
- Incident management
  - ➢ With the high level of congestion on many different routes, one crash can very easily contribute to one or more follow-on or secondary crashes occurring. Successful use of incident management to reduce those crashes needs specific data.

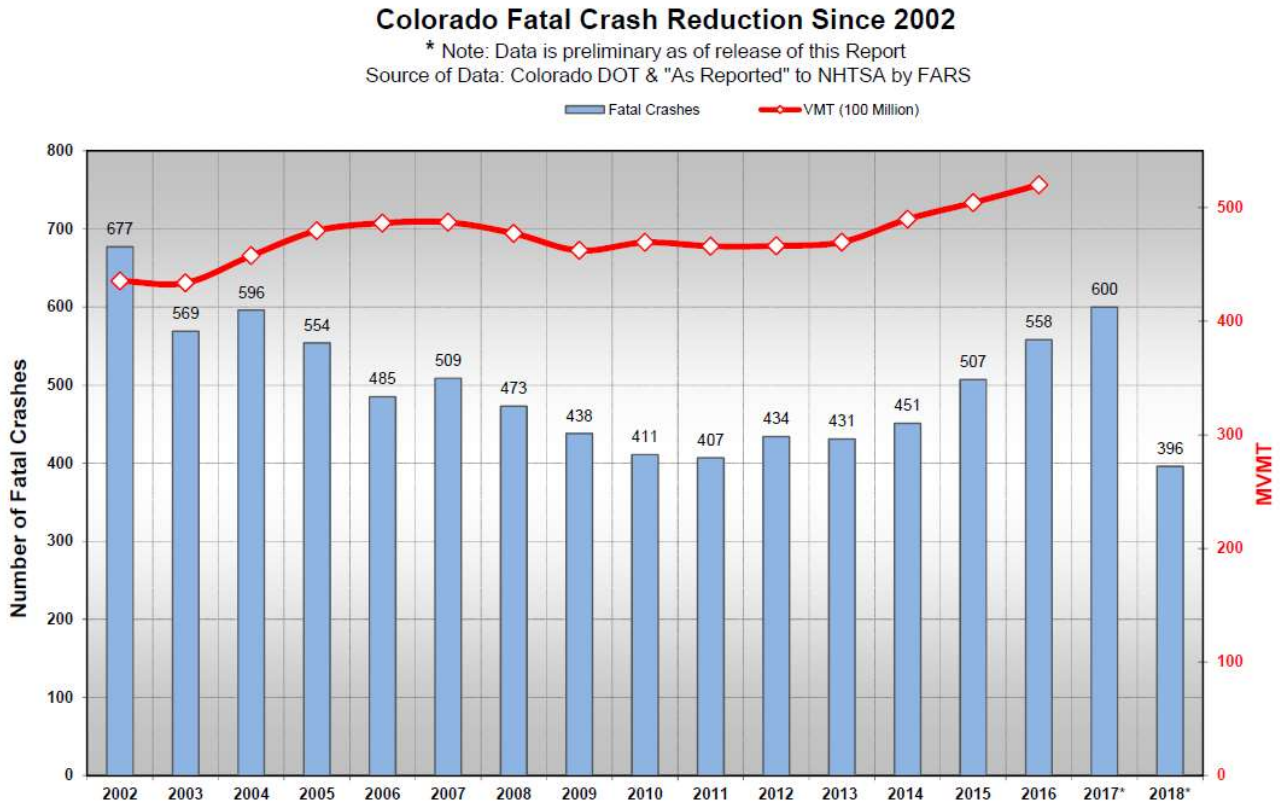
Why Update the Crash Form?

It is disruptive to change something like the crash form. New systems have to be developed and every officer needs to learn a new form and a new routine for filling it out.

Nonetheless, a new form was needed. The main goals have been:

- Make the crash data useful for traffic safety decision-making
- Make it easy for the officer to fill out the form

Colorado Experiences Too Many Crashes



The economic impact of crashes in the State of Colorado is huge tens of billions of dollars each year. Each fatality – according to national figures – has an economic impact of more than $9 million. All crashes have impacts – from the damage to the vehicles, to the impacts on the people involved, to the damage to the roadway and public and private property.

Improve the Usefulness of the Crash Data

Much has changed since 2006 (when the form was last updated) that change the kinds of data needed:

- Marijuana has been legalized
- Colorado has experienced an uptick in the number of fatal crashes
- There are more and more non-motorists involved in crashes
- Federal agencies have standardized injury severity classification
- Driver impairment and occupant protection remain concerns
- The concern about driver distraction, especially electronic, continues to rise

- Autonomous vehicles are arriving on the street

Facilitate Completing the Form

We heard many concerns expressed by officers regarding the completion of the crash form:

- Too little space for many data fields
- Often unclear or confusing which codes should be selected for some situations
- Awkward to use overlays, too easy to enter data into the wrong side-bar boxes
- Need to reduce the amount of time it takes to fill out the form
- Redundancy in the fatal supplement

The Form Update Process

The effort to update the form was addressed as a major project in order to consolidate inputs from many different participants with various (and often partially conflicting) perspectives. The following steps were applied:

- Survey of law enforcement and of crash data analysts
- Two rounds of workshops to address the different areas of the form, the different data needs
- Ground rules for the workshops were discussed and agreed:
  - ➢ Limit the fields added to the crash form, only add a field if:
  - ➢ The data is really needed
  - ➢ The crash form best place to collect that data, and
  - ➢ Law enforcement officer can collect the requested efficiently, reliably
- Workshops were then held to review the form and try applying it to real crash situations

Over 20 rounds of discussion were held, with hundreds of officers from all over the state, to make sure that the crash form update would address the needs of law enforcement as well as the needs for safety analysis.

Considerations for Reporting

Overall, we wanted to streamline the process for the officer to enter crash data.

More and more agencies are going electronic, so we wanted to support, encourage, and facilitate the transition to electronic crash reporting.

We made the form more modular, and to make it clearer which sections needed to be filled out for different types of crashes.

We kept the codes consistent: When some codes were removed, we did not recycle those codes to eliminate the holes. When new codes were added, we used new higher code numbers.

The Form Changes

The following sections of this document highlight each important difference in the DR 3447 compared to the DR 2447, and provides the following information:

- At the page level, an image of the page is shown, along with an overview of how that page compares to the DR 2447 (knowing that there is not always a one-to-one correspondences),
- A quick description of the change (usually indicating either a new field, or changes to the codes available for an existing field)
- A quick rationale or explanation as to the reason the field was added, or the list of codes modified
- An extract of the manual that pertains to the new or field.

THE DR 3447 FORM CHANGES

Overall Improvements to the Form

- The following general actions were taken to improve the DR 3447:
- Reduced number of overlays to keep track of
  - ➢ The crash / vehicle overlay has been eliminated
  - ➢ The CMV overlay has been eliminated
- Eliminated the fatal supplement, along with the redundancy between it and the DR 2447
- Expanded the space for text fields
- Clearly indicated number of characters or digits expected for various fields
- Removed or clarified the confusing options

Improvements Made to the Manual

In the overall section of the manual, clarified key aspects of crash reporting with additional examples. What counts as a *reportable crash* is made clearer, as well as what constitutes a *crash fatality*.

At the start of each section of the manual covering pages of the form, the corresponding page is shown for easier reference.

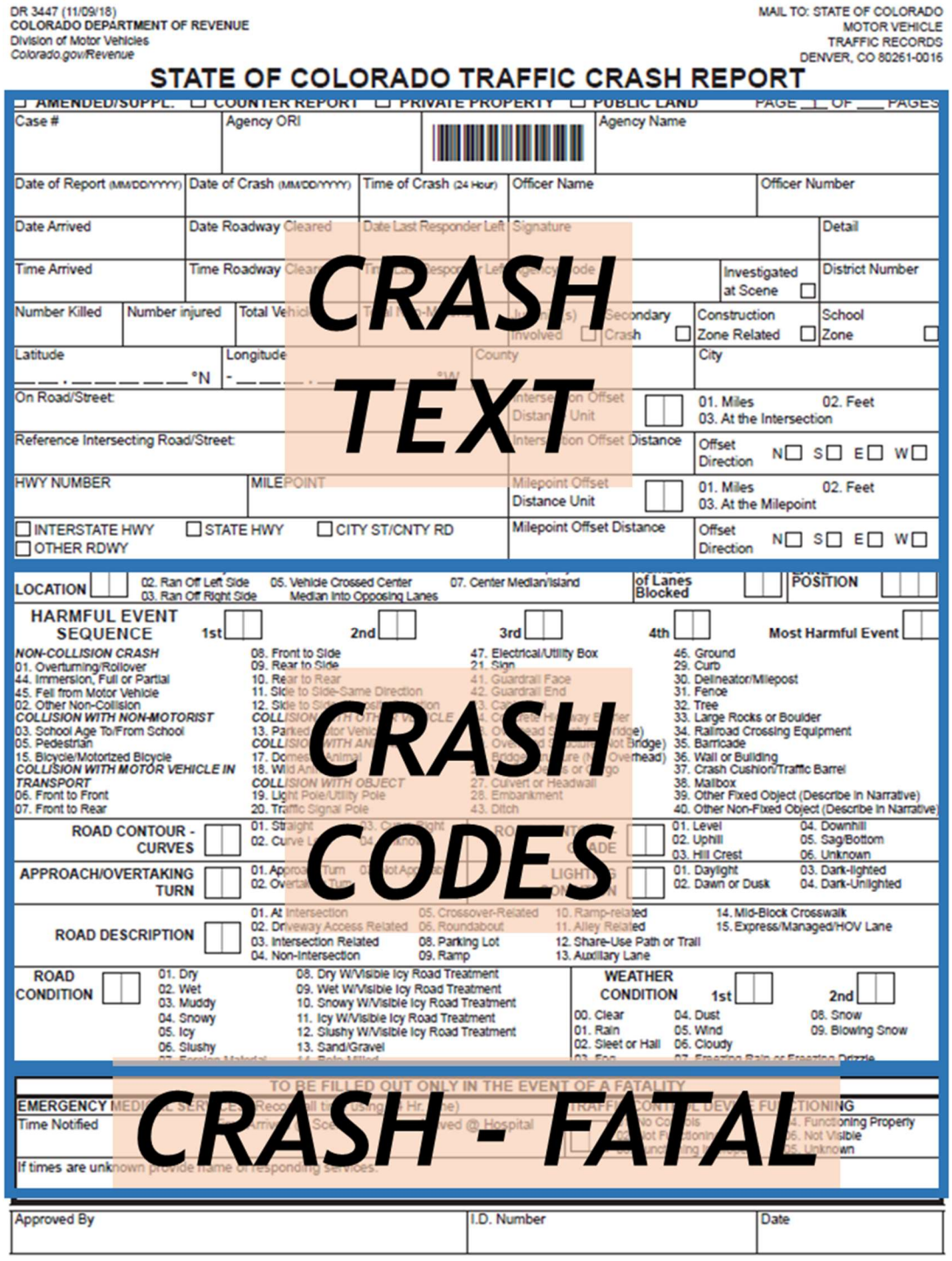
Provide more structured informative for each field on the form:

- A “snippet” of the field from the form for easy recognition
- Guidance on how to determine what to enter
- Electronic Reporting recommendations
- Increased number of examples
- Increased number of illustrations

DR3447 Page 1 – CRASH

This page is for information regarding the overall crash.

In a DR 3447 crash report package, there will be one and only one copy of this page, and it will always be the first page.



Overall Layout Changes

The top section of this page has the textual fields along with some check boxes to fill in regarding the crash itself. This section is very similar to the DR 2447

The middle section contains the fields where one or more codes are entered. This section used to be the left-hand overlay boxes on the DR 2447.

The lower section is only in the event of a fatal crash. This section used to be on the Fatal Supplement.

The New / Changed Fields

(Law Enforcement) Agency ORI

Changes:

- New

Rationale:

- A unique identifier without the issue of “free text” (when entered as free text, the Agency Name results in a wide variety of spellings for the same agency).

Manual Extract:

Enter the ORI (Originating Agency Identifier) code for the reporting officer’s agency.

Guidance

- The ORI codes are from the official list (as managed by CBI).
- Some agencies may have more than one ORI to distinguish different sections within the agencies.
- NOTE: While Colorado State Patrol has more than one ORI for the different troops, an internal decision was made that CSP will use only one ORI for crash reports.

Electronic Reporting

- It is expected that this field (as well as the (Law Enforcement) Agency Name field) would be auto-populated based on the officer completing the report.

Public Land Check Box

Changes:

- New

Rationale:

- To indicate if the crash occurred on public land

Manual Extract:

☐ PUBLIC LAND

Mark this box (enter an "**X**" or ✓) if a crash occurs within a location that is considered public land, such as BLM (Bureau of Land Management), National Forest, National or State Parks.

Guidance

NOTE: Crashes that do not begin on, end on, or otherwise involve a trafficway even if the crash occurs on public land, are NOT reportable crashes.

Date and Time Arrived

Changes:

- New

Rationale:

- To help reduce the impact of secondary crashes by identifying instances of high response time

Manual Extract:

Date Arrived
Time Arrived

Enter the date and time at which the (first) investigating officer arrived on the scene. If appropriate, obtain the date and time from dispatch. Otherwise, estimate to the best of your ability. If no on-site investigation was performed, leave blank.

Enter the date using the format MM/DD/YYYY.

Enter the time using the 24-hour clock system. Do not use a colon.

NOTE: The date and time entered here by the officer is considered approximate and may not be precise.

Date and Time Roadway Cleared

Changes:

- New

Rationale:

- To identify locations where crashes with long clearance time occur frequently. When such locations are identified, corrective actions can be taken to help reduce the clearance time for those crashes.

Manual Extract:

Date Roadway Cleared
Time Roadway Cleared

Enter the date and time at which the roadway was considered cleared as per definition below.

Enter the date using the format MM/DD/YYYY.

Enter the time using the 24-hour clock system. Do not use a colon.

NOTE: The date and time entered here by the officer is considered approximate and may not be precise.

Definition

Cleared means when:

- All lanes of traffic are available for traffic are open and traffic is flowing, and
- All vehicles have been removed (from the roadway).

It is not necessary that all parties, including the investigating officer have left the scene for the roadway to be considered cleared.

Date and Time Last Responder Left

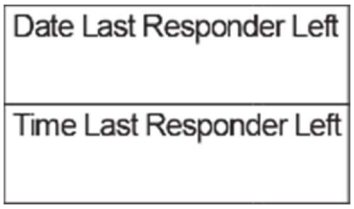
Changes:

- New

Rationale:

- To identify locations where crashes that require long-duration responder activity occur frequently. When such locations are identified, corrective actions can be taken to help reduce the clearance time for those crashes.

Manual Extract:



Enter the date and time at which the last responder left.

Enter the date using the format MM/DD/YYYY.

Enter the time using the 24-hour clock system. Do not use a colon.

NOTE: The date and time entered here by the officer is considered approximate and may not be precise.

Guidance

If the person filling out this form was not the last responder to leave the scene, then the date and time when the last responder left should be estimated.

Total Non-Motorists

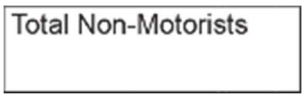
Changes:

- New field

Rationale:

- Summary number to identify crashes involving non-motorists

Manual Extract:



Enter the count of the total number of non-motorists involved in the crash.

Guidance

See **Autonomous Vehicle** on page 87 for type various types of non-motorists that need to be included.

Electronic Reporting

- This field may be auto-populated, based on the number of Traffic Unit/Non-Motorist pages that were completed.

Juvenile(s) Involved Check Box

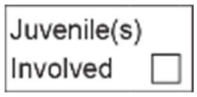
Changes:

- New field

Rationale:

- To indicate that there is information in the crash report relative to a juvenile, in which case specific privacy laws apply

Manual Extract:



Mark this box (enter an "**X**" or ✓) If one or more juveniles (under the age of 18) were involved in the crash,

Title 19 requires law enforcement records containing Juvenile information to be clearly marked as such. As crash forms fall seem to fall under Title 19 requirements (a majority of the documents are created by a law enforcement agency) and thus must be marked appropriately prior to transmission to DOR.

Business rules

This check box could be automatically checked based on the dates of births of the various involved parties. If any person's age is less than 18 years old (i.e. the current date minus the DOB is less than 18 years) for any of the individuals listed (on a Motorized Traffic Unit/Occupant page, a Traffic Unit/Non-Motorist page, or an Additional Occupants page), then this box can be checked automatically.

Secondary Crash Check Box

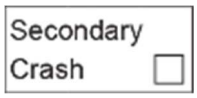
Changes:

- New

Rationale:

- To identify locations where secondary crashes (crashes that follow onto previous crashes or other repetitious incidents) occur frequently. When such locations are identified, corrective actions can be taken to help reduce those secondary crashes.

Manual Extract:



Mark this box (enter an "**X**" or ✓) if the crash is considered a secondary crash.

Definition

A secondary collision is defined as a crash occurring within an incident scene area or within a traffic queue, including the opposite direction, resulting from an original incident.

The original incident does not have to be a collision; it could be a disabled motorist, vehicles on the side of the road, or any other unusual circumstance related to traffic backup or change in traffic flow as long as it played a role in distracting the driver or the causation in the collision. If the queue is normal, everyday occurrence without an original unplanned incident then a crash is not secondary.

Examples

The following crashes would be considered secondary crashes:

- A crash has occurred in the southbound lanes of I-25, and the traffic in the northbound lanes have slowed down as drivers look over at the activity. A fast-moving vehicle doesn't see the slow down and rear-ends a slower-moving vehicle at the tail end of the queue.
- Heavy snow is falling on a stretch of a two-lane highway causing vehicles to slow down. Upon reaching the beginning of a passing lane, one driver tries to pass the slower-moving vehicles, loses traction, and crosses into oncoming traffic.
- When slow-moving trucks are pulling out of a chaining station during a snowfall, and the differences in vehicle speeds contributes to a crash occurring.

School Zone Check Box

Changes:

- New

Rationale:

- Support school transportation-related studies

Manual Extract:

Mark this box (enter an "**X**" or ✓) if the crash occurred in a school zone.

"School Zones" are zones near or at a school which exist during months and hours when zone signing is in effect. Flashing school zone speed limits or school zone sign may be present on the road that designates the edges of the school zones.

The Crash Location

Form Extract:

Latitude	Longitude	County	City
__ __ . __ __ __ __ __ °N	- __ __ __ . __ __ __ __ __ °W		
On Road/Street.		Intersection Offset Distance Unit ☐	01. Miles 02. Feet 03. At the Intersection
Reference Intersecting Road/Street.		Intersection Offset Distance	Offset Direction N☐ S☐ E☐ W☐
HWY NUMBER	MILEPOINT	Milepoint Offset Distance Unit ☐	01. Miles 02. Feet 03. At the Intersection
☐ INTERSTATE HWY ☐ STATE HWY ☐ CITY ST/CNTY RD ☐ OTHER RDWY		Milepoint Offset Distance	Offset Direction N☐ S☐ E☐ W☐

Changes:

- Intersection Offset (unit, distance, direction) and Milepoint Offset (unit, distance, direction) are separated to make it clearer to the officer which fields go together make up a set.
- Latitude and Longitude are clarified: expect decimal degrees, expect 5 significant digits (after the decimal point), and the N and W are added, and the minus sign for negative Longitude is added
- Added OTHER RDWY

Rationale:

- Location is a very important piece of crash data, and there have been many issues with crash location in the past.

Manual Extract:

The Crash Location is defined as ***the location of the crash is where the First harmful event of the crash occurred***.

Noting the precise location of a crash is very important, as information is used to identify locations that warrant improvements (to the roadway, the intersection, etc.). Each year, millions of dollars are spent to improve roadway safety, and it is imperative that those improvements are made at the locations where they would have the most benefit in terms of crash reduction.

The goal is to geo-locate the crash. This means having a computer-understood location that allows computer processing to be performed on the crash data (e.g. to find hot spots).

Guidance

- There are three different methods that are available to you to specify the crash's location:

- ➢ GPS Coordinates (Lat/Long)
- ➢ Route and Milepoint, and appropriate offset
- ➢ Intersection, and appropriate offset

- In general, two different location methods are preferred in order to be certain that the crash is correctly geo-located.
- NOTE: Latitude/Longitude (Lat/Long) coordinates are the most highly desirable, as a GPS location is the most direct approach to geo-locating the crash. However, it is important to take care when entering the coordinates, as missing or swapped digits could locate the crash in the Pacific Ocean.
- If Lat/Long coordinates are not given then it is imperative that either an intersection/offset location is entered or a route/milepoint/offset location is entered. Otherwise, the crash cannot be properly geolocated for useful analysis.

Latitude/Longitude

Changes:

- Increased emphasis
- Showing the data format (decimal degrees) and the number of digits

Rationale:

- Lat/Long coordinates are a very useful way to specifically identify where the crash occurred.

Manual Extract:

Latitude	Longitude
__ __ . __ __ __ __ __ °N	- __ __ __ . __ __ __ __ __ °W

The Latitude and Longitude are to be entered in a format called **decimal degrees**, meaning that the degrees are entered with 5 decimal points. The standard used is the WGS 84 Coordinate System (R2S5-86). **DO NOT USE Degrees Minutes Seconds**.

Examples

- The latitude and longitude of the intersection of US 287 (College Ave) and Horsetooth in Fort Collins is 40.53806 and -105.07683
- The latitude and longitude of the intersection of W Colfax Ave and Pierce St in Lakewood is 39.74031 and -105.07201

The GPS device used to identify the coordinates should be configured to use the WGS 84 Coordinate System (R2S5-86).

On Road/Street (Name)

Changes:

- Emphasis on structured name entry

Rationale:

- Make it easier for analysts to geo-locate the crashes, which is critical to safety analyses

Manual Extract:

On Road/Street:

This field is the roadway name where the crash happened.

Guidance

- For a crash on a roadway segment, this is the name of the roadway.
- For a crash in an intersection, this is the name of the roadway on which Traffic Unit 1 was traveling before entering the intersection.
- If the roadway is a state highway, enter the highway number (e.g. CO 67)
- Otherwise enter the roadway name (e.g. GOLDEN GATE CANYON RD)
- The standard roadway name suffixes are shown below:

Table 1: Road Type Abbreviations

Suffix Type	Suffix Description
ALY	Alley
ALT	Alternate
AVE	Avenue
BLVD	Boulevard
….	

Electronic Entry

To help facilitate convergence on the spelling of roadway name suffixes, the above table can be used as a lookup table for the suffixes when building the roadway name. (Also preferred is the use of the eight cardinal direction abbreviations – N, NW, W, SW, S, SE, E, NE – for prefix or suffix directions.)

(Reference: US Postal Service Street Suffix Abbreviations, https://pe.usps.com/text/pub28/28apc_002.htm)

Intersection Offset Unit/Distance/Direction

Changes:

- Restructured the set of fields to a complete self-sufficient block

Rationale:

- Make it clearer to the officer what fields should be filled

Manual Extract:

Intersection Offset Distance Unit	☐	01. Miles 02. Feet 03. At the Intersection
Intersection Offset Distance	Offset Direction	N ☐ S ☐ E ☐ W ☐

For a crash that does not occur at an intersection, the Intersection Offset indicates the distance and direction from the nearest/reference intersection, which helps geo-locate the crash.

Guidance

NOTE: Certain ways of describing a location, such as "mid-block" addresses or utility pole numbers might be meaningful to some humans, they cannot be used to geo-locate a crash; they do not provide useful location information for safety analysis purposes and are thus considered unacceptable.

Invalid/unacceptable location information:

- 1st Street at light pole 187827
- 1st Street 200’ west of the patch of weeds
- 1st Street at Joe’s Feed and Grain
- 8301 N I-25 (there are no address on interstates)
- 1500 Block of East 10th Avenue

Good/useful location information includes

- 1st Street at Main Street
- 1st Street 200’ south of Main Street
- 1st Street 0.10 miles south of Main Street
- I-25 at mile marker 100

- I-25 1000’ north of Main Street

In a rural area, especially if the milepoint is not known (e.g. on county roads), “near an intersection” would mean within 2-5 miles, since that can help more precisely locate a crash than simply that it occurred somewhere on a 10-mile long road.

Intersection Offset

The three components of the Intersection Offset are:

- **Intersection Offset Unit**
  - ➢ This is the unit of distance, either F for Feet or M for Miles
  - ➢ If the distance is less than .5 miles or 2500 feet, feet would be preferred. For longer distances, miles would be preferred.
- **Intersection Offset Distance**
  - ➢ This is the numerical distance. Do not use fractions, but use decimals instead.
  - ➢ If the Offset Unit is F, then this would be the distance in feet. Please enter a whole number (no decimal points) for feet.
  - ➢ If the Offset Unit is M, then this would be the distance in miles. Precision to 2 decimal points is preferred.

    Example: 1¼ should be entered as 1.25
- **Intersection Offset Direction**
  - ➢ There are four check boxes to indicate the direction. Check the one or two boxes that indicate the direction.
  - ➢ To indicate that the crash occurred northwest of the intersection, check both the N and the W boxes.

Guidance

- If the crash occurred in an urban area, then an intersection offset location is highly desired (and must be entered if a Lat/Long location is not entered).
- The distance from the intersection should be measured from the **edge** of the intersection (as shown in the illustration below). Remember that anything located within the limits of the intersection, as illustrated in the glossary (Page 175) is considered **in** the intersection.
- If the crash occurred in the intersection, then 03 should be entered in the **Intersection Offset Distance Unit** field.
- The **Distance Direction** is determined in compass heading, not the direction of travel on the roadway.

- Location direction should not be confused with direction of travel. For crashes located south of an intersection with northbound N Broadway, the box should be checked for S.

- Locations that are not within the area within the prolongation of the lateral curb lines (or the lateral boundary lines) should not be coded “at the intersection”

- An alley/road location is not considered “at an intersection”.

Electronic Entry

The selection between feet and miles, along with the appropriate conversion and rounding should be handled automatically.

Business Rules

- The user must not check both S and N, or both E and W. Only one N/S direction or one E/W direction is allowed.

Examples

In the illustration below, the crash location data for the location marked with **1** would entered as follows:

- On Road/Street: S Colorado Blvd

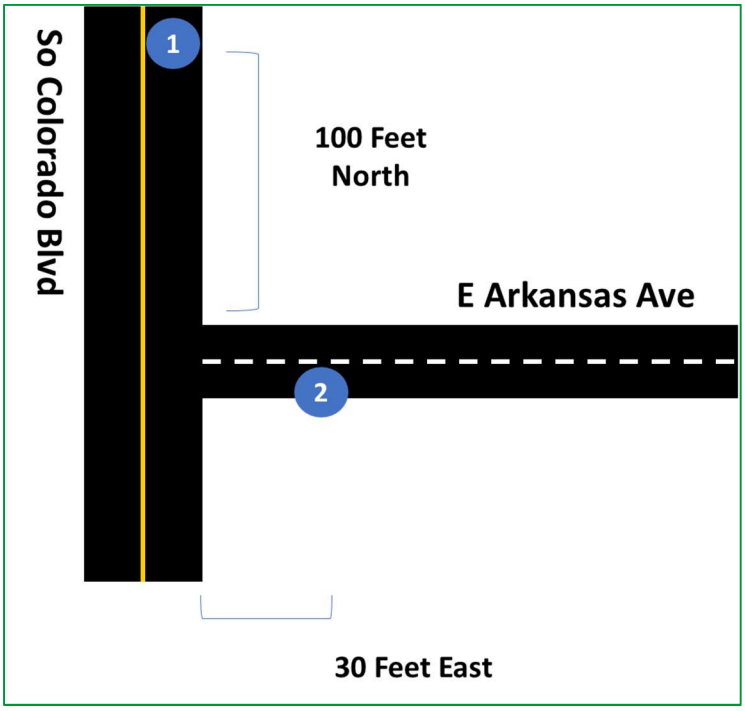
- Reference/Intersecting Roadway Name: E Arkansas Ave

- Intersection Offset Unit; F

- Intersection Offset Distance: 100

- Intersection Offset Direction: Only the N check box checked.

Figure 1: Illustration of an Example Intersection Offset



In the illustration above, the crash location data for a crash at the location marked with a **2** would entered as follows:

- On Road/Street: E Arkansas Ave
- Reference/Intersecting Roadway Name: S Colorado Blvd
- Intersection Offset Unit; F
- Intersection Offset Distance: 30
- Intersection Offset Direction: Only the E check box checked.

Guidance

If the crash occurred within the intersection, ***or*** if no Reference/Intersecting Roadway Name was given, then the three intersection offset fields (unit, direction, distance) should be left blank.

Milepoint Offset Unit/Distance/Direction

Changes:

- Restructured the set of fields to a complete self-sufficient block

Rationale:

- Make it clearer to the officer which fields should be filled

Manual Extract:

Milepoint Offset Distance Unit ☐☐	01. Miles 02. Feet 03. At the Intersection
Milepoint Offset Distance	Offset Direction N☐ S☐ E☐ W☐

Enter the milepoint offset distance. If the offset distance is in miles, then use up to two decimal places (100th of a mile) if available. An example milepoint offset distance in miles is 1.25.

If the offset distance is in feet, then enter the distance in feet rounded to the nearest 10. An example milepoint offset distance in feet is 150.

Guidance

If the crash occurred in a rural area, then milepoint offset location is highly desired (and must be entered if a Lat/Long location is not entered).

- If the crash occurred at the entered milepoint, then no offset distance or direction need be entered.
- If the crash occurred some distance from the highway milepoint entered, then the offset distance and direction can be entered here.
- **Milepoint Offset Unit**
  - ➢ This is the unit of distance, either F for Feet or M for Miles
  - ➢ If the distance is less than .5 miles or 2500 feet, feet would be preferred. For longer distances, miles would be preferred.
- **Milepoint Offset Distance**
  - ➢ This is the numerical distance. Do not use fractions; use decimals instead.
  - ➢ If the Offset Unit is F, then this would be the distance in feet. Please enter a whole number (no decimal points) for feet.
  - ➢ If the Offset Unit is M, then this would be the distance in miles. You should enter 2 decimal points.

    Example: ¾ would be entered as 0.75.
- **Milepoint Offset Direction – this is the direction**
  - ➢ There are four check boxes to indicate the direction. Check the one or two boxes that indicate the direction.

➢ To indicate that the crash occurred northwest of the milepoint, check both the N and the W boxes.

- If the crash occurred at the milepoint that was entered, or if no milepoint was entered, then the above three milepoint offset (unit, direction, distance) fields should be left blank.

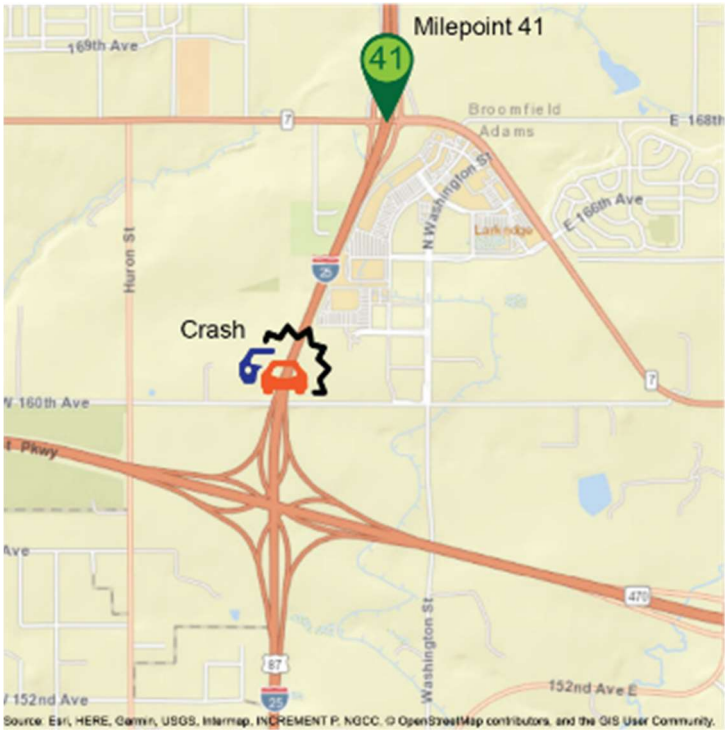
- NOTE: The offset direction is where the crash occurred relative to the milepoint entered. As shown in the example below, the crash occurred to the southwest of the milepoint 41, and thus the direction is SW (both S and W checked). **The milepoint offset direction is independent of the direction of travel on I-25 (north or south).**

Example

In the example below, the crash occurred at the location marked “Crash”. This location is about 1.1 miles southwest of the milepoint 41 (at exit 41) on I-25. For this location, the Milepoint/Offset location would be entered as:

- Milepoint = 41.0
- Milepoint Offset Distance Unit = 01. Miles
- Milepoint Offset Distance = 1.1
- Milepoint Offset Direction – Both S and W would be checked.

Figure 2: Direction/Offset from a Milepoint



Business Rules

- If the crash occurred on a state or interstate highway (either the INTERSTATE HWY or the STATE HWY check boxes were selected) and outside of city limits (nothing entered in the City field), then a milepoint should be entered.

- The user must not check both S and N, or both E and W.

Electronic Reporting

- If “At the Milepoint” is selected, then the Milepoint Offset Distance and Milepoint Offset Direction checkboxes should be disabled.

Examples

Remember: An accurate crash location is of utmost importance. Please take the time to fill the location fields out.

If a crash occurs on a state highway **within** city limits, the report taker should enter data in the location fields as follows:

- General location fields completed
  - ➢ **Error! Reference source not found.Error! Reference source not found.**
  - ➢ **Error! Reference source not found.Error! Reference source not found.**
- Preferred specific location field completed
  - ➢ 0 Latitude/Longitude
- The “on” roadway fields completed
  - ➢ 0 On Road/Street (Name) could be entered
  - ➢ **Error! Reference source not found. Error! Reference source not found.**
  - ➢ **Error! Reference source not found. Error! Reference source not found.**
- For crashes at or near an intersection, complete the following (otherwise leave them blank)
  - ➢ **Error! Reference source not found. Error! Reference source not found.**
  - ➢ 0 Intersection Offset Unit/Distance/Direction
- Leave blank:
  - ➢ **Error! Reference source not found. Error! Reference source not found.**
  - ➢ **Error! Reference source not found. Error! Reference source not found.**

- ➢ 0 OTHER (Public) RDWY Check Box
- ➢ **Error! Reference source not found. Error! Reference source not found.**
- ➢ 0 Milepoint Offset Unit/Distance/Direction

Example 2: A crash occurs on a state highway **outside of** city limits, the report taker should enter data in the location fields as follows:

- General location fields completed
  - ➢ **Error! Reference source not found. Error! Reference source not found.**
  - ➢ (**Error! Reference source not found. Error! Reference source not found.** would be left blank)
- Preferred specific location field completed
  - ➢ 0 Latitude/Longitude
- The "on" roadway fields completed
  - ➢ 0 On Road/Street (Name) could be entered
  - ➢ **Error! Reference source not found. Error! Reference source not found.**
  - ➢ **Error! Reference source not found. Error! Reference source not found.**
- Complete the following regarding the milepost:
  - ➢ **Error! Reference source not found. Error! Reference source not found.**
  - ➢ 0 Milepoint Offset Unit/Distance/Direction
- If the crash occurred at or near an intersection, fill out the following (otherwise, leave them blank)
  - ➢ **Error! Reference source not found. Error! Reference source not found.**
  - ➢ 0 Intersection Offset Unit/Distance/Direction
- Leave blank:
  - ➢ **Error! Reference source not found.Error! Reference source not found.**
  - ➢ **Error! Reference source not found.Error! Reference source not found.**
  - ➢ 0OTHER (Public) RDWY Check Box

Note: Remember: The offset direction should not be confused with direction of travel, nor with the prefix direction of the roadway name. For example, if a crash occurred on a southbound lane of S Broadway, 500 feet north of W Iliff as in the map snippet below. The Direction of Travel is S (traveling on the southbound lane), but the Intersection Offset Direction is N (north of the intersection with Iliff).

OTHER (Public) RDWY Check Box

Changes:

- New

Rationale:

- Added a missing checkbox to avoid confusion (for roadways that are not interstates, state highways, city streets/county roads).

Manual Extract:

☐ OTHER RDWY

Mark this box (enter an "**X**" or ✓) if the road on which the crash occurred on a roadway that is NOT an interstate highway. State highway, or city/county road.

Guidance

- This checkbox is for public roadways such as park service, forest service, or BLM roads.
- This check box should NOT be marked if the roadway on which the crash occurred is not public roadway. For example, roads in parking lot or private subdivision are not considered public roadways.

Location

Changes:

- Added selection 07. Center Median/Island

- Added example illustrations

Rationale:

- Addresses common situation that was not previously covered

Manual Extract:

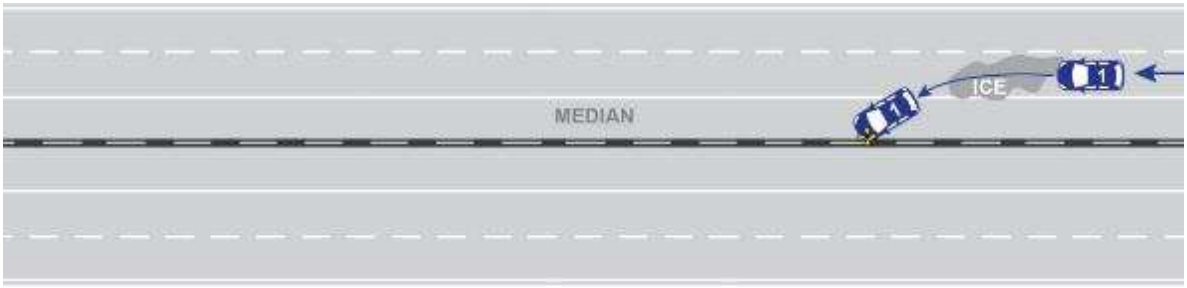
LOCATION	01. On Roadway 02. Ran Off Left Side 03. Ran Off Right Side	04. Ran Off 'T' Intersection 05. Vehicle Crossed Center Median Into Opposing Lanes	06. On Private Property 07. Center Median/Island

Enter the code which best corresponds to the location of the crash with respect to roadways. Although there are several events involved in a crash, traffic crashes are located by the first **harmful** event.

Example: Vehicle #1 ran off the road on the right, overcorrected and ran off on the left where it hit a tree. No damage occurred where it ran off on the right. Enter **02. Ran Off Left Side**.

Guidance

- **Location**
  - ➢ If there are any conflicts or inadequate information, enter **01. On-roadway**.
  - ➢ Code **05. Vehicle Crossed Center Into Opposing Lanes** is only used if a vehicle crosses the median and enters the opposing lanes or roadway. A frontage road is a roadway set apart by a separator not a median and is not included in this definition.



  - ➢ Code **06. On Private Property** is used only used if entirely contained within the boundaries of a private property. If a vehicle runs off a roadway onto private property (where damage occurs), this is a "run off road" crash (code 02 or 03).
  - ➢ Use the Glossary to assist you with classification when needed.
  - ➢ Refer to the illustrations on the following pages to identify locations and harmful events.

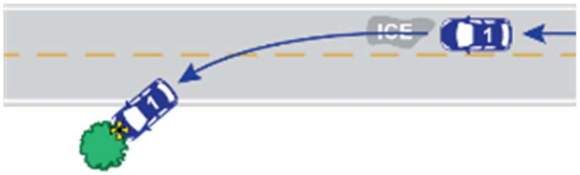
Examples

The following illustrations and explanations provide examples when each of the codes would be selected for the Location.

01. On Roadway

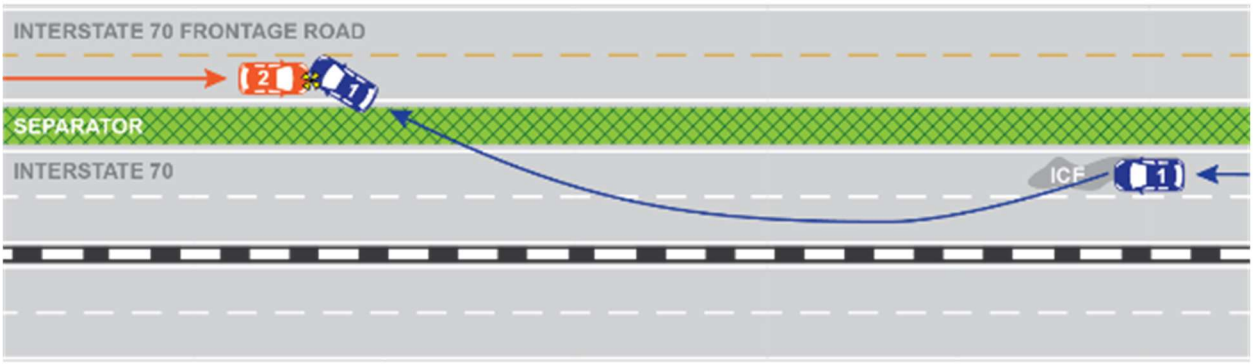
Example: Vehicle #1 and Vehicle #2 were traveling in the same direction in the right-hand lane. Vehicle #1 struck Vehicle #2 from behind, resulting in Vehicle #2 being run off of the road where it hit a tree.

02. Ran Off Left Side

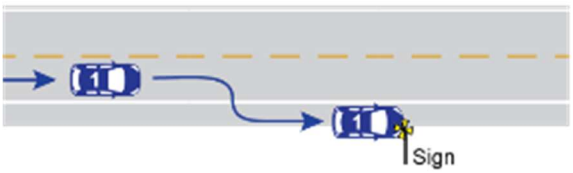


Example: Vehicle #1 was traveling in the right-hand lane and hit a patch of ice, causing it to run off on the left. It crossed over the left-hand lane and crashed into a tree.

03. Ran Off Right Side



Example 1: Vehicle #1 hit a patch of ice causing it to veer into the left lane, overcorrected, and ran off on the right-hand side over a separator into the oncoming traffic of the frontage road. Vehicle #1 crashed into Vehicle #2, traveling in the right-hand lane of the frontage road.

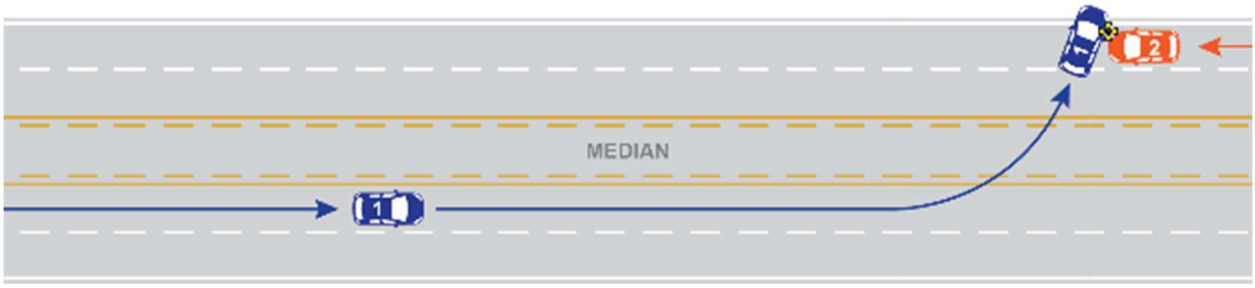


Example 2: Vehicle #1 hit a patch of ice and ran off on the right where it crashed into a sign.

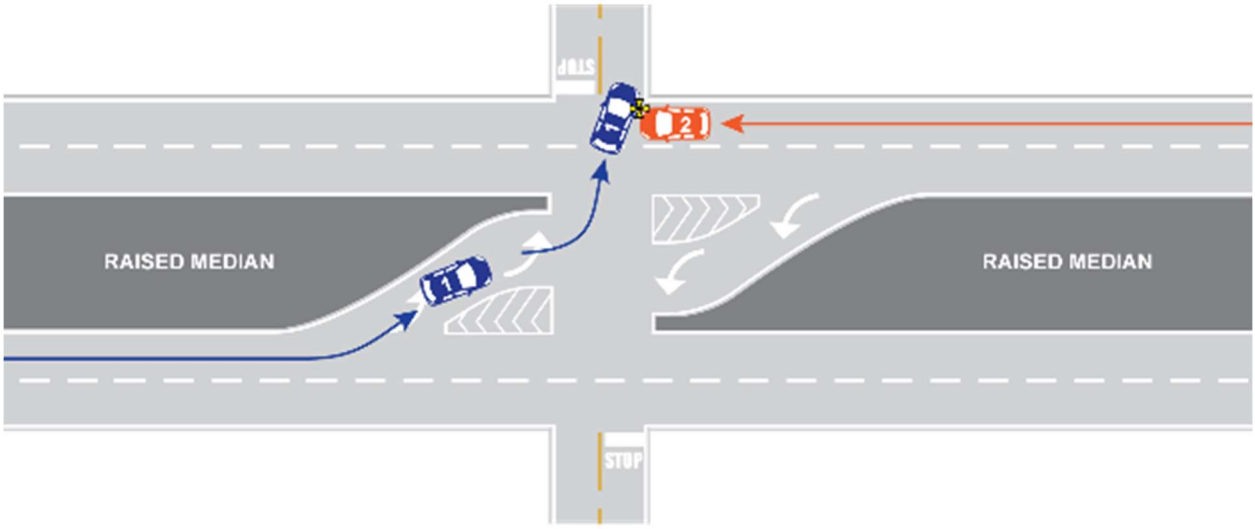
04. Ran Off “T” Intersection

Example: Vehicle #1 continues past a stop sign, through a “T” intersection, colliding with a barrier.

05. Vehicle Crossed Center Median into Opposing Lanes



Example 1: Vehicle #1 was traveling in the left-hand lane and ran off the left side, over the center median into opposing lanes. Vehicle #1 crashed into Vehicle #2, which was traveling in the right-hand lane of opposing traffic.

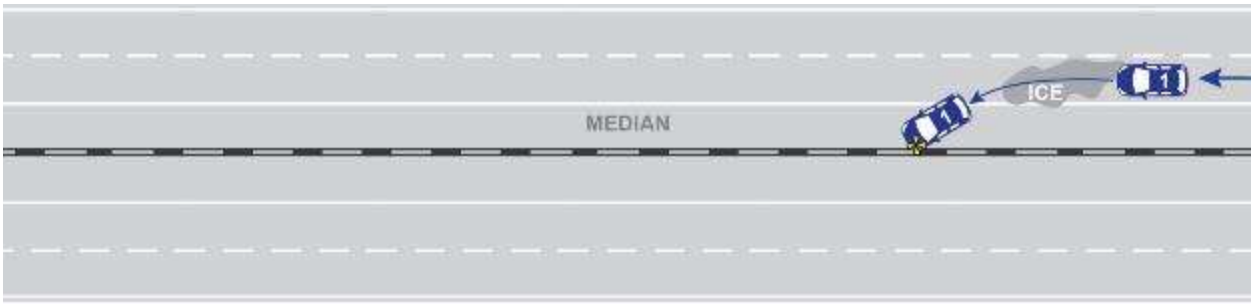


Example 2: Vehicle #1 was traveling eastbound in the left-hand lane and turned left through an intersection with a raised median on its left and a painted median on its right. Vehicle #2 was westbound traveling in the right-hand lane of opposing traffic, could not avoid Vehicle #1, and crashed into the right side of Vehicle #1.

06. Private Property

If the conditions are met for marking the **PRIVATE PROPERTY** checkbox (see the guidance on page 26), then this code should be selected for the Location.

07. Center Median / Island



Example: Vehicle #1 was traveling on the westbound lane, hit a patch of ice, and slid into the median between the westbound and eastbound lanes where it ran into the cable median barrier and came to a stop.

Number of Lanes Blocked

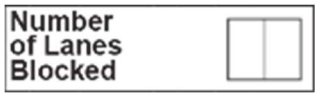
Changes:

- New

Rationale:

- To identify locations where incident management could be improved to reduce the impact on traffic flow due to a crash and/or to reduce likelihood of secondary crashes.

Manual Extract:



Enter the maximum number of traffic lanes that were blocked by the crash. Include **any** lanes on which traffic could otherwise have flowed. Include turn lanes, through lanes, acceleration or deceleration lanes, etc. Do not include shoulders, or lanes that were closed due to construction, or lanes that were otherwise not available for traffic to flow for other reasons than the crash.

Lane Position

Changes:

- New

Rationale:

- To support analyses to identify on where the crash occurred on multi-lane roadways for better identification of corrective treatments.

Manual Extract:

Enter the designation for the lane in which actions that most contributed to the crash occurred, and that needs attention for possible safety improvements. In general, that would be equivalent to the lane in which the first harmful event occurred, but that might not always be the case.

The Lane Position field uses three characters that make up the following two designations:

- The first character is the **direction** designation; used to indicate which side of the roadway. This is not necessarily the direction of travel of the vehicle (if the vehicle is traveling the wrong way, for example), but is the normal direction of travel for the lane in question.
  - ➢ The valid values for the direction designation are: N, S, E, and W
- The next two characters are the **lane** designation; used to indicate which lane on that side of the roadway. The lane designation can be:
  - ➢ A 2-digit number (with zero padding) such as 01, etc., or
  - ➢ LS to designate the left shoulder, or
  - ➢ RS to designate the right shoulder.

Guidance

This field leverages the National Transportation Incident Management Coalition/Lane Designation Terminology, with the following conventions:

- For divided roadways, the lane positions are numbered as shown below **in Figure 3: Divided Roadways Lane Positions (for an E/W oriented highway)** below.
- For undivided roadways, the lane positions are numbered from left to right for each direction of travel as shown below in **Figure 4: Undivided Roadways Lane Positions** below.
- The numbered designation applies to ALL travel lanes in the same roadway direction of travel that are not separated by a permanent physical barrier (concrete jersey, raised or grass median, etc.) that essentially creates another separate roadway. Such lanes include
  - ➢ Through lanes (driving, passing, etc.)
  - ➢ HOV, toll, or other managed lanes

- ➢ Right turn or left turn lanes
- ➢ Slow vehicle lanes
- ➢ Other lanes such as acceleration lanes, deceleration lanes, or passing lanes

- The lane count does NOT include bike lanes or other lanes not meant for motorized vehicles.
- The lane numbering starts at 01 for left-most lane, and each additional lane gets incremented.

Validation Rules

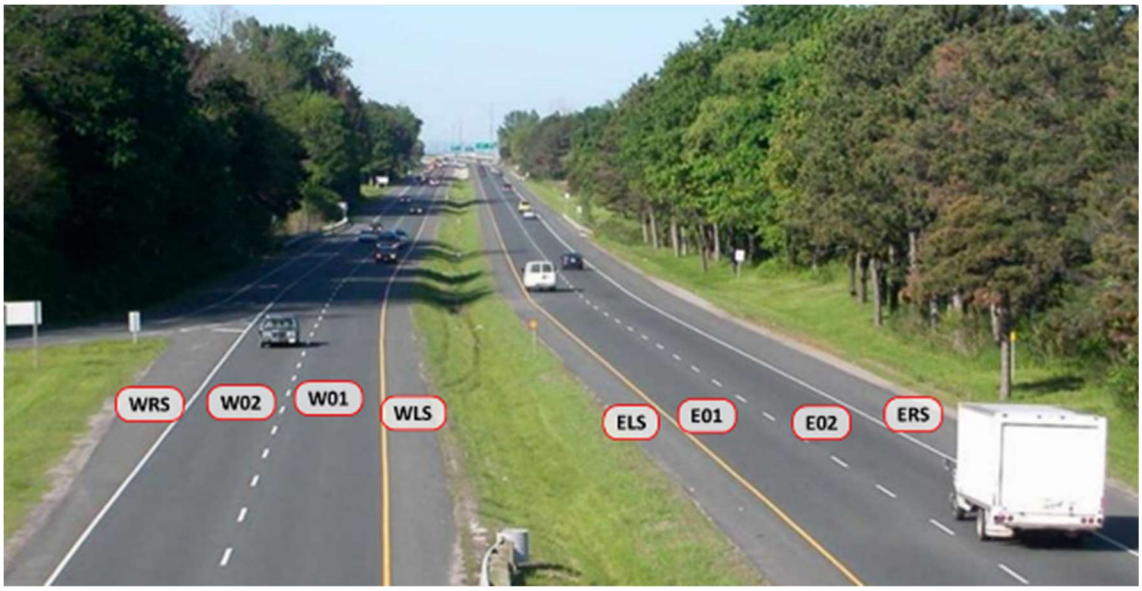
Note: The following conventions apply:

- The Lane Designation is **always** three characters.
- The first character **must** be one of: N, S, E, and W
- The next two characters **must** be either:
  - ➢ A 2-digit number (with zero padding) such as 01, etc., or
  - ➢ LS or RS.

Examples

The following examples make use of the diagrams below.

Figure 3: Divided Roadways Lane Positions (for an E/W oriented highway)



Example 1: V1 starts in the driving lane on the east-bound side of the road, and then changes lanes and sideswipes V2 in the passing lane on the same side of the roadway. The LOCATION / LANE POSITION fields would be entered as follows:

- LOCATION = 01 (On roadway), and
- LANE POSITION = E01, since V1 moved into lane 1 of the east-bound side of the roadway.

Example 2: Where V1 starts in the passing lane on the east-bound side of the road, then crosses over the center median, and hits V2 in the inside lane in the opposite direction. The LOCATION / LANE POSITION fields would be entered as follows:

- LOCATION = 05 (Vehicle Crossed Center Median into Opposing Lanes), and
- LANE POSITION = W01 (the inside lane of the opposite, west-bound side of the roadway)

Example 3: On a divided highway: V1 is traveling in the west-bound lanes and hits the guardrail in the median. The LOCATION / LANE POSITION fields would be entered as follows:

- LOCATION = 02. Ran Off Left Side
- LANE POSTION = WLS

Example 4: V2 is stopped in the outside shoulder on the west-bound side of the highway, and V1 drifts over from W02 and hits V2. The LOCATION / LANE POSITION fields would be entered as follows:

- LOCATION = 03. Ran Off Right Side
- LANE POSTION = WRS

Figure 4: Undivided Roadways Lane Positions

(There really isn't a shoulder on the left / oncoming side of the road, since it's a curb)

Example 5 (Similar to Example 1 above, but for an undivided road): V1 starts in the driving lane in the north-bound lanes, and then changes lanes and hits V2 that was in the passing lane. The LOCATION / LANE POSITION fields would be entered as follows:

- LOCATION = 01. On Roadway, and
- LANE POSITION = N01 (since V1 moved into that lane)

Example 6 (Similar to Example 2 above, but for an undivided road): V1 crosses over the center line, and hits V2 in the inside lane in the opposite direction. The LOCATION / LANE POSITION fields would be entered as follows:

- LOCATION = 05. Vehicle Crossed Center Median into Opposing Lanes, and
- LANE POSITION = S01 (i.e. the inside lane in the opposite direction)

Example 7: V1 hits the guardrail on the right. The LOCATION / LANE POSITION fields would be entered as follows:

- LOCATION = 03. Ran Off Right Side, and
- LANE POSITION = NRS

Example 8: V1 is on the northbound lanes, crosses all the way to run off the road to the left. The LOCATION / LANE POSITION fields would be entered as follows:

- LOCATION = 02. Ran Off Left Side, and
- LANE POSITION = S02

Example 9: A two-way left turn lane

- A two-way left turn lane (and any lane shared by both directions of travel) will be numbered 01 IN BOTH DIRECTIONS. In other words, it could be considered N01 or S01, depending on how the crash occurred. For example,
  - ➢ If Vehicle 1 starts in lane S02 and then moves into the two-way left turn lane where Vehicle 2 (which was traveling north) was waiting to turn left, the shared two-way left turn lane would best be identified as N01.
  - ➢ If Vehicle 2 was traveling south in the two-way left turn lane, and Vehicle 1 (also traveling south) rear-ends Vehicle 2, then the two-way left turn lane would best be identified as S01.

Harmful Event Sequence

Changes:

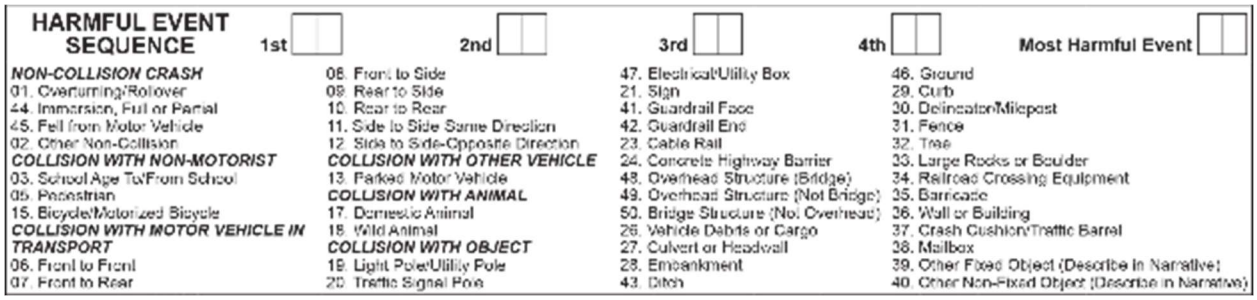
- Added several new selections
- Split out structures

- Deleted several selections
- Allow up to four events to be captured

Rationale:

- To make it clearer to the officer which code to select in various circumstances

Manual Extract:



HARMFUL EVENT SEQUENCE	1st	2nd	3rd	4th	Most Harmful Event
NON-COLLISION CRASH	08. Front to Side	47. Electrical/Utility Box	46. Ground		
01. Overturning/Rollover	09. Rear to Side	21. Sign	29. Curb		
44. Immersion, Full or Partial	10. Rear to Rear	41. Guardrail Face	30. Delineator/Milepost		
45. Fell from Motor Vehicle	11. Side to Side Same Direction	42. Guardrail End	31. Fence		
02. Other Non-Collision	12. Side to Side-Opposite Direction	23. Cable Rail	32. Tree		
COLLISION WITH NON-MOTORIST	***COLLISION WITH OTHER VEHICLE***	24. Concrete Highway Barrier	33. Large Rocks or Boulder		
03. School Age To/From School	13. Parked Motor Vehicle	48. Overhead Structure (Bridge)	34. Railroad Crossing Equipment		
05. Pedestrian	***COLLISION WITH ANIMAL***	49. Overhead Structure (Not Bridge)	35. Barricade		
15. Bicycle/Motorized Bicycle	17. Domestic Animal	50. Bridge Structure (No Overhead)	36. Wall or Building		
COLLISION WITH MOTOR VEHICLE IN TRANSPORT	18. Wild Animal	26. Vehicle Debris or Cargo	37. Crash Cushion/Traffic Barrel		
	COLLISION WITH OBJECT	27. Culvert or Headwall	38. Mailbox		
06. Front to Front	19. Light Pole/Utility Pole	28. Embankment	39. Other Fixed Object (Describe in Narrative)		
07. Front to Rear	20. Traffic Signal Pole	43. Ditch	40. Other Non-Fixed Object (Describe in Narrative)		

Enter the codes which best describes the sequence in which the harmful events occurred. A harmful event is that point in the sequence of events when injury or damage occurs.

Guidance

Up to four harmful events can be entered in the sequence. If there are less than four harmful events in the sequence, you should leave the remaining sequence fields blank

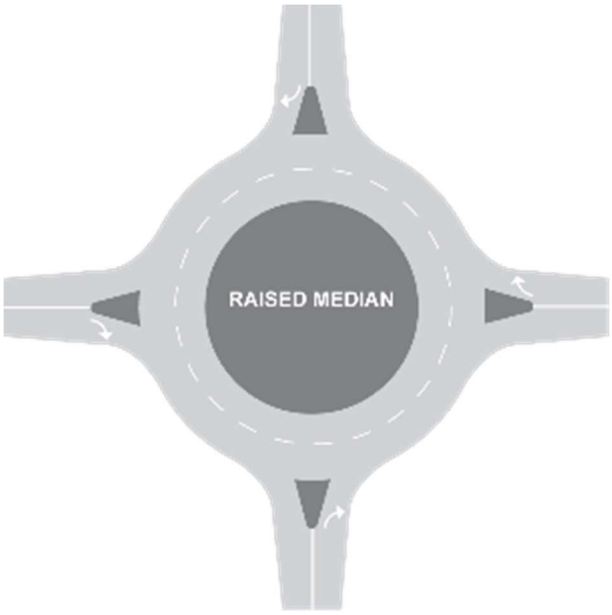
Example: Vehicle #1 is northbound on I-25 when it changes lanes and sideswipes Vehicle #2. Vehicle #2 runs off the roadway into the median and rolls over, coming to rest on its top. This crash would be coded for the Harmful Event Sequence as follows:

- First: 11. Side to side – same direction;
- Second: 01. Overturning/Rollover
- Third: blank
- Fourth: blank

Terminology: The following explanations cover some of the new terms used:

- Center Median: This covers a median (whether painted, planted, raised) between the opposing lanes of travel. This also covers the center island of a roundabout.

Figure 5: Center Median for a Roundabout



- Vehicle Debris or Cargo: This applies when the crash involved striking falling or shifting cargo or anything set in motion by a motor vehicle.

Harmful Events

Notes:

- Several of the codes from DR2447 are no longer used;
  - ➢ 04. Pedestrian on Toy Vehicle, since pedestrian details are now handled on the Non-Motorist page,
  - ➢ 14. Railway Vehicle/Light Rail and 16. Road Maintenance Equipment. since these vehicles are covered in the Unit Types and thus are captured with all Unit data elements, and
  - ➢ 22. Guardrail, since this has been split into face or end – see below.
  - ➢ 25. Bridge Structure, since this has been expanded to indicate different structures – see below.
- There are several new codes in this field;
  - ➢ The codes 41. Guardrail Face and 42. Guardrail End have replaced the now obsolete 22. Guardrail. Select 41. Guardrail Face if a vehicle hit the long, flat part of the guardrail, and 42. Guardrail End if a vehicle hit either of the two ends of the guardrail.
  - ➢ 43. Ditch was added for when the vehicle (or non-motorist) simply slid or fell into the borrow ditch.
  - ➢ 44. Immersion, Full or Partial was added if the vehicle (or non-motorist) fell into water (either a stream or river, or a lake).

- ➢ 45. Fell From Motor Vehicle was added if a person was injured due to falling from a motor vehicle in transport.
- ➢ 46. Ground was added if the vehicle (or non-motorist) hit the ground. This could happen if a motorcyclist or bicyclist for example slid out and fell, or if a vehicle went over an embankment or cliff and hit the ground.
- ➢ 47. Electrical/Utility Box was added to cover boxes for phone, cable, signal control, etc.
- ➢ 48. Overhead Structure (Bridge) is for the deck or pillars for a bridge crossing over the travelway.
- ➢ 49. Overhead Structure (Not Bridge) is for a non-bridge structure (such as overhead signs, etc.) crossing over the travelway.
- ➢ 50. Bridge Structure (Not Overhead) is for a structure (deck, barrier, etc.) associated with the bridge carrying the travelway.

- Code 34. Railroad Crossing Equipment applies when the harmful event occurred in the area formed by the at-grade connection of a railroad bed and a roadway, and the crash involved equipment associated with the crossing (primarily, the gates).

- Examples for codes 06. Front-to-Front through 12. Side to Side-Opposite Direction are illustrated below.

Collision Types

06. Front to Front

Example 1: Vehicle #1 was traveling behind Vehicle #2 in the right-hand lane. Vehicle #1, while trying to pass Vehicle #2 on the left, hit a patch of ice causing it to lose control and swerve head first into Vehicle #2.

Example 2: Vehicle #1 crossed over into the opposing lane and crashed into the front of Vehicle #2.

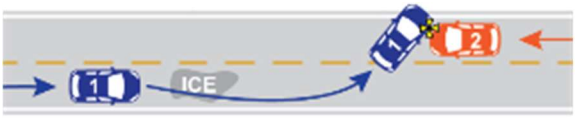
07. Front to Rear

Example 1: Vehicle #1 was traveling behind Vehicle #2 and crashed into Vehicle #2 from behind.

Example 2: Vehicle #1 was traveling behind Vehicle #2 and crashed into Vehicle #2 from behind.

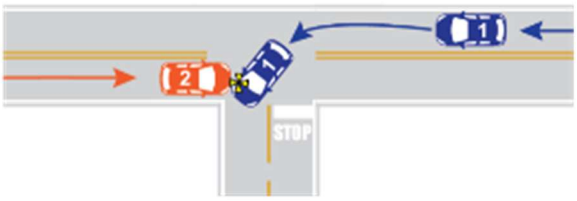
08. Front to Side

Example 1: Vehicle #1 was traveling on the right lane while Vehicle #2 was in the left, both going in the same direction. Vehicle #1 hit a patch of ice and ran over into the left lane, crashing its left side into the front of Vehicle #2.



Example 2: Vehicle #1 hit a patch of ice and ran off the left side into opposing traffic where its right side crashed into the front of Vehicle #2.

Example 3: Vehicle #1 took a left-hand turn at a “T” intersection stop sign, Vehicle #2, traveling in the opposing lane of Vehicle #1’s intended direction, crashed into the left side of Vehicle #1 during the left-hand turn.



Example 4: Vehicle #1 took a left turn onto a new road, crossing over traffic going in the opposite direction. Vehicle #2 was traveling in the opposing lane and crashed into the right side of Vehicle #1.

09. Rear to side

This is a rare event outside of parking lots.

Example: Vehicle #1 was backing up and ran into the side of Vehicle #2.

10. Rear to Rear

This is a rare event outside of parking lots.

Example: Vehicle #1 was backing up and ran into the rear end of Vehicle #2.

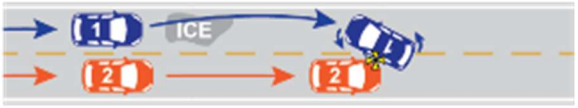
11. Side to Side – Same Direction

Example 1: Vehicle #1 was traveling on the left lane while Vehicle #2 was in the right, both going in the same direction. Vehicle #1 crossed over into the right lane, crashing its right side into the left side of Vehicle #2.

Example 2: Vehicle #1 and Vehicle #2 were traveling in opposite directions. Vehicle #1 hit a patch of ice causing it to lose control and spin forward into the opposing lane where its right side collided with the left side of Vehicle #2.

12. Side to Side – Opposite Direction

Example 1: Vehicle #1 and Vehicle #2 were traveling in opposite directions. Vehicle #1 crossed over into the opposing lane, crashing its left side into the left side of Vehicle #2.



Example 2: Vehicle #1 was traveling on the left lane while Vehicle #2 was in the right, both going in the same direction. Vehicle #1 hit a patch of ice causing it to lose control and spin forward into the right lane where its left side collided with the left side of Vehicle #2.

Road Contour – Curves

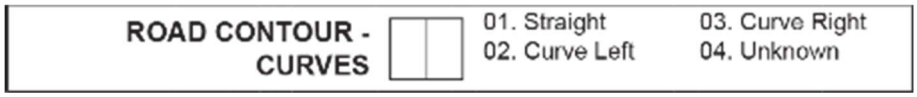
Changes:

- Split into separate to facilitate determination, cover all combinations.

Rationale:

- Make it easier for the officer to select the curve and grade attributes that apply

Manual Extract:



Enter the code which best describes the horizontal curvature characteristic of the roadway.

Guidance

- For Curve Left and Curve Right, pay careful attention to the direction of travel of Traffic Unit # 1.
- If that Vehicle or Non-Motorist was going through a right-hand curve, then Curve Right is the code to enter, even if the other Traffic Units involved were not traveling in the same direction.

Road Contour – Grade

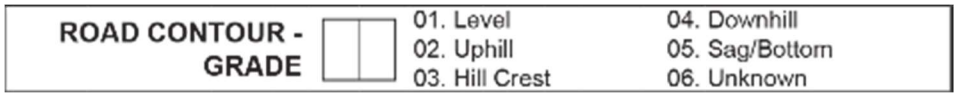
Changes:

- Split into separate to facilitate determination, cover all combinations.

Rationale:

- Make it easier for the officer to select the curve and grade attributes that apply

Manual Extract:



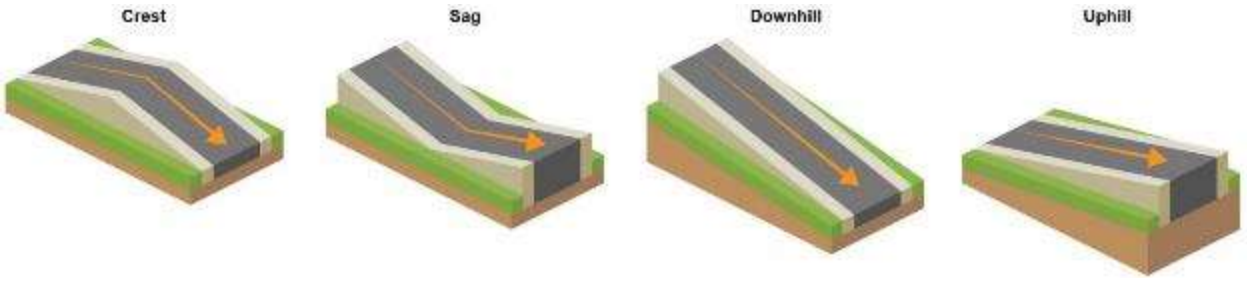
Enter the code which best describes the vertical characteristic of the roadway in the direction of travel of Traffic Unit # 1.

Guidance

- The code 01. Level is equivalent to “flat”.
- For Uphill and Downhill, pay careful attention to the direction of travel of Traffic Unit # 1.
- If Traffic Unit # 1 was traveling uphill, then enter code 02. Uphill, even if the other Traffic Units involved were not traveling uphill.

Note: The grade is not the banking (or superelevation) of a curve – it refers to whether Traffic Unit 1 is traveling uphill, downhill, or is at the crest of a hill or the bottom of a valley.

Figure 6: Examples of Grade



Road Condition

Changes:

- Added selections to cover more conditions

Rationale:

- Make it easier for the officer to identify adverse conditions related to construction or operations. that apply

Manual Extract:

ROAD CONDITION			
		01. Dry	08. Dry W/Visible Icy Road Treatment
		02. Wet	09. Wet W/Visible Icy Road Treatment
		03. Muddy	10. Snowy W/Visible Icy Road Treatment
		04. Snowy	11. Icy W/Visible Icy Road Treatment
		05. Icy	12. Slushy W/Visible Icy Road Treatment
		06. Slushy	13. Sand/Gravel
		07. Foreign Material	14. Roto-Milled

Enter the code which best describes the condition of the roadway at the time and location of the first harmful event.

Guidance

- For “Packed Snow” conditions, the following convention should be used to select the proper code:
  - ➢ If the top layer of the snow has developed a sheen, or tires do not leave a track, then the code 05. Icy should be entered. Otherwise, 04. Snowy should be entered.
- “Visible icy road treatment” refers to sand, salt, gravel and or liquid chemical treatments.

Weather Conditions

Changes:

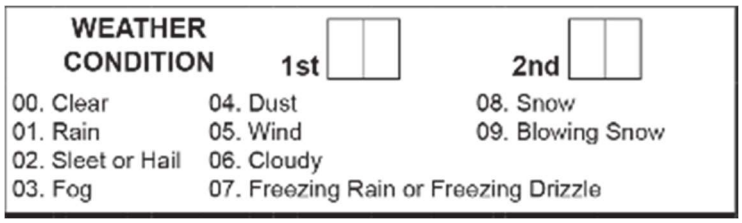
- Change the name of the field

- Modified code 00 and 02
- Added codes 06-09
- Allow up to two selections

Rationale:

- To make it easier for the officer to identify the weather conditions that may have contributed to the crash
- To address federal reporting requirements
- To more easily distinguish between weather factors

Manual Extract:



Enter the code which best describes weather condition at the time and location of the first harmful event.

Note: There are several significant changes from the DR 2447:

- The Field is no longer called Adverse Weather Condition, but just Weather Condition.
- The selection 00. used to be None, but now is Clear.
- 02. Snow/Sleet/Hail has been modified to Sleet or Hail
- New selections 06. Cloudy, 07. Freezing Rain or Freezing Drizzle, 08. Snow, and 09. Blowing Snow have been added.

The above changes are to better align with FARS requirements, that differentiate between Clear or Cloudy if there are no adverse weather conditions.

Guidance

- Up to two weather conditions can be entered.
- If only one weather condition applies, then the second one should be left blank.
- The first weather condition identified should be the one that most contributed to the crash occurring, or to the severity of the crash.

- ➢ 02. Sleet or Hail would apply to conditions where precipitation is falling as ice (sleet or hail)
- ➢ 07. Freezing Rain or Drizzle would apply when precipitation is falling as liquid (rain) and then freezing on the roadway.

Business Rules

- If 00. Clear is entered for the first weather condition, then the second one should be left blank.

To Be Completed Only For Fatalities

Changes:

- Moved from the Supplement into the main form
- For Traffic Control Device Functioning, added 06. Not Visible

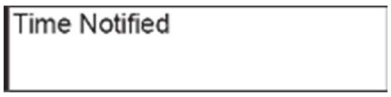
Rationale:

- Reduce redundancy / broken flow caused by Fatality Supplement

Manual Extract:

- Enter the time notified for the first responder/EMS personnel.
- Enter the time the first responder/EMS personnel arrived at the scene.
- Enter the time the most seriously injured party arrived at the hospital.
- If times are unknown, provide the name and contact information of the first responding EMS agency as well as the transporting agency.

(EMS) Time Notified

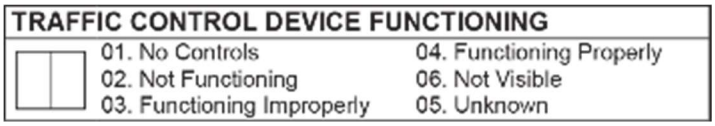


Enter the time at which the first EMS service was notified of the crash. If the time is unknown, then leave blank, and enter the name of the EMS service as described below.

Enter the time using the 24-hour clock system. Do not use a colon.

Etc…

Traffic Control Device Functioning



Enter the code which describes how the traffic control devices was functioning. If more than one device was at the crash scene, it is only necessary to enter the information of the **most significant** traffic control device(s). As an option, the other devices may also be listed in the narrative.

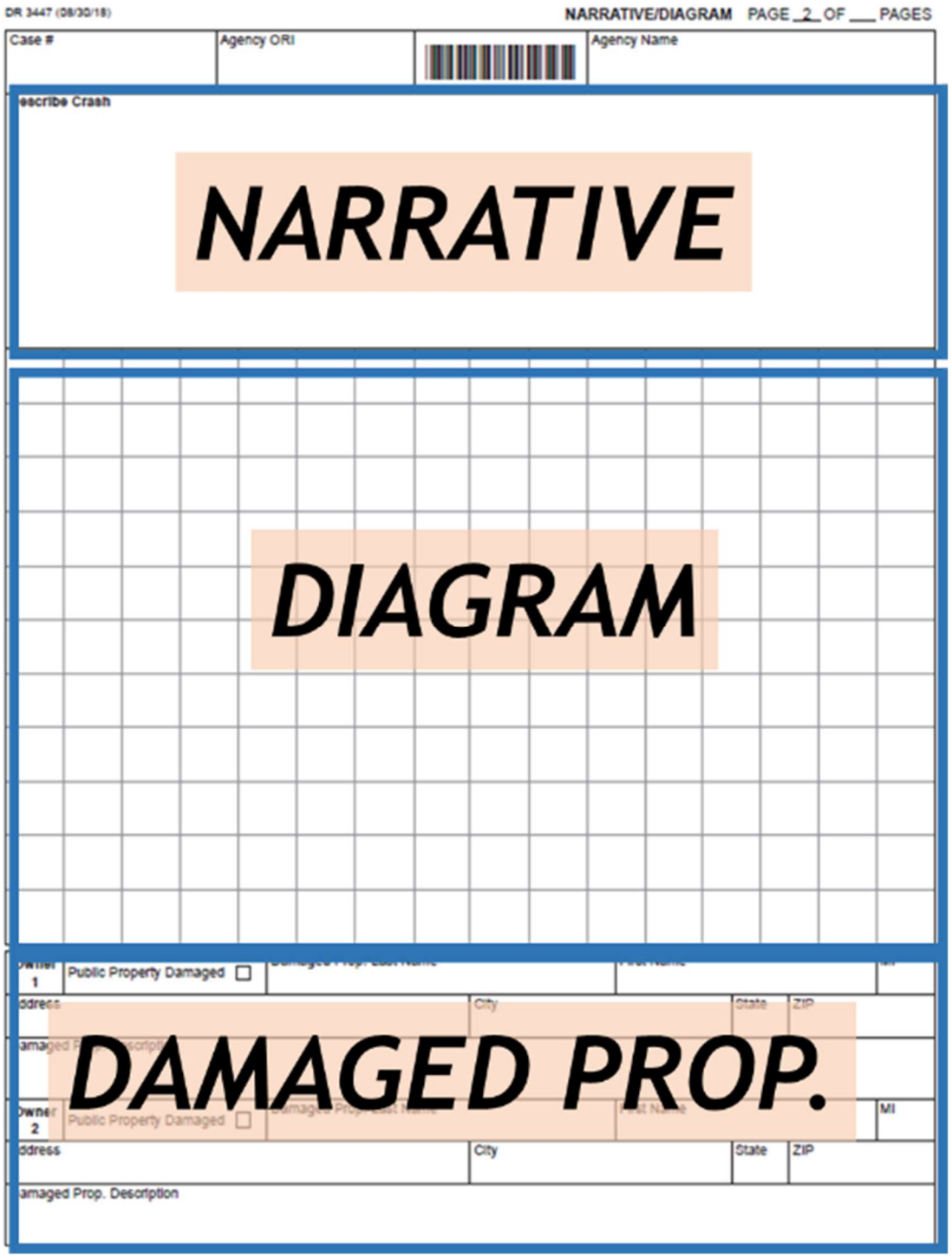
If the code 06. Not Visible is entered, then the cause (e.g. snow, vegetation, etc.) should be noted in the narrative.

Note: CSR § 42-1-102 (64) defines traffic control devices to mean "all signs, signals, markings, and devices, not inconsistent with this title, placed or displayed by authority of a public body or official having jurisdiction, for the purpose of regulating, warning, or guiding traffic."

For purposes of this field, pavement markings are not considered traffic control devices.

Crash Page 2 – NARRATIVE/DIAGRAM

In a DR 3447 crash report package, there will be one and only one copy of this page, and it will always be the second page.



Layout Changes

The overlay boxes from Overlay C – FEDERAL MOTOR CARRIER INFORMATION – have been removed from this page, along with the Carrier name and Identification information.

Two sets of information for Damaged Property have been added instead.

Specific Field Changes

Damaged Property Fields

Changes:

- Provided more room for the name and address
- Added space for description of the property
- Added a public property checklist

Rationale:

- Allows more room for entering information
- Make it easier for the officer to enter damaged property information; no longer need to put some damaged property information in the narrative

Manual Extract:

This set of fields is collected in order to support those entities (DOT, DOW, local municipality, utilities) to get reimbursed for damage caused by a crash. Multiple entities can be impacted in a single crash (for example, if a utility cabinet is hit as part of the crash, that can impact an internet/cable provider, a phone provider, etc.). Damaged property generally refers to such items as fences, trees, lawns, utility poles, animals, traffic control devices, and other non-vehicles (if the information hasn't already been included in prior fields). Vehicles, whether parked or not, should not be listed here. Wild animals are listed here and belong to the State of Colorado.

Guidance

- Do not use this field to list what was damaged, how it was damaged, the location of the damaged property, or the circumstances surrounding it at the time of the crash. This information should be explained in the narrative.
- When a crash involves several owners of several pieces of damaged property, the second owner is listed in the second set of Damaged Property fields. If there are more than 2 damaged properties, the subsequent owners are listed on the Additional Damaged Property page.
- If both public and private property is damaged, list the owners of public property first, followed by owners of private property.

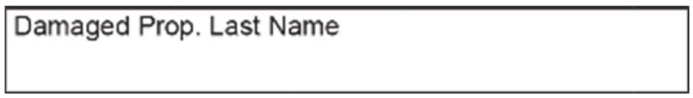
- If damage caused by the crash impacted more than two owners, then use the **ADDITIONAL DAMAGED PROPERTIES** page for up to 8 more additional damaged properties.

Note: If the Damaged Property Supplement is used, the Damaged Property # field must be filled out for each additional damaged property reported.

Public Property Damaged Check Box

Mark this box (enter an "**X**" or ✓) when the crash involves equipment or property that is owned by a Federal, State, County or Municipal agency, or a special governmental district.

Owner of Damaged Property – Name

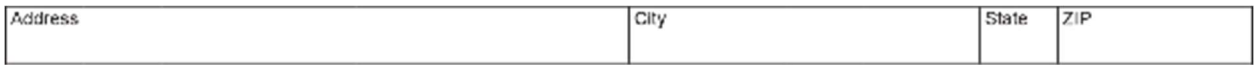


Enter the first name, last name, and middle initial of the owner of property damaged in a crash.

Follow the structure as defined in the section on **Entering a Person's Name**, on page 12.

The owner of the property, if known, should always be entered. If another individual, such as a renter, has immediate control of the property, his or her name should be listed in the narrative.

Owner of Damaged Property – Address



Enter the street, route, or P.O. Box number, city, state, and zip code of up to two owner(s) of the damaged property.

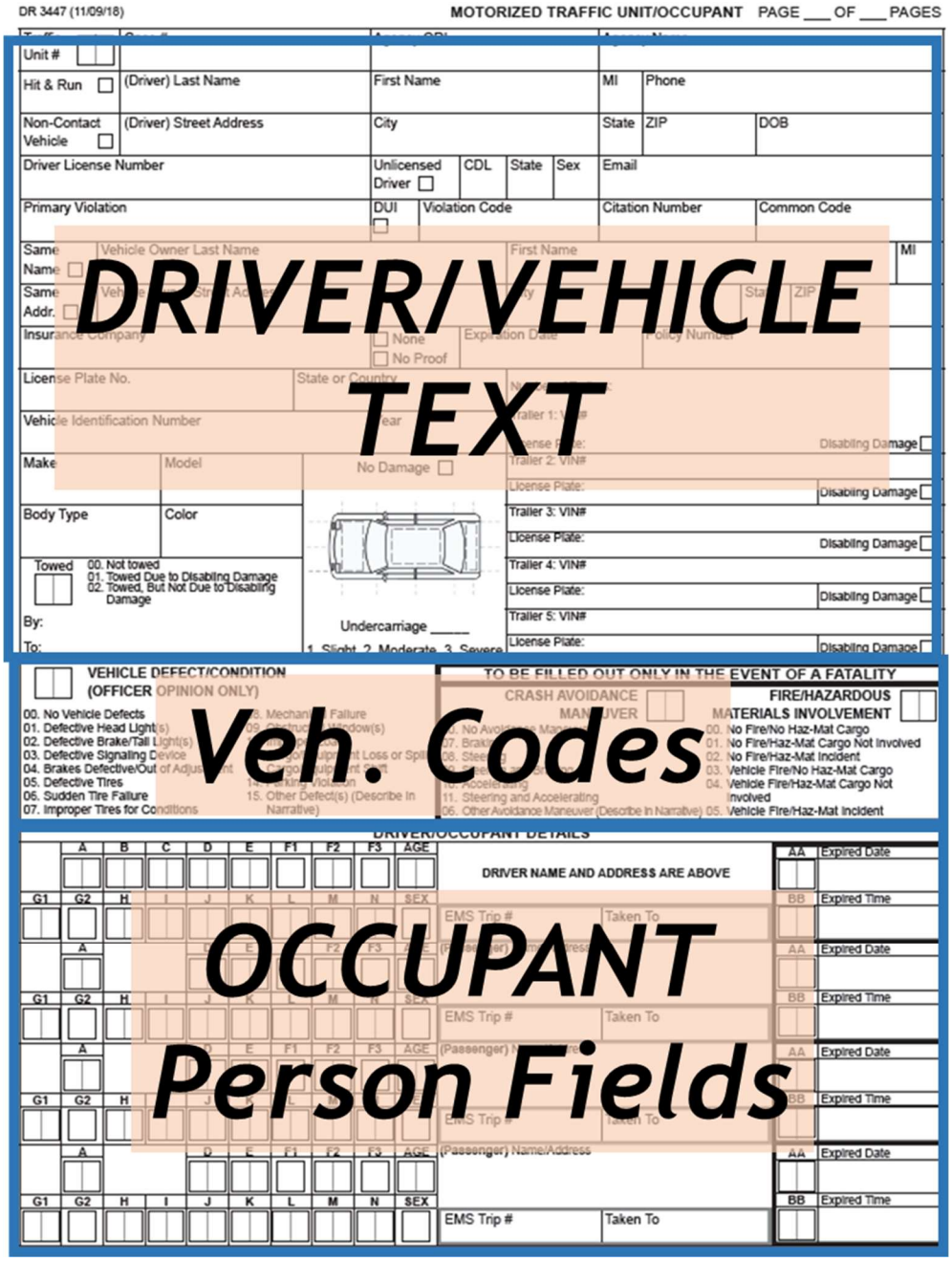
Damaged Property Description

Briefly describe the damaged property, with just a few words, for example "STOP sign" or "guardrail" or "utility cabinet at intersection".

Vehicle Page 1 – MOTORIZED TRAFFIC UNIT/OCCUPANT

For each motorized vehicle involved in the crash, one copy of this page and one copy of Vehicle Page 2 – TRAFFIC UNIT/GENERAL VEHICLE AND CMV are included in the DR3447 crash report package.

If there are two vehicles involved in the crash, then there are two sets of the vehicle page; without having to add a crash page that is not completely filled out.



Overall Layout

The vehicle and CMV overlays have been removed, reducing the complexity.

There is more space for driver, vehicle description and registration, and owner information.

There is space for 4 occupants OF THAT VEHICLE, to reduce the confusion related to vehicle occupants.

(NOTE: There is an optional supplement page available if there are more than 4 occupants to a vehicle.)

The New / Changed Fields

Hit and Run Check Box

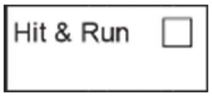
Changes:

- New

Rationale:

- To allow an amended report to update the driver / vehicle information if they are later identified without losing sight of the fact that the crash was Hit & Run.

Manual Extract:



Mark this box (enter an "**X**" or ✓) if the driver of the vehicle does not remain at the scene of a crash as required by statute.

Guidance

- The vehicle driven by such an operator/driver shall be listed as Vehicle #1 when the primary cause of the crash can be attributed to the operation of such vehicle and such vehicle may be referred to as the "run vehicle".

- As much information as possible about the "run vehicle" should be entered in the Traffic Unit/Motor Vehicle information fields on pages C and D.

- If the original report was submitted, and the driver of the "run vehicle" that left the scene is subsequently identified, a follow-up report must be submitted. This should be done even if the original report was submitted as being complete

- ***However***, the hit and run check box should remain checked if the crash originated as a hit and run, even if the crash is later amended to indicate information about the run vehicle and driver on this page of the DR3447 package.

- If more than one vehicle involved in the crash qualifies as “Hit and Run”, then the above applies to each of those vehicles. Number the Traffic Units based on the most reasonable crash reconstruction.

Unlicensed Driver Check Box

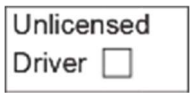
Changes:

- New

Rationale:

- Clarify what to enter if driver does not have a driver’s license.

Manual Extract:



Mark this box (enter an “X” or ✓) if this driver does not have a driver’s license **and** no number can be obtained from a driving record.

NOTE: If the person’s driver license has been suspended or revoked, their driver license number should be entered, and this checkbox should NOT be checked.

Validation Rules

If the Unlicensed Check Box is marked, then the Driver’s License Number field should be blank.

(Driver) Email

Changes:

- New

Rationale:

- Email has become a common way to contact individuals.

Manual Extract:

Enter an email address that can be used to contact the driver. If no email address is given, do not enter “NONE”. Instead, leave the field blank.

No Damage Check Box

Changes:

- Added a checkbox if the vehicle was not damaged by the crash

Rationale:

- Clarifies to the officer how to enter that situation (without leaving the overall field blank)

Manual Extract:

No Damage ☐

Mark this box (enter an "**X**" or ✓) if the vehicle did not sustain any apparent damage due to the crash.

Towed

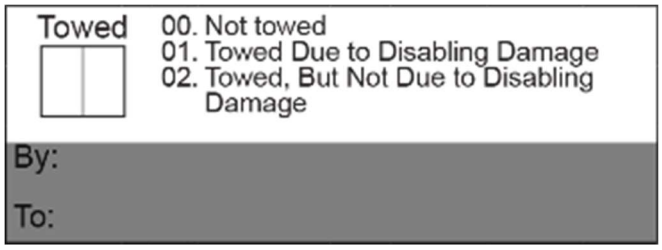
Changes:

- Expanded from simply **Towed due to damage** checkbox

Rationale:

- Clarifies to the officer what to enter in different conditions
- Consistent with federal requirements for commercial motor vehicles

Manual Extract:



Enter the appropriate code in the field, corresponding to whether the vehicle was towed or not, and whether the damage incurred during the crash was disabling, requiring it to be towed. The possible codes are:

- 00. Not towed
- 01. Towed Due to Disabling Damage
- 02. Towed, But Not Due to Disabling Damage

Guidance

The FMCSA definition of *disabling damage* is:

- "Towed" means transported away from the scene by a tow truck or other motor vehicle.
- If the vehicle was not towed by the time the officer leaves the scene, then this should be marked as 00 Not Towed.
- Disabling damage means damage which precludes departure of a motor vehicle from the scene of the accident in its usual manner in daylight after simple repairs. Disabling damage includes damage to a motor vehicle that could have been driven but would have been further damaged if so driven. Disabling damage does not include:
  - ➢ Damage which can be remedied temporarily at the scene of the accident without special tools or parts.
  - ➢ Tire disablement without other damage even if no spare tire is available.
  - ➢ Headlamp or taillight damage.
  - ➢ Damage to turn signals, horn, or windshield wipers which makes them inoperative.

Trailer Fields

Changes:

- Allow up to the maximum legal configuration to be entered
- Expanded the space to write down the information for trailers; VIN, license plate, Disabling Damage checkbox for each

Rationale:

- Make it easier for the officer; to Enter all the trailer-related information in the right location, rather than going to the narrative.

Guidance

- The maximum number of trailers/dollies a vehicle may be pulling is five; with a configuration of a triple plus two dollies.
- All trailers and dollies should have VINs.
- The trailers/dollies should have license plate numbers, except perhaps dollies (though they should have VINs and most will have registration numbers as well).
- Only fill in the fields for which there are trailers/dollies.

- It is not required to specify what parts of a trailer have been damaged. It is only necessary to indicate if the trailer has suffered disabling damage.
- The Guidance regarding *Disabling Damage* given above also applies to the **Disabling Damage checkbox** for each trailer.
- If the trailer cargo was damaged, that can be noted in the narrative.

Validation Rules

- VIN and/or License Plate number should be filled out for the number of trailers identified in the Number of Trailers field.

Number of Trailers

Enter the number of trailers (including dollies) pulled by the vehicle.

Trailer Fields

Enter the Vehicle Identification Number (VIN) for each trailer/dolly if available.

Enter the License Plate numbers for each trailer/dolly if available.

Mark the Disabling Damage Check Box (enter an "**X**" or ✓) for each trailer/dolly if it sustained disabling damage due to the crash.

Guidance

Use the same FMCSA definition for *disabling damage* as for **Towed** above.

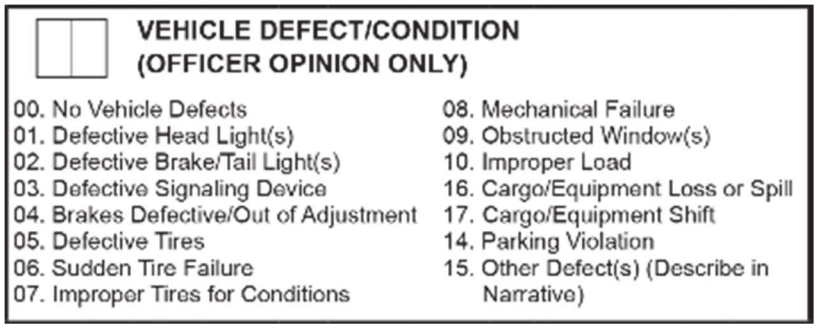
Vehicle Defect/Condition (Officer Opinion Only)

Changes:

- Additional codes added

Rationale:

- To clarify which code applies relative to a vehicle load



VEHICLE DEFECT/CONDITION (OFFICER OPINION ONLY)

00. No Vehicle Defects	08. Mechanical Failure
01. Defective Head Light(s)	09. Obstructed Window(s)
02. Defective Brake/Tail Light(s)	10. Improper Load
03. Defective Signaling Device	16. Cargo/Equipment Loss or Spill
04. Brakes Defective/Out of Adjustment	17. Cargo/Equipment Shift
05. Defective Tires	14. Parking Violation
06. Sudden Tire Failure	15. Other Defect(s) (Describe in Narrative)
07. Improper Tires for Conditions	

Enter the code that best describes any vehicle defect or condition that may have been a contributing factor in the crash. For example, if the heaviest cargo was not loaded at the end of the trailer, near the driver's cab, it could result in the rear of the trailer fishtailing in the event of external interference. This would be marked as **10.** Improper Load. If several defects/conditions were present, select the number of the most significant defect/condition.

The following changes were made to the selections for this field:

- The three selections 11. Spilled Load – Commercial Aggregate, 12. Spilled Load – Commercial Non-Aggregate, and 13. Spilled Load – Other were deleted.
- Two selections were added:
  - ➢ 16. Cargo/Equipment Loss or Spill for when there was any loss or spill of the load or of associated equipment, and
  - ➢ 17. Cargo/Equipment Shift for when there was any shift in the load or equipment that may have contributed to, or was otherwise involved in, the crash.

Crash Avoidance Maneuvers

Changes:

- Modified the codes available

Rationale:

- Simplified the choices for the officer

Manual Extract:

Enter the code that best corresponds to evidence of any crash avoidance maneuver taken by the traffic units involved in the crash. If **06. Other Avoidance Maneuver** is selected, explain the maneuver in the narrative.

Fire/Hazardous Materials Involvement

Changes:

- Moved from Fatal Supplement

Rationale:

- Removes the need for a supplement in the event of a fatality (and the associated redundancy)

Enter the code that best describes fire or hazardous material involvement in the crash.

Note: Do not include fuel spilled from the vehicle fuel tank as Hazardous Materials Involvement.

Driver/Occupant Fields

Changes:

- The first row is for the driver

- The fatal information is incorporated into the fields
- Additional space available for the name and address

Rationale:

- Facilitate the entry of data for the occupants of the vehicle
- Remove the need for a fatal supplement (and the associated redundancy)

Manual Extract:

The driver/occupant fields, located in the bottom half of the Traffic Unit/Vehicle page (page B front) of the **DR 3447**, must be completed for reportable occupants of this vehicle.

Guidance

- Use the INVOLVED PERSON OVERLAY to fill out these fields.
- Do NOT enter data for occupants of another vehicle on this form.
- If there are more than 4 occupants (including the driver) in this vehicle, then use an optional ADDITIONAL MOTOR VEHICLE OCCUPANTS page for the additional occupants.
- The detailed occupant information should be filled out for all persons in or on this vehicle **except for <u>uninjured</u>** bus passengers or **<u>uninjured</u>** railway passengers.
- For uninjured busses or railway passengers, do the following:
    - ➢ In one row of the Occupant Details section (or in one row of the ADDITIONAL MOTOR VEHICLE OCCUPANTS page), enter the total number of uninjured passengers in the Name/Address field. For example, enter "*10 uninjured passengers*".
    - ➢ If the bus or railway vehicle provided the option of seat belts, then enter the number of uninjured passengers that were **<u>belted</u>** in another row of the Occupant Details section (or in one row of the ADDITIONAL MOTOR VEHICLE OCCUPANTS page) in the Name/Address field. For example, enter "*7 uninjured, belted passengers*".

See the Overlay A description on the following page for reference.

Guidance

Regarding which occupants should be listed:

- If a bus or railway passenger originally was thought to be uninjured, but an injury later shows up, an amended report should be filed, with this individual added to the DR3447 as soon as possible after the discovery/diagnosis of the crash related injury.

- If a juvenile is involved (since there is special consideration for juvenile privacy), the juvenile individual's data should be filled out in full (including names and age, DOB), with the juvenile box checked so each agency can follow redaction rules for juvenile records.

Figure 7: Involved Person Overlay (Overlay A) – For Reference

OVERLAY A

DR 3447 (11/09/18)

INVOLVED PERSON OVERLAY NOT TO BE SUBMITTED TO DOR

A — Position In/On Vehicle

14

03	06	09	
02	05	08	10/11/12
01	04	07	

13

01. Driver
02-09. Passengers
10. Other ENCLOSED Passenger/Cargo Area
11. Other UN-ENCLOSED Passenger/Cargo Area
12. Sleeper Section of Truck
13. Trailer
14. Riding/Hanging on to Exterior of Vehicle or Trailer

B — DRIVING RESTRICTIONS

00. None
01. Complied With
02. Not Complied With
03. Compliance Not Known
04. Did Not Comply With GDL 6 Months
05. Did Not Comply With GDL 12 Months

C — DRIVING ENDORSEMENTS

00. None
01. Complied With
02. Not Complied With
03. Compliance Not Known

D — EJECTION

00. No
01. Yes – Partial
02. Yes – Full
03. Extricated

E — EJECTION PATH

00. Not Ejected/ Not applicable
01. Through Side Door Opening
02. Through Side Window
03. Through Windshield
04. Through Back Window
05. Through Back Door/Tailgate Opening
06. Through Roof Opening (Sun Roof/Convertible Top Down)
07. Through Roof (Convertible Top Up)
08. Other Path (e.g. Back of Pickup Truck)
10. Motorcycle
09. Unknown

F1 — SAFETY EQUIPMENT - AVAILABLE

A. None
B. Shoulder and Lap Belt
C. Shoulder Belt Only
D. Lap Belt Only
H. Child Restraint – Forward Facing
I. Child Restraint – Rear Facing
J. Child Restraint – Type Unknown
K. Booster Seat
F. N/A (e.g. Motorcycle)

F2 — SAFETY EQUIPMENT - USE

(Restraints and MC Eye Protection)
00. Not Used
01. Properly Used
02. Improperly Used
03. Unknown

F3 — SAFETY EQUIPMENT - HELMET

A. N/A (e.g. Cars/Ped/etc.)
B. No Helmet
C. Available, Not Used
D. Helmet Improperly used
E. Helmet Properly used
F. Unknown (Describe in Narrative)

G1 — AIRBAG - DEPLOYMENT

00. Not Equipped
01. Not Deployed
02. Deployed at pos. Only
03. Deployed at pos. and Others
04. Not Deployed at pos., Deployed at Others
05. Unknown (Describe in Narrative)

G2 — AIRBAG - TYPE

A. None
B. Front
C. Side
D. Curtain
E. Rear
F. Multiple
G. Knee
H. Air Belt
I. Center Console
J. Pedestrian Airbag
K. Other Airbag Type(Describe in Narrative)

H — INJURY SEVERITY

00. No Apparent Injury (O)
01. Possible Injury (C)
02. Suspected Minor Injury (B)
03. Suspected Serious Injury (A)
04. Fatal Injury (K)

I — ALCOHOL SUSPECTED (OFFICER OPINION ONLY)

YES	*NO*
01. Preliminary Breath Test	06. Preliminary Breath Test
02. SFST	07. SFST
03. Observed	08. Observed
05. Other Method	10. Other Method

J — TESTED FOR ALCOHOL

00. Not Tested
01. Blood
02. Breath
04. Other
05. Refusal
06. By Coroner – Unknown
07. By Coroner – Blood
08. By Coroner – Urine
09. By Coroner – Fluids
10. By Coroner – Other

K — MARIJUANA SUSPECTED (OFFICER OPINION ONLY)

00. Marijuana Not Suspected
01. Marijuana Suspected
02. Unknown

L — TESTED FOR MARIJUANA

00. Not Tested
01. Blood
04. Other
05. Refusal
06. By Coroner – Unknown
07. By Coroner – Blood
08. By Coroner – Urine
09. By Coroner – Fluids
10. By Coroner – Other

M — OTHER DRUG/IMPAIRMENT SUSPECTED (OFFICER OPINION ONLY)

YES	*NO*
01. Drug Recognition Expert	05. Drug Recognition Expert
02. SFST	06. SFST
03. Observed	07. Observed
04. Other Method	08. Other Method

N — TESTED FOR OTHER DRUGS

00. Not Tested
01. Blood
04. Other
05. Refusal
06. By Coroner – Unknown
07. By Coroner – Blood
08. By Coroner – Urine
09. By Coroner – Fluids
10. By Coroner – Other

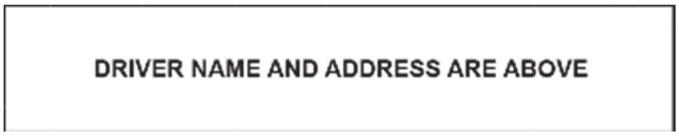
TU#	A	B	C	D	E	F1	F2	F3	AGE	Name/Address		AA	Expired Date
G1	**G2**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**SEX**	**EMS Trip #**	**Taken To**	**BB**	**Expired Time**

TO BE FILLED OUT ONLY IN THE EVENT OF A FATALITY

AA — DEAD AT SCENE
00. No
01. Yes

BB — TRANSPORTED BY
01. Ambulance
02. Air
03. Not Transported
04. Other (Describe in Narrative)

Name/Address



Enter the name and address. In the first row, this information applies to the driver, which should already be recorded in the driver section and thus does not have to be filled out here. The next three rows are for other reportable occupants, and the Name/Address should be filled out for them.

Guidance

- If the vehicle is a bus or railway, then the name/address need only be entered for the fatal and injured parties (classifications 02, 03, and 04).
- If an officer has only obtained a partial name, enter only that information obtained. If an officer wasn't able to obtain a name, enter "unknown".
- If further investigation into the person's identification is pending (e.g. if such will be done at a hospital or by the coroner), add a note in the narrative indicating steps for pending identification.
- If no further identification will be possible (in the case of a PD turned fatal with an out of state passenger who was not otherwise identified during investigation of the PD crash), add a note in the narrative indicating that situation.

A-Position in/on Vehicle

This field applies to the driver and all passengers of the motor vehicle.

This field must be completed for all reportable occupants.

Enter the position of the occupant or passenger as per the diagram provided on the INVOLVED PERSON OVERLAY. All bus passengers are classified as 10.

Special cases:

- For bus passengers, enter **10. Other Enclosed passenger**.
- For people individuals in a pickup truck bed, enter **11. Unenclosed passenger**.
- For a motorcycle passenger, enter 04 (or 04 and 07 for motorcycles with one driver and two passengers).

B-Driving Restrictions

This field only applies to driver (which should be in the first row).

This field must be completed for drivers of the vehicles with information pertaining to their compliance with driving restrictions.

If driver has no restrictions, enter 00. None. If restrictions did apply, then enter the code that best corresponds to the driver's compliance with the restriction(s). "Restrictions" means restrictions such as corrective lenses, left side mirror, interlock, etc., not driving suspensions.

Note the addition of the codes for GDL 6-months and GDL 12-months restrictions.

C-Driving Endorsements

This field only applies to driver (which should be in the first row).

This field must be completed for the driver of the vehicle only if endorsements are necessary for the type of vehicle, i.e. motorcycle, hazmat, etc.

If no endorsements are required, enter **00. None**. If endorsements are required, then enter the code that best corresponds to the driver's compliance with the endorsement requirements.

D-Ejection

This field applies to the driver and all passengers of the motor vehicle.

Enter the code **00** if the occupant was not ejected. Enter the code **01** if the physical forces of the collision caused partial ejection of a major or significant portion of the body, for example, the head or the torso. Enter the code 02 if the occupant was fully ejected. Enter the code **03** if the occupant had to be extricated from the vehicle.

E-Ejection Path

This field applies to the driver and all passengers of the motor vehicle.

Enter the code corresponding to the path of ejection followed by the ejected (partially or completely) occupant (only applicable if 01 or 02 was entered for Ejection).

When the motor vehicle is a motorcycle, enter 10. Motorcycle.

F1-Safety Equipment – Available

Changes:

- Separated available from used
- Reduced codes to those applicable to motorized vehicles (not non-motorist)

Rationale:

- Make easier for officer to determine which code to enter

This field applies to the driver and all passengers of the motor vehicle.

Enter the code that describes what type of restraint system was available in the traffic unit. If the traffic unit was a motorcycle, enter **F-Not Applicable**.

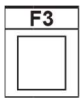
F2-Safety Equipment – Used

This field applies to the driver and all passengers of the motor vehicle.

Enter the number that describes how the system was used.

In the case of a motorcycle, “Used” refers to eye protection.

F3-Safety Equipment – Helmet



This field must be completed for all persons on a motorcycle.

For motor vehicles other than a motorcycle, enter the code **A-Not Applicable**. For a motorcycle, enter a code, B through F, depending whether and how the helmet was used.

Examples

- For a driver who had a lap/shoulder combination restraint and had the lap belt on but put the shoulder portion behind his back, the data would be entered as follows:

  - ➢ 0 F1-Safety Equipment – Available = B-shoulder and lap belt,
  - ➢ 0F2-Safety Equipment – Used = 02. improperly used
  - ➢ 0 F3-Safety Equipment – Helmet = A-Not Applicable.

- A 4-year-old is belted into a vehicle without a child safety seat. Data for that occupant would be entered as:

  - ➢ 0 F1-Safety Equipment – Available = B-shoulder and lap belt,
  - ➢ 0F2-Safety Equipment – Used = 02. improperly used
  - ➢ 0 F3-Safety Equipment – Helmet = A-Not Applicable.

- Data for a passenger in a bus with no available occupant restraints would be entered as:

  - ➢ 0 F1-Safety Equipment – Available = A-none
  - ➢ 0F2-Safety Equipment – Used = 00. not used
  - ➢ 0 F3-Safety Equipment – Helmet = A-Not Applicable.

- Data for a driver of a classic car with no safety equipment installed would be entered as:

  - ➢ 0 F1-Safety Equipment – Available = A-none
  - ➢ 0F2-Safety Equipment – Used = 00. not used
  - ➢ 0 F3-Safety Equipment – Helmet = A-Not Applicable.

- Data for a motorcyclist wearing protective eyewear but with a helmet strapped to the back seat of the cycle would be entered as:

  - ➢ 0 F1-Safety Equipment – Available = F-N/A (e.g. motorcycle)
  - ➢ 0F2-Safety Equipment – Used = 01. (eye protection) properly used
  - ➢ 0 F3-Safety Equipment – Helmet = C-available, not used

- It is determined that a motorcyclist was wearing a helmet that was not strapped securely around the head, and the goggles were found stuffed in a saddlebag. This would be entered as:

  - ➢ 0 F1-Safety Equipment – Available = F-N/A (e.g. motorcycle)
  - ➢ 0F2-Safety Equipment – Used = 00. (eye protection) Not Used
  - ➢ 0 F3-Safety Equipment – Helmet = D-helmet improperly used

- A motorcyclist has glasses perched atop his head and no helmet. This would be entered as:
  - ➢ 0 F1-Safety Equipment – Available = F-N/A (e.g. motorcycle)
  - ➢ 0F2-Safety Equipment – Used = 02. (eye protection) improperly used
  - ➢ 0 F3-Safety Equipment – Helmet = B-no helmet

AGE

Enter the individual's age in years. Months are not included. Children under the age of one are entered as 0.

This field may be left blank if a) the information requested applies to the driver, b) the Date of Birth is already recorded in the driver section, and c) you enter "SAME AS DRIVER" in the name/address field.

This field must be completed for all parties involved in a crash except uninjured bus or railway passengers.

Business Rules

- If the occupant is a juvenile (under the age of 18) then **Juvenile(s) Involved Check Box** on the main CRASH page 1 must be checked.

Occupant Airbag Fields

This section is for whether an airbag has deployed and what type of airbag it was,

G1-Airbag Deployment

Enter the code that describes whether one or more airbags deployed at this position relative to other positions.

Guidance

The available codes are described:

- 00 – The vehicle is not equipped with airbags at this position.
- 01 – The vehicle is equipped with airbags at this position, but they didn't deploy.
- 02 – One or more airbags deployed at this position, but not at any other position.

- 03 – One or more airbags deployed at this position, and one or more airbags also deployed at other positions in the vehicle.
- 04 – No airbags deployed at this position, but one or more did deploy at other positions.
- 05 – It is unknown how the airbags deployed.

Examples

The driver's and right front passenger's front airbags deployed:

Position (A)	Airbag Type (G1)	Airbag Deployment (G2)
01	B	03
03	B	03

The driver's front airbag deploys. There is a passenger in position 03, and the airbag does not deploy:

Position	Airbag Type (G1)	Airbag Deployment (G2)
01	B	02
03	B	04

The driver's front airbag deploys. The passenger's side airbag deploys:

Position	Airbag Type (G1)	Airbag Deployment (G2)
01	B	03
03	C	03

G2-Airbag Type

Enter the code that specifies which type of airbag(s) deployed at the position occupied by the person. Use code **A-None**, either if a vehicle not equipped with an airbag or if it was equipped but did not deploy. Code **F-Multiple**, refers to more than one airbag deploying at the position, i.e., both the front and side at passenger position 03.

Note some new types of airbags that have been added:

- G-Knee: Knee airbags are installed in the lower portion of the dashboard, directly in front of the passenger's knees. When a collision occurs, they inflate to fill the space between the dashboard and the passenger's lower legs. (From http://www.takata.com/en/products/airbag05.html)

- H-Air Belt: The inflatable seat belts deploy upon impact of a certain force, quickly expanding and providing added restraint and protection for people riding in the back seat of cars.

Person Injury Severity Field

This field identifies how seriously a person (occupant or non-motorist) was injured.

Note: While the codes have not changed, the terms used with the codes have changed to meet federal requirements.

H-Injury Severity

Enter the code which best describes the injury severity to the party in question.

Guidance

The standard MMUCC definitions for when to use each injury classification is as follows:

- **00. No apparent injury (O)**

  No apparent injury is a situation where there is no reason to believe that the person received any bodily harm from the motor vehicle crash. There is no physical evidence of injury and the person does not report any change in normal function.

  Note: If a party is transported and is subsequently examined and found to have no injuries, the injury severity for that party would be classified as No Injury.

- **01. Possible injury (C)**

  A possible injury is any injury reported or claimed which is not a fatal, suspected serious or suspected minor injury. Examples include momentary loss of consciousness, claim of injury, limping, or complaint of pain or nausea. Possible injuries are those which are reported by the person or are indicated by his/her behavior, but no wounds or injuries are readily evident.

  Note: If a party is transported and is subsequently examined and found to have no injuries, the injury severity for that party would be classified as Possible Injury.

- **02. Suspected Minor Injury (B)**

  A minor injury is any injury that is evident at the scene of the crash, other than fatal or serious injuries. Examples include lump on the head, abrasions, bruises, minor lacerations (cuts on the skin surface with minimal bleeding and no exposure of deeper tissue/muscle).

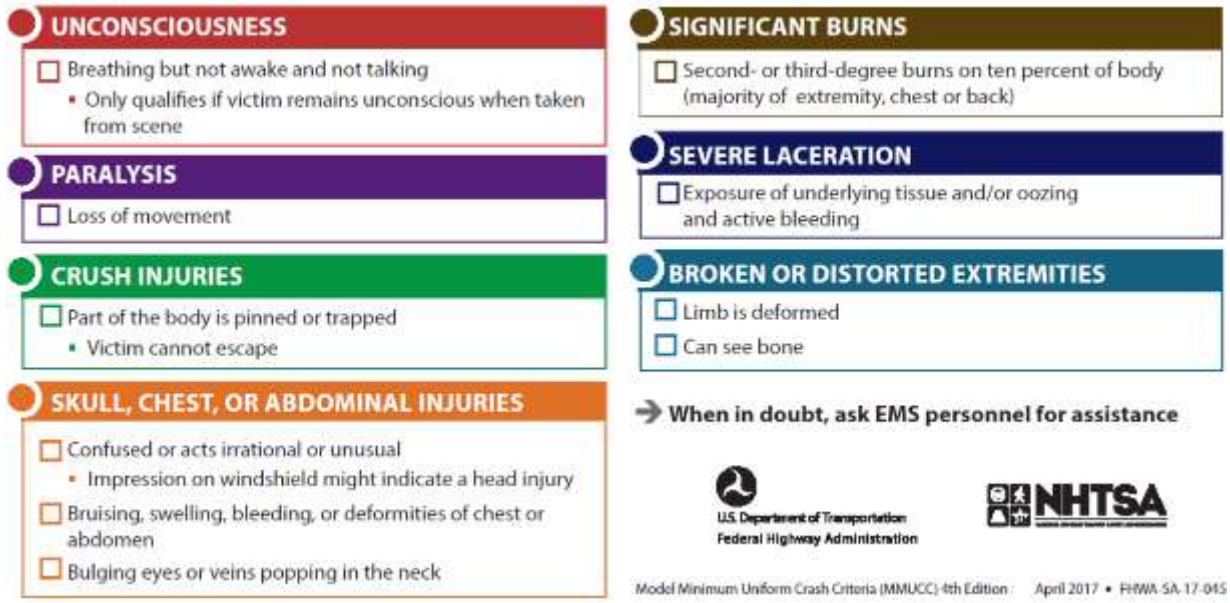
- **03. Suspected Serious Injury (A)**

  A suspected serious injury is any injury other than fatal which presents one or more of the following symptoms:

  - ➢ Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood.
  - ➢ Broken or distorted extremity (arm or leg).
  - ➢ Crush injuries.
  - ➢ Suspected skull, chest or abdominal injury other than bruises or minor lacerations.
  - ➢ Significant burns (second and third degree burns over 10% or more of the body).
  - ➢ Unconsciousness when taken from the crash scene.
  - ➢ Paralysis.

The following chart from NHTSA provides additional examples of what would qualify for a Suspected Serious Injury.

Figure 8: Suspected Serious Injury Classifications



- **04. Fatal Injury (K)**

  A fatal injury is any injury that results in death within 30 days after the crash in which the injury occurred. If the person did not die at the scene but died within 30 days of the motor vehicle crash in which the injury occurred, the injury classification should be changed from the attribute previously assigned to the attribute “Fatal Injury”.

Refer to the section on ***What Constitutes a Crash Fatality*** starting on page 13 for a definition of what is considered a fatality with respect to the DR3447 crash report.

Impairment Fields

This section is for enhanced information regarding suspected alcohol, marijuana, or drug use involved in the crash.

I-Alcohol Suspected (Officer Opinion Only)

Enter the code that best corresponds to whether or not other alcohol was suspected, and why.

Guidance

- If you suspect alcohol was involved, enter whichever code **01** through **05** that best describes how you came to suspect alcohol.
- If you did not suspect alcohol was involved, enter whichever code **06** through **10** that best describes how you came to that conclusion.

Explanation of Terms:

- "**PBT**" means Preliminary Breath Test.
- "**SFST**" means behavior of the driver observed during Standardized Field Sobriety Tests.
- "**Observed**" means physical symptoms heard or seen by the officer during investigation, such as slurred speech, staggering, or admissions of alcohol or drug use by the driver, or other physical evidence.

Hierarchy of selections 01 through 03:

- **01 –** The use of a PBT takes priority over an SFST or other observations. Without a PBT, an SFST takes priority over other observations.
- **02 –** SFSTs are observations of a driver as the result of a Standardized Field Sobriety Test.
- **03 –** (Observed) are behaviors, other than an SFST, made during the course of the investigation. These include slurred speech, staggering, admissions of drinking, or other physical evidence.

Examples of alcohol suspected/not suspected:

- While talking to a driver involved in the crash, it is observed that his eyes are bloodshot and his speech is slurred. He has trouble walking back to his car to get his registration. Enter code **03**.
- The driver is transported before you arrive on scene. Empty beer cans are strewn about and the inside of the car smells like of stale beer. Enter code **03**.

- The driver is transported before you arrive on scene. The ambulance attendants note the odor of an alcoholic beverage on the driver's breath, along with nystagmus (repetitive, uncontrolled eye movements) and informs you. Enter code **05**.

- While talking to the driver, indications of intoxication are observed. He submits to a PBT and the reading comes back as 0.148. Enter code 01. Note: even though your suspicions are raised through observations, any time a PBT is used, you should enter either a **01** or a **06**.

- As you talk to the driver, you observe no indications of intoxication. Enter **08**.

J-Tested for Alcohol

Enter the code that describes what type of test was given to determine alcohol use.

Note: Several additional codes have been added with respect to the type of test performed by the coroner.

K-Marijuana Suspected (Officer Opinion Only)

Enter the code that applies to the Officer's suspicion regarding use of marijuana by the person.

Note: Marijuana is still considered a drug. It is pulled out separately in order to gather crash information specifically associated with marijuana in the context of the recent legalization by the State.

L-Tested for Marijuana

Enter the code that describes what type of test was given/requested to determine marijuana use.

Note: Several additional codes have been added with respect to the type of test performed by the coroner.

M-Other Drug/Impairment Suspected (Officer Opinion Only)

As pertains to Alcohol Suspected, enter the code that best corresponds to whether or not other drugs (besides marijuana) were suspected, and why.

- Numbers **01** through **04** apply to "suspected".
- Numbers **05** and **08** apply to "not suspected".

A **DRE** evaluation takes precedence over an SFST and an SFST takes precedence over other observations. For example, if both a SFST and a DRE evaluation were performed, note **01. Drug Recognition Expert** (if the evaluation was positive) or **02. Drug Recognition Expert** (if the evaluation was negative).

N-Tested for Other Drugs

Enter the code that describes what type of test was given/requested to determine drug use.

Note: The codes for breath and urine have been deleted, as these are not applicable. Several additional codes have been added with respect to the type of test performed by the coroner.

Sex

Enter "M" for male or "F" for female.

This field may be left blank if a) the information requested applies to the driver, b) that information is already recorded in the driver section, and c) you enter "SAME AS DRIVER" in the name/address field.

This field must be used for all parties involved in a crash, except uninjured bus or railway passengers.

To Complete Only for Fatalities or Certain Injuries

This section to be filled out only for a person transported from the crash scene for:

- A Fatality, or
- A Suspected Serious Injury, or
- An injury related to a CMV crash

Please refer to page 15 for definition of what constitutes a Serious Injury.

EMS Trip

Enter the Trip Number as provided by the EMS staff.

Taken To

Enter the location where the occupant was taken (for example, Lutheran Hospital, Swan Funeral Home, or Denver Coroner).

If the individual was transported by both ambulance and air, then enter 02. Air. If some other mode of transportation (besides ambulance or air), then enter 04. Other, and describe in the narrative.

To Complete Only for Fatalities

AA-Dead at Scene

Enter the code corresponding to whether the person died at the scene (and was not transported for treatment).

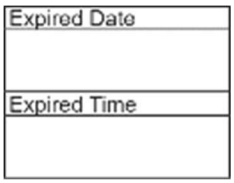
- Enter **00** for **No**
- Enter **01** for **Yes**

BB-Transported By

Enter the code for the mode use to transport the individual.

Expired Date and Time

Enter the pronounced date and time of death for all fatalities. If the death occurred at the scene, and the time is unknown, use the date and time of the crash.



Use the standard format MM/DD/YYYY to fill in this field. **Example:** 05/08/2005.

Enter the pronounced date and time of death for all fatalities. If the death occurred at the scene, and the time is unknown, use the date and time of the crash.

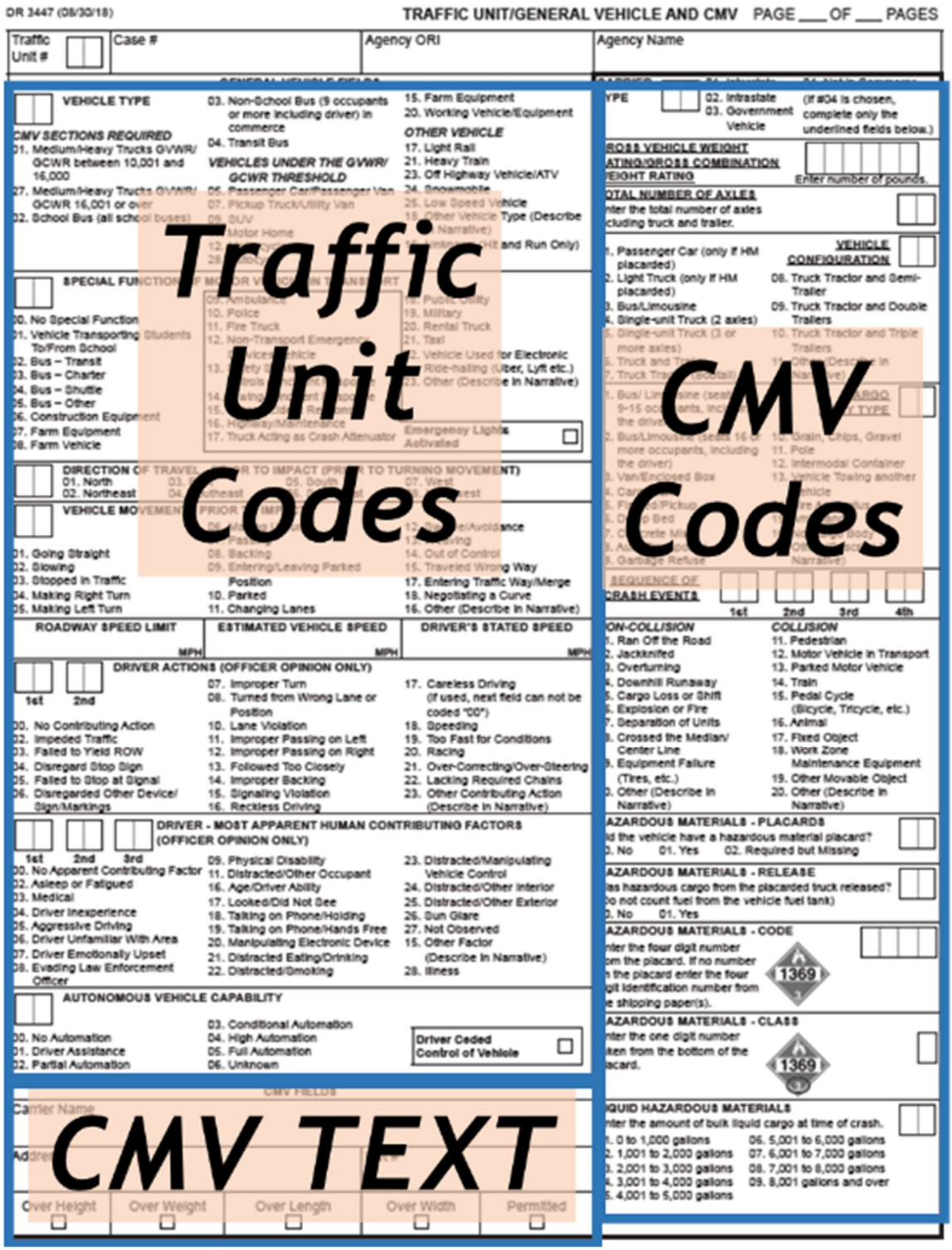
Enter the time using the 24-hour clock system. Do not use a colon.

Example: If death occurred at 2:43 PM, the time would be entered as “1443”.

If the date of death is known, but the time of pronouncement is unknown, provide the death date and leave the time of death blank.

Example: If a death was delayed by several days and there was no easily obtainable record of the time of death, provide the date of death with no time of death.

Vehicle Page 2 – TRAFFIC UNIT / GENERAL VEHICLE AND CMV



This is the second page for a vehicle.

Overall Layout

Combined vehicle, driver, and CMV codes for the same vehicle on one page

Provided more space for the CMV fields;

Simplified and clarified several of the fields to make easier to determine what to enter.

The New / Changed Fields

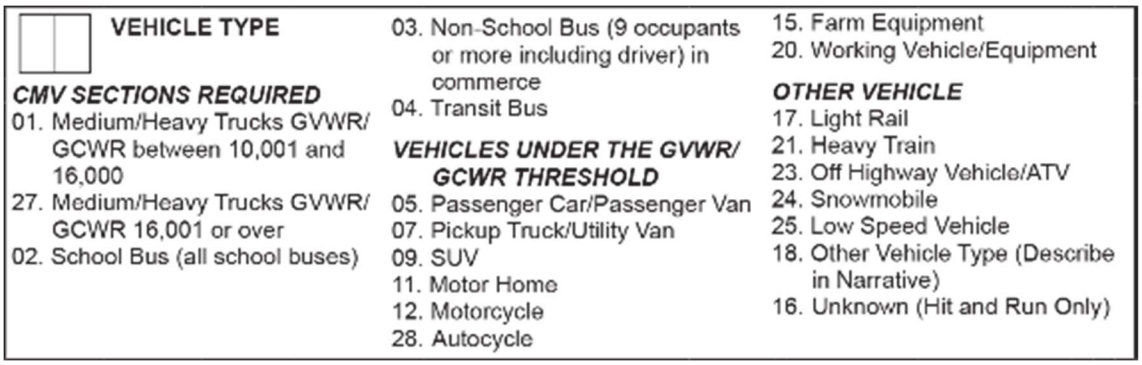
Vehicle Type

Changes:

- Added some codes for different vehicle types
- Removed non-motorist types (e.g. bicycle)
- Separated vehicle type from function (see below)

Rationale:

- To make it easier for the officer to determine what should to entered in more circumstances



VEHICLE TYPE

CMV SECTIONS REQUIRED
01. Medium/Heavy Trucks GVWR/ GCWR between 10,001 and 16,000
27. Medium/Heavy Trucks GVWR/ GCWR 16,001 or over
02. School Bus (all school buses)
03. Non-School Bus (9 occupants or more including driver) in commerce
04. Transit Bus

VEHICLES UNDER THE GVWR/ GCWR THRESHOLD
05. Passenger Car/Passenger Van
07. Pickup Truck/Utility Van
09. SUV
11. Motor Home
12. Motorcycle
28. Autocycle
15. Farm Equipment
20. Working Vehicle/Equipment

OTHER VEHICLE
17. Light Rail
21. Heavy Train
23. Off Highway Vehicle/ATV
24. Snowmobile
25. Low Speed Vehicle
18. Other Vehicle Type (Describe in Narrative)
16. Unknown (Hit and Run Only)

Enter the code which best describes the type of vehicle.

Guidance

- If the vehicle is present (or the driver is in custody), then enter the corresponding code.
- If this vehicle left the scene, and is not known, then enter 16. Unknown.
  - ➢ This field corresponds to the **body type** of the vehicle itself. The next field - ***Special Function of Motor Vehicle in Transport*** - addresses **what the vehicle is used for**.
  - ➢ Note that the weight threshold for vehicles to be considered CMV has been modified in Colorado, and the codes have been updated to reflect that:

- ➢ 01. Medium/Heavy Trucks, GVWR/GCWR between 10,001 and 16,000
- ➢ 27. Medium/Heavy Trucks, GVWR/GCWR 16,001 or over

NOTE: The above weight limits are applicable even if the vehicle is not a commercial motor vehicle. Those codes should be entered even if for a private vehicle.

- Code 02 corresponds to the familiar body shape of a school bus (whether colored yellow or another color). This code refers to the body type, *whether or not* the vehicle was being used to transport students to or from school.
- Code 03 should be used for any kind of shuttle bus or van that is not a school bus body type
- Codes 05, 07, 09, 11, 12, 15, and 20 correspond to vehicles under the CMV GVWR/GCWR thresholds.
- Code 20. Working Vehicle/Equipment such as snow plows, construction/maintenance equipment.
- 17. Light rail corresponds to RTD Light Rail or commuter rail.
- Code 21. Heavy Train such as BNSF or Union Pacific, or AMTRAK trains (as opposed to RTD Light Rail or commuter rail).
- If the code 23. Off Highway Vehicle/ATV is entered, then the specific type of off-highway vehicle should be described in the narrative.
- The code 24. Snowmobile corresponds to a snowmobile involved in a reportable crash.
- The code 25. Low Speed Vehicle includes such types as a “tuk-tuk” and some kinds of “neighborhood vehicles”.
- If code 18. Other is entered, describe the vehicle type in the narrative.

Note: For definitions of GVWR (Gross Vehicle Weight Rating) and GCWR (Gross Combination Weight Rating), see the section on Commercial Motor Vehicle Data on page 129.

Special Function of Motor Vehicle in Transport

Changes:

- New (separated the function from the vehicle/body type above)

Rationale:

- Make it easier for the officer to determine which codes to select to handle various configurations

Manual Extract:

SPECIAL FUNCTION OF MOTOR VEHICLE IN TRANSPORT

00. No Special Function
01. Vehicle Transporting Students To/From School
02. Bus – Transit
03. Bus – Charter
04. Bus – Shuttle
05. Bus – Other
06. Construction Equipment
07. Farm Equipment
08. Farm Vehicle
09. Ambulance
10. Police
11. Fire Truck
12. Non-Transport Emergency Services Vehicle
13. Safety Service Patrols – Incident Response
14. Towing – Incident Response
15. Other Incident Response
16. Highway/Maintenance
17. Truck Acting as Crash Attenuator
18. Public Utility
19. Military
20. Rental Truck
21. Taxi
22. Vehicle Used for Electronic Ride-hailing (Uber, Lyft etc.)
23. Other (Describe in Narrative)

Emergency Lights Activated ☐

Enter the code which best describes the purpose for which the vehicle was being used (which may differ significantly from the type of vehicle).

Guidance

In order to highlight the differences between **Vehicle Type** Vehicle Type and **Special Function of Motor Vehicle**, the following examples are given in the pictures below:

- For all three vehicles, the Vehicle Type would be 07. Pickup/Utility Van.
- For the photo on the left, the Special Function would be 09. Ambulance, for the photo in the middle would be 11. Fire Truck, and for the photo on the right would be 08. Farm Vehicle

09

11

08

In order to clarify the rules regarding the special case of school buses, the following points are offered:

- The body type of “School Bus” refers to the classic yellow bus, as in the picture below.

- A van, such as the one in the picture below, used for a school function would be coded with Traffic Unit Type = 03. Non-school bus, but with Special Function = 02. Vehicle Transporting Students To/From School.

- A school bus, whether modified or not, and whether owned by a school district or not, that is being used for a non-school function it would be coded with Traffic Unit Type = 02. School Bus, but with Special Function = 03. Bus – Charter (or other function, if appropriate).

Emergency Lights Activated Check box

Changes:

- New

Rationale:

- To clarify for the officer how to identify between a vehicle that is responding to an emergency or just on the road

Manual Extract:

Emergency Lights Activated ☐

Mark this box (enter an "**X**" or ✓) if this vehicle was an emergency vehicle, and the warning lights (and/or siren or other indicators) were activated.

The following are examples from Colorado Statute identifying service vehicles that would be considered in-service (and the Emergency Lights Activated check box should be checked):

- Authorized emergency vehicle that is giving a visual signal by means of flashing, rotating, or oscillating red, blue, or white lights
- A towing carrier vehicle that is giving a visual signal by means of flashing, rotating, or oscillating yellow lights
- A maintenance, repair, or construction vehicle with yellow lights

In the following situations, the service vehicles should not have their lights activated, and would not be considered in-service and the Emergency Lights Activated check box should not be checked:

- A fire engine being taken to a garage for repairs.
- An ambulance going to get the gas tank filled up.
- A police car being used to go get lunch.
- An emergency vehicle clearly marked as out of service.
- A snow plow that is not actively plowing but is returning from performing its operation.

Vehicle Movement - Prior To Impact

Changes:

- Added two codes for additional movements

Rationale:

- To identify additional movements that could contribute to a crash

Manual Extract:

VEHICLE MOVEMENT - PRIOR TO IMPACT

01. Going Straight	06. Making U-Turn	12. Swerve/Avoidance
02. Slowing	07. Passing	13. Weaving
03. Stopped in Traffic	08. Backing	14. Out of Control
04. Making Right Turn	09. Entering/Leaving Parked Position	15. Traveled Wrong Way
05. Making Left Turn	10. Parked	17. Entering Traffic Way/Merge
	11. Changing Lanes	18. Negotiating a Curve
		16. Other (Describe in Narrative)

Enter the code which best describes the movement of the vehicle prior to impact.

Driver-Stated Speed

Changes:

- New

Rationale:

- Since an officer cannot always estimate the speed, and instead often relies on the driver's statement.

Enter the speed of the vehicle immediately prior to the crash or the first difficulty or event leading to the crash, as stated by the driver.

Guidance

- If no statement is given by the driver as to the vehicle speed, then leave this field blank.

Driver Actions (Officer Opinion Only)

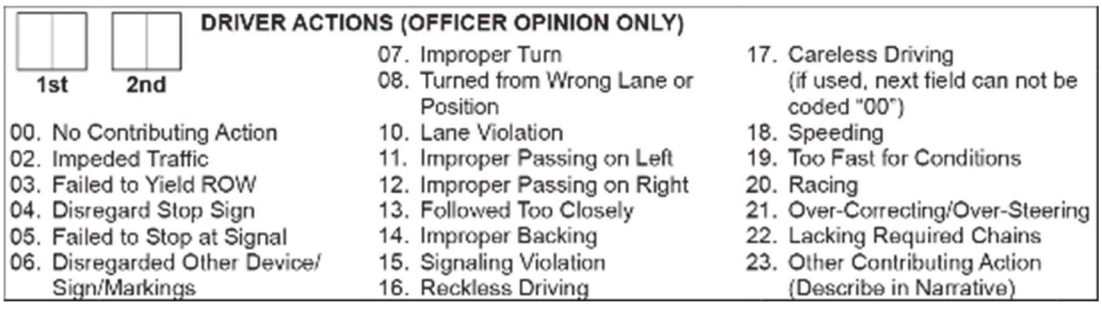
Changes:

- Added several codes for actions that could contribute to a crash
- A second driver action can be recorded

Rationale:

- Make it easier for the officer to identify some missing common actions (rather than having to go to the narrative)

Manual Extract:



Enter the code that best describes the driver action that led to the crash, in the officer's opinion. Whereas, the next field describes a driver condition, this field defines a specific action, or law violation, that led to the crash occurring.

Guidance

- Up to two driver actions can be entered.
- The more significant action (that had the most impact leading to the crash occurring) should be entered first. The first field must be given a value.

Business Rules

- If the first field is coded **as 00. No Contributing Action**, then the second one should be left empty.
- If **16. Careless Driving** is entered in the first field, then **00. No apparent contributing factor** cannot be entered as the Most Apparent Human Contributing Factor below.

Driver-Most Apparent Human Contributing Factors (Officer Opinion Only)

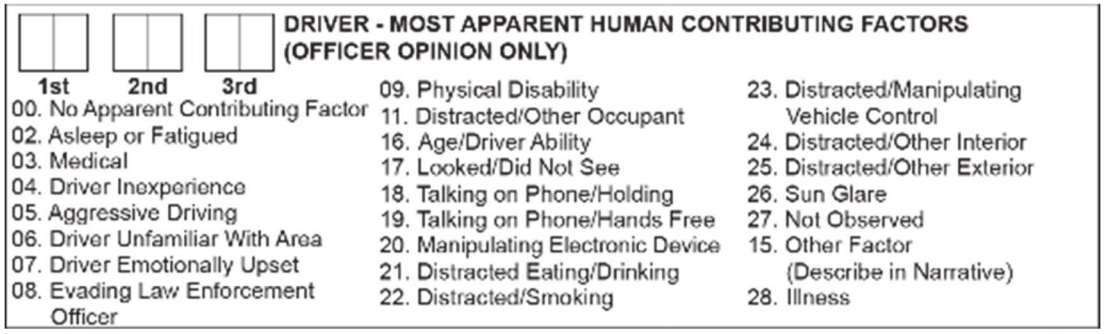
Changes:

- Added several codes, especially related to distraction
- Allow up to three selections

Rationale:

- Make it easier for the officer to identify some missing common factors that might contribute to a crash

Manual Extract:



DRIVER - MOST APPARENT HUMAN CONTRIBUTING FACTORS
(OFFICER OPINION ONLY)

1st 2nd 3rd

00. No Apparent Contributing Factor
02. Asleep or Fatigued
03. Medical
04. Driver Inexperience
05. Aggressive Driving
06. Driver Unfamiliar With Area
07. Driver Emotionally Upset
08. Evading Law Enforcement Officer
09. Physical Disability
11. Distracted/Other Occupant
16. Age/Driver Ability
17. Looked/Did Not See
18. Talking on Phone/Holding
19. Talking on Phone/Hands Free
20. Manipulating Electronic Device
21. Distracted Eating/Drinking
22. Distracted/Smoking
23. Distracted/Manipulating Vehicle Control
24. Distracted/Other Interior
25. Distracted/Other Exterior
26. Sun Glare
27. Not Observed
15. Other Factor (Describe in Narrative)
28. Illness

Enter the codes which best describes the human factor, if any, that **contributed** to the crash. These fields indicate which specific driver **conditions** the officer feels contributed to the crash, not specific driving actions.

Guidance

- Up to three contributing factors can be entered.
- The most significant factor (that had the most impact leading to the crash occurring) should be entered first. The first field must be given a value.

- These fields are intended to record the officer's opinion only and may or may not be supported by other evidence.

- Select the codes which best describe the condition of the non-motorist prior to impact that you feel did (or could have) contributed to the crash.

- Medical/Illness has been split, with the following definitions:

  - **03. Medical**: An ongoing, chronic diagnosed condition, such as heart disease, diabetes, epilepsy, cancer, or other medical condition requiring significant ongoing medical care by a doctor, and approval of a physician to maintain driving privileges**.**

  - **28. Illness**: A condition such as cold, flu, allergies, or other minor medical conditions not requiring the on-going medical management of the condition.

  - **NOTE**: A **Medical** entry will serve as a trigger to the Department of Revenue to require a follow-up medical review and certification to reapprove the driving privileges of an involved party suffering from a medical condition.

Examples of behavior corresponding to the various new codes:

- **16. Age/Ability** – This would be selected where a driver's reaction time or physical condition may have contributed to the crash or to not being able to avoid the crash.

- **17. Looked/Did Not See** – The driver stated that he/she was looking but did not see something leading up to the crash.

- **18. Talking on Phone/Holding** – The driver was holding a phone and in a conversation on the phone leading up to the crash.

- **19. Talking on Phone/Hands Free** – The driver was in a conversation on a phone that was in hand's free mode (i.e. the audio was connected to either an earpiece/headphone or the vehicle) leading up to the crash.

- **20. Manipulating Electronic** Device – The driver was interacting with an electronic device (not associated with the vehicle), such as a phone, laptop, game console, GPS navigation system, etc.

- **21. Distracted Eating/Drinking** – The driver was distracted by the act of eating, drinking, reaching for food or drink, or having dropped food or spilled a drink.

- **22. Distracted/Smoking** – The driver was distracted by the act of smoking, trying to light a cigarette or cigar, or etc., was activating an electronic cigarette, or was reaching for a cigarette, cigar, etc. Dropping a lit cigarette in the vehicle would also be covered by Distracted/Smoking.

- **23. Distracted/Manipulating vehicle control** – The driver was interacting with a vehicle control (gearshift, stereo, integrated GPS, system settings, windshield wipers, autopilot, etc.)

- **24. Distracted/Other Interior** – The driver was distracted by some other source of distraction located such as insects, non-food objects on the floor, within the vehicle not including distraction by a passenger.

- **25. Distracted/Other Exterior** – The driver was distracted by some other source of distraction located outside the vehicle (e.g. another crash, reading a billboard, road construction, etc.).

- **26. Sun Glare** – The driver was distracted by glare, or the driver's vision was impeded by glare.

The following codes have been removed:

- **01. Asleep at the Wheel** – This has been addressed with the modified code 02.

- **10. DUI, DWAI, DUID** – Those cases will now be noted in the fields for suspected alcohol, suspected marijuana, or suspected drugs (to better clarify the type of impairment observed.

- **12. Distracted/Cell Phone** – This has been expanded in the new codes 17 and 18

- **13. Distracted/Radio** – This has been replaced by the new code 23 described above.

- **14. Distracted/Other** – The old selection has been expanded into several new ones (20. 24). If the driver was distracted by something not in the list, select code **15. Other Factor**, and describe the distraction in the narrative.

Business Rules

- If the first or second field is coded as **00. No Apparent Contributing Factor**, then the remaining fields should be left empty.

Autonomous Vehicle Capability

Changes:

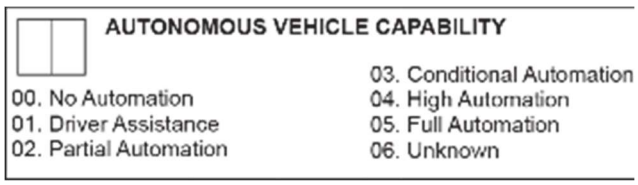
- New

Rationale:

- Autonomous vehicles are arriving within the next few years, and the form need to be ready for that.

- To allow the officer to enter the relevant information as a field (rather than in the narrative)

Manual Extract:



Enter the code that best describes the level of autonomy that the vehicle has:

- 00. No Automation: The full-time performance by the human driver of all aspects of the dynamic driving task, even when enhanced by warning or intervention systems.

- 01. Driver Assistance: The driving mode-specific execution by a driver assistance system of either steering or acceleration/deceleration using information about the driving environment and with the expectation that the human driver performs all remaining aspects of the dynamic driving task

- 02. Partial Automation: The driving mode-specific execution by one or more driver assistance systems of both steering and acceleration/deceleration using information about the driving environment and with the expectation that the human driver performs all remaining aspects of the dynamic driving task

- 03. Conditional Automation: The driving mode-specific performance by an Automated Driving System of all aspects of the dynamic driving task with the expectation that the human driver will respond appropriately to a request to intervene

- 04. High Automation: The driving mode-specific performance by an Automated Driving System of all aspects of the dynamic driving task, even if a human driver does not respond appropriately to a request to intervene

- 05. Full Automation: The full-time performance by an Automated Driving System of all aspects of the dynamic driving task under all roadway and environmental conditions that can be managed by a human driver.

Note: The definitions above come from a press release regarding US DOT adopting SAE International's levels of automation. (https://www.sae.org/news/3544/) Refer to the table below for determining the level of automation.

SAE level	Name	Narrative Definition	Execution of Steering and Acceleration/ Deceleration	*Monitoring* of Driving Environment	Fallback Performance of *Dynamic Driving Task*	System Capability *(Driving Modes)*
***Human driver* monitors the driving environment**						
0	No Automation	the full-time performance by the *human driver* of all aspects of the *dynamic driving task*, even when enhanced by warning or intervention systems	Human driver	Human driver	Human driver	n/a
1	Driver Assistance	the *driving mode*-specific execution by a driver assistance system of either steering or acceleration/deceleration using information about the driving environment and with the expectation that the *human driver* perform all remaining aspects of the *dynamic driving task*	Human driver and system	Human driver	Human driver	Some driving modes
2	Partial Automation	the *driving mode*-specific execution by one or more driver assistance systems of both steering and acceleration/ deceleration using information about the driving environment and with the expectation that the *human driver* perform all remaining aspects of the *dynamic driving task*	**System**	Human driver	Human driver	Some driving modes
***Automated driving system* ("system") monitors the driving environment**						
3	Conditional Automation	the *driving mode*-specific performance by an *automated driving system* of all aspects of the dynamic driving task with the expectation that the *human driver* will respond appropriately to *a request to intervene*	System	**System**	Human driver	Some driving modes
4	High Automation	the *driving mode*-specific performance by an automated driving system of all aspects of the *dynamic driving task*, even if a *human driver* does not respond appropriately to a *request to intervene*	System	System	**System**	Some driving modes
5	Full Automation	the full-time performance by an *automated driving system* of all aspects of the *dynamic driving task* under all roadway and environmental conditions that can be managed by a *human driver*	System	System	System	**All driving modes**

Enter **06. Unknown** if you cannot ascertain the level of autonomy of the vehicle.

Driver Ceded Control of Vehicle Check Box

Changes:

- New

Rationale:

- To differentiate between whether the vehicle had autonomous capabilities (above) and whether someone was actively driving the vehicle or not.

Manual Extract:

Mark this box (enter an "**X**" or ✓) if the driver ceded control of the vehicle, in other words, let an autonomous vehicle drive itself.

Business Rules

- If 00, 01, or 02 is entered for **Autonomous Vehicle**, then Driver Ceded Control of Vehicle Check Box must not be checked.
- Conversely, if Driver Ceded Control of Vehicle Check Box is checked, then 04, or 05 must be entered in **Autonomous Vehicle**.

CMV Portion

Changes:

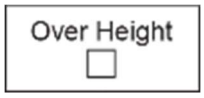
- New

Rationale:

- To indicate which dimension may have contributed to the crash
- To address federal CMV needs

Manual Extract:

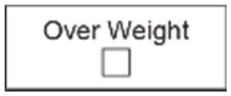
Over Height Check Box



Mark this box (enter an "**X**" or ✓) the vehicle is over height.

Over Weight Check Box

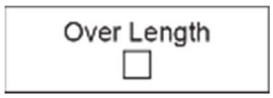
To address federal CMV needs



Mark this box (enter an "**X**" or ✓) if the vehicle is overweight.

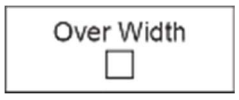
Over Length Check Box

To address federal CMV needs



Mark this box (enter an "**X**" or ✓) if the vehicle is over length.

Over Width Check Box



Mark this box (enter an "**X**" or ✓) if the vehicle is over width.

Permitted Check Box

Mark this box (enter an "**X**") if the vehicle is permitted for all over-size aspects corresponding with the above overage boxes that were marked (over height, overweight, over length and/or over width).

Guidance

Refer to permitting documentation provided by the driver.

Gross Vehicle Weight Rating/Gross Combined Weight Rating

Changes:

- Changed from code to weight (in pounds)

Rationale:

- To better reflect what would be obtained by the officer.

Manual Extract:

Enter the actual weight rating for the vehicle, which will be either the Gross Vehicle Weight Rating or the Gross Combined Weight Rating:

- **Gross Vehicle Weight Rating (GVWR)** A GVWR is a value specified by the manufacturer for a single-unit truck, truck tractor, or trailer. In the absence of a GVWR, an estimate of the gross weight of a fully loaded unit may be substituted.

- **Gross Combined Weight Rating (GCWR)** A GCWR is the sum of the GVWRs for the units which make up a truck combination.

For the power unit, the GVWR can be found on the driver's side door, or by looking at the hinge pillar, door-latch post, or door edge for the manufacture label.

The GVWR for the trailer can be found on the manufacturer's tag affixed to the trailer.

If there is more than one trailer, use the Gross Combed Weight Rating (GCWR) of all the trailers and the power unit in this field.

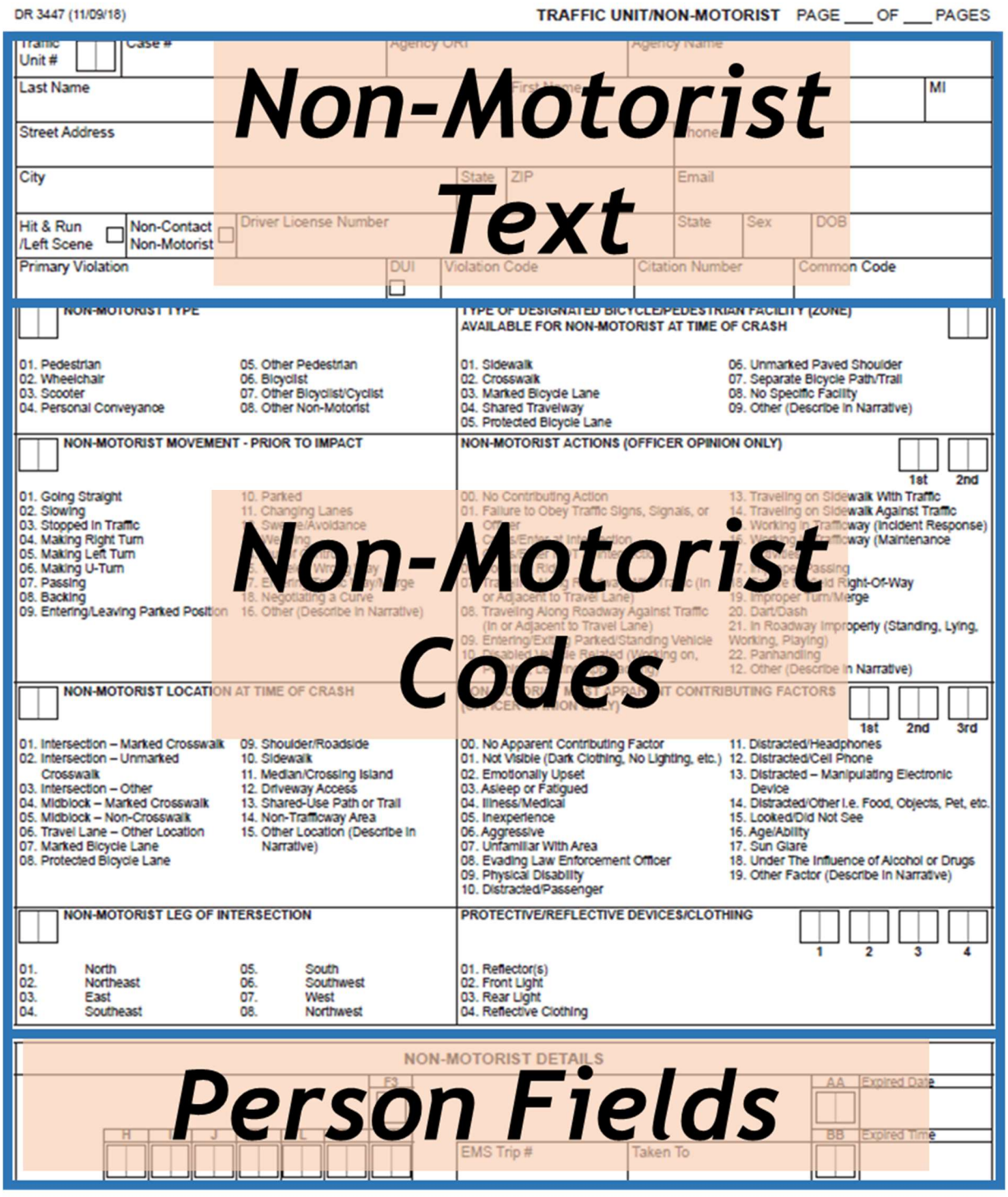
Hazardous Materials – Placards

Enter the appropriate code to indicate whether the vehicle has hazardous material placards. Refer to **Appendix J**.

Guidance

- Normally, if you enter 00. No, then the next four Hazmat fields should be left blank.
- However, If you enter 00. No (because the vehicle is not placarded) but determine from other sources, (i.e., shipping papers) that the vehicle was transporting hazardous materials and ***should have been placarded***, continue to complete the Hazmat fields as applicable.

TRAFFIC UNIT/NON-MOTORIST



Overall Page Layout

The following improvements were applied to this page:

- Gave more room for the person's information
- Separated out from Traffic Unit Vehicle; only needed if a non-motorist is involved
- Kept the fields are the consistent between a Motor Vehicle / Driver and a Non-Motorist
- Adapted the fields in this section for a non-motorist
- Kept the Person fields consistent (but show only those fields that are applicable)

Non-Motorist Type

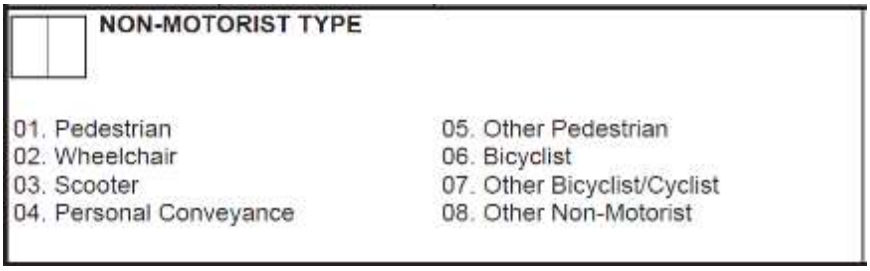
Changes:

- New (separated from "Traffic Unit Type")

Rationale:

- Make it easy for the officer to identify which type of non-motorist was involved
- To enable better safety studies addressing non-motorist crashes

Manual Extract:



Enter the code that best corresponds to the type of non-motorist.

Guidance

The following codes are available for this field:

- 01. Pedestrian, for a person walking or running (not riding any apparatus).
- 02. Wheelchair, for a person in a wheelchair.
- 03. Scooter, for a person riding a scooter (less than 49 cc)
- 04. Personal Conveyance, for a non-motorist on a skateboard, motorized toy cars, etc.

- 05. Other Pedestrian, for any other pedestrian (describe in the narrative)
- 06. Bicyclist, for a non-motorist riding a bicycle (generally, with two wheels), including a tandem bicycle.
- 07. Other Bicyclist/Cyclist, for a non-motorist riding a something besides bicycle (e.g. other than two wheels, motorized bicycle, pedicab, etc.).
- 08. Other Non-Motorist, for any other non-motorist, such as:
  - ➢ A person on skates, riding a skateboard, long-board, or electric skateboard
  - ➢ An occupant of Motor Vehicle Not in Transport (parked, etc.)
  - ➢ An occupant of a Non-Motor Vehicle Transportation Device such as a toy vehicle or scooter that does not have an engine size 49cc or greater. etc.
  - ➢ NOTE: If this code is used, a brief description should be added to the narrative.
- If the electric bicycle with more than 750 watts of power, it should be considered a motorized vehicle (and thus the relevant crash information should be captured on the Traffic Unit/Vehicle page).

Non-Motorist Location at Time of Crash

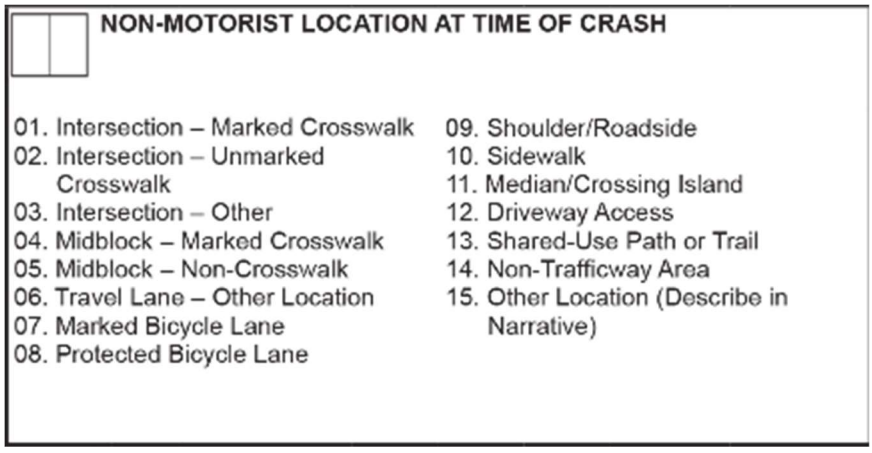
Changes:

- New

Rationale:

- Make it easy for the officer to identify what kind of facility the non-motorist was in when hit
- To enable better safety studies addressing non-motorist crashes

Manual Extract:



NON-MOTORIST LOCATION AT TIME OF CRASH

01. Intersection – Marked Crosswalk
02. Intersection – Unmarked Crosswalk
03. Intersection – Other
04. Midblock – Marked Crosswalk
05. Midblock – Non-Crosswalk
06. Travel Lane – Other Location
07. Marked Bicycle Lane
08. Protected Bicycle Lane
09. Shoulder/Roadside
10. Sidewalk
11. Median/Crossing Island
12. Driveway Access
13. Shared-Use Path or Trail
14. Non-Trafficway Area
15. Other Location (Describe in Narrative)

Enter the code which best describes the location of the non-motorist at the time of the crash.

Leg of Intersection

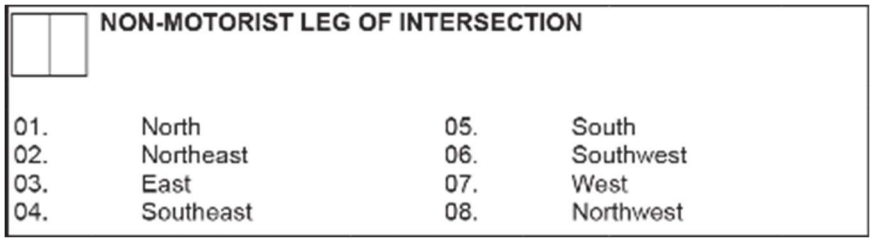
Changes:

- New

Rationale:

- Make it easy for the officer to identify wherein an intersection the non-motorist was when hit
- To enable better safety studies addressing non-motorist crashes

Manual Extract:



NON-MOTORIST LEG OF INTERSECTION

01.	North	05.	South
02.	Northeast	06.	Southwest
03.	East	07.	West
04.	Southeast	08.	Northwest

Enter the codes corresponding to the cardinal direction of the intersection leg in which the non-motorist was located at the time of the crash.

Type of Designated Bicycle/Pedestrian Facility/(Zone) Available for Non-Motorist at Time of Crash

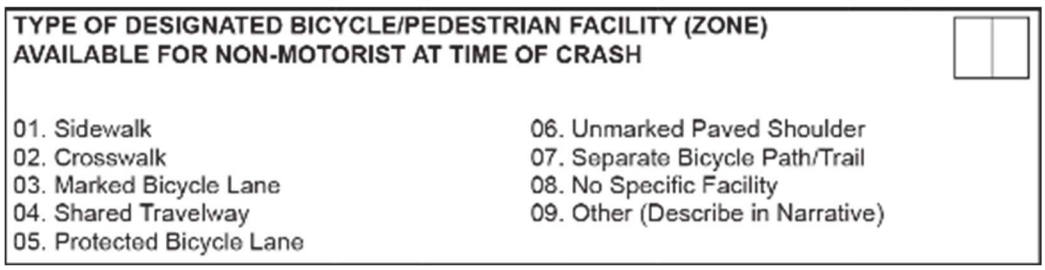
Changes:

- New

Rationale:

- Make it easy for the officer to identify which type of facility was available to the non-motorist at the location of the crash
- To enable better safety studies addressing non-motorist crashes

Manual Extract:



TYPE OF DESIGNATED BICYCLE/PEDESTRIAN FACILITY (ZONE) AVAILABLE FOR NON-MOTORIST AT TIME OF CRASH

01. Sidewalk	06. Unmarked Paved Shoulder
02. Crosswalk	07. Separate Bicycle Path/Trail
03. Marked Bicycle Lane	08. No Specific Facility
04. Shared Travelway	09. Other (Describe in Narrative)
05. Protected Bicycle Lane	

Enter the code which best describes the type of facility/zone that was present and available for use by the non-motorist. The non-motorist may not have made use of the facility

Guidance

- Crosswalks are considered available for a non-motorist as per CRS 42-4-803, "Between adjacent intersections at which traffic control signals are in operation, pedestrians shall not cross at any place except in a marked crosswalk."
- Protected Bicycle Lanes include physical separation motor vehicle travel ways and the bicycle lane, such as raised curb, delineators, etc.
- There are often experimental or trial facilities that are not specifically identified in the list of codes. For example, some municipalities are trying out the use of "green bike boxes". If such a facility is present, then enter code 08. Other, and describe the type of facility in the narrative.
- Examples of a protected bike lanes include: a lane placed between parked cars and curb, or delineators separating from travel lanes, etc.

Non-Motorist Actions

Changes:

- New (separated from Driver Action)

Rationale:

- Make easier for officer to select appropriate codes for a non-motorist

Manual Extract:

NON-MOTORIST ACTIONS (OFFICER OPINION ONLY) 1st 2nd

00. No Contributing Action	13. Traveling on Sidewalk With Traffic
01. Failure to Obey Traffic Signs, Signals, or Officer	14. Traveling on Sidewalk Against Traffic
02. Cross/Enter at Intersection	15. Working in Trafficway (Incident Response)
03. Cross/Enter NOT at Intersection	16. Working in Trafficway (Maintenance Activities)
06. Soliciting Rides	17. Improper Passing
07. Traveling Along Roadway With Traffic (In or Adjacent to Travel Lane)	18. Failure to Yield Right-Of-Way
08. Traveling Along Roadway Against Traffic (In or Adjacent to Travel Lane)	19. Improper Turn/Merge
09. Entering/Exiting Parked/Standing Vehicle	20. Dart/Dash
10. Disabled Vehicle Related (Working on, Pushing, Leaving/Approaching)	21. In Roadway Improperly (Standing, Lying, Working, Playing)
	22. Panhandling
	12. Other (Describe in Narrative)

Enter the codes that best describe the non-motorist action that contributed to the crash. Whereas the next field describes a non-motorist condition, these fields refer to specific actions, or law violations, that led to the crash occurring.

For example, if a non-motorist was walking on the sidewalk (in the same direction as the traffic), then started crossing the street (in the middle of the block), then

- The 1st Non-Motorist action would be **13. Traveling on Sidewalk With Traffic**, and
- The 2nd Non-motorist action would be **03. Cross/Enter NOT in crosswalk**.

Guidance

- Up to two non-motorist actions can be entered.
- The more significant action (that had the most impact leading to the crash occurring) should be entered first.

Business Rules

- The first field must be given a value.
- If the first field is coded as **00. No Contributing Action**, then the second fields should be left empty.

Protective/Reflective Clothing

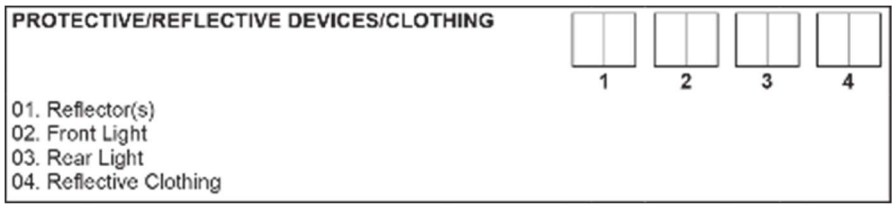
Changes:

- New

Rationale:

- Make it easy for the officer to identify which type of protection the non-motorist was using
- To enable better safety studies addressing non-motorist crashes

Manual Extract:



Enter the codes corresponding to the protective and/or reflecting devices and/or clothing worn by the non-motorist.

Guidance

- Up to four codes can be entered.
- Enter the code corresponding to the most significant item in the first field, followed by any others that are applicable.

Business Rules

- If any of the four fields are left blank, then all subsequent fields must also be left blank

Involved Person/Non-Motorist Fields

Changes:

- Located on Non-Motorist page in the same way as for the MOTORIZED TRFFIC UNIT/OCCUPANT page
- Show only the fields applicable to a non-motorist

Rationale:

- Make it easier for an officer to enter the appropriate information for a non-motorist

Manual Extract:

These fields are to be filled out using the **INVOLVED PERSON OVER**LAY. See the following page for reference.

This section of the Traffic Unit/Non-Motorist page should be filled out similarly to the occupant section of the **MOTORIZED TRAFFIC UNIT / OCCUPANTS** page. See the manual section starting on page 80 for details.

F3-Safety Equipment – Helmet

If the pedestrian / non-motorist was riding something a conveyance that justifies use of a helmet, then enter the appropriate code indicating a) whether or not a helmet was available, b) whether it was used, and c) if it was used properly.

Examples of what conveyances a non-motorist might be riding that justifies wearing use of a helmet:

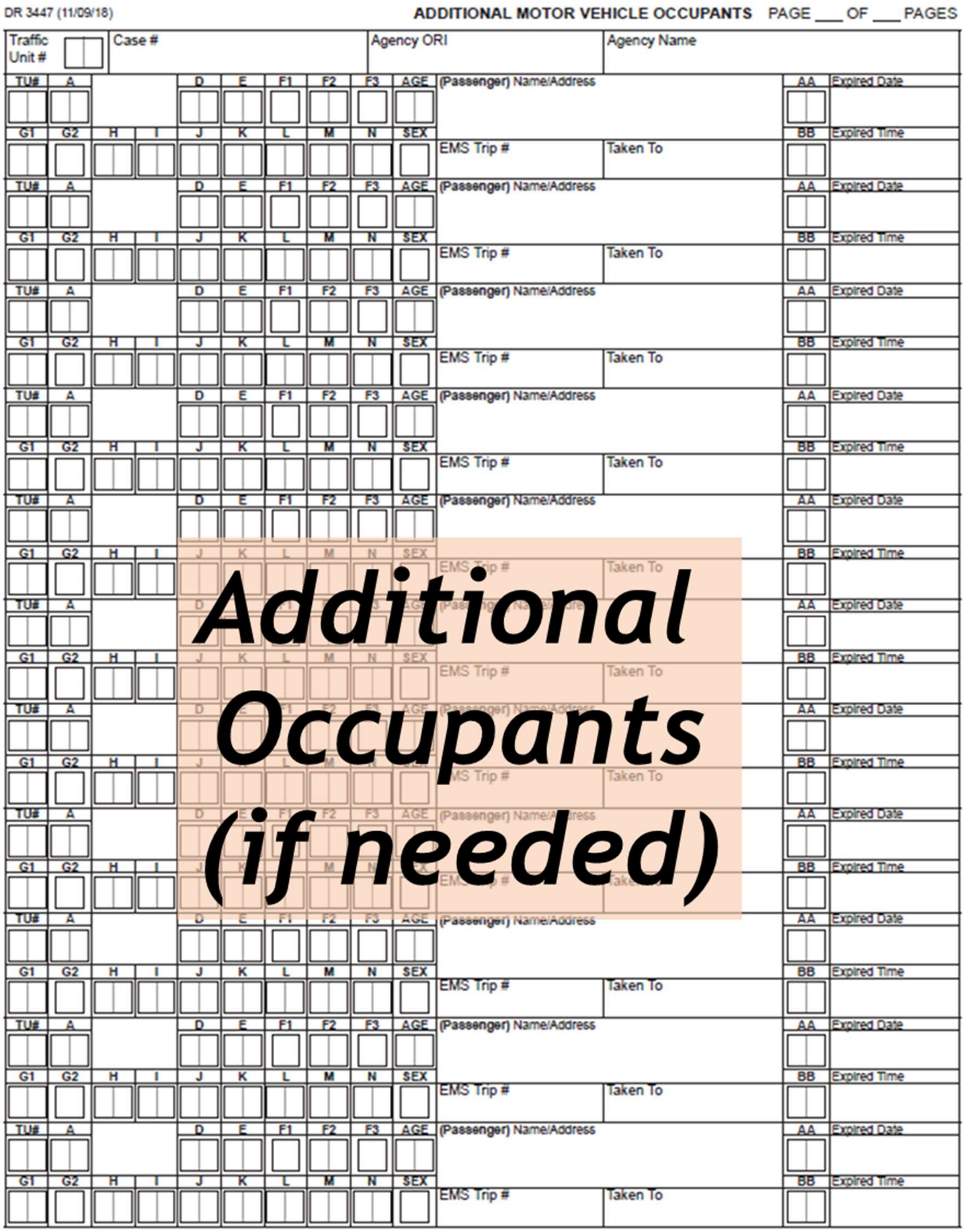
- Bicycle
- Motorized Bicycle
- Other bicycle
- Personal Conveyance (such as a skateboard, longboard, roller skates or in-line skates)

Otherwise, enter the code A-N/A (for pedestrians and other non-motorists where a helmet would not be required), such as a pedestrian, etc.

NOTE: Not showing all fields described in the manual.

Additional Motor Vehicle Occupant Page

This page is needed only if there are more than 4 occupants in a motor vehicle that need to be reported.


DR 3447 (11/09/18)

ADDITIONAL MOTOR VEHICLE OCCUPANTS PAGE ___ OF ___ PAGES

Traffic Unit #	Case #	Agency ORI	Agency Name

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

TU# | A | D | E | F1 | F2 | F3 | AGE | (Passenger) Name/Address | AA | Expired Date
G1 | G2 | H | I | J | K | L | M | N | SEX | EMS Trip # | Taken To | BB | Expired Time

Overall Layout

This page has the same layout as the DRIVER/OCCUPANT DETAILS section of the vehicle page.

The Additional Damaged Properties Page

This page is needed only if more than two pieces of property were damaged.

Overall Layout

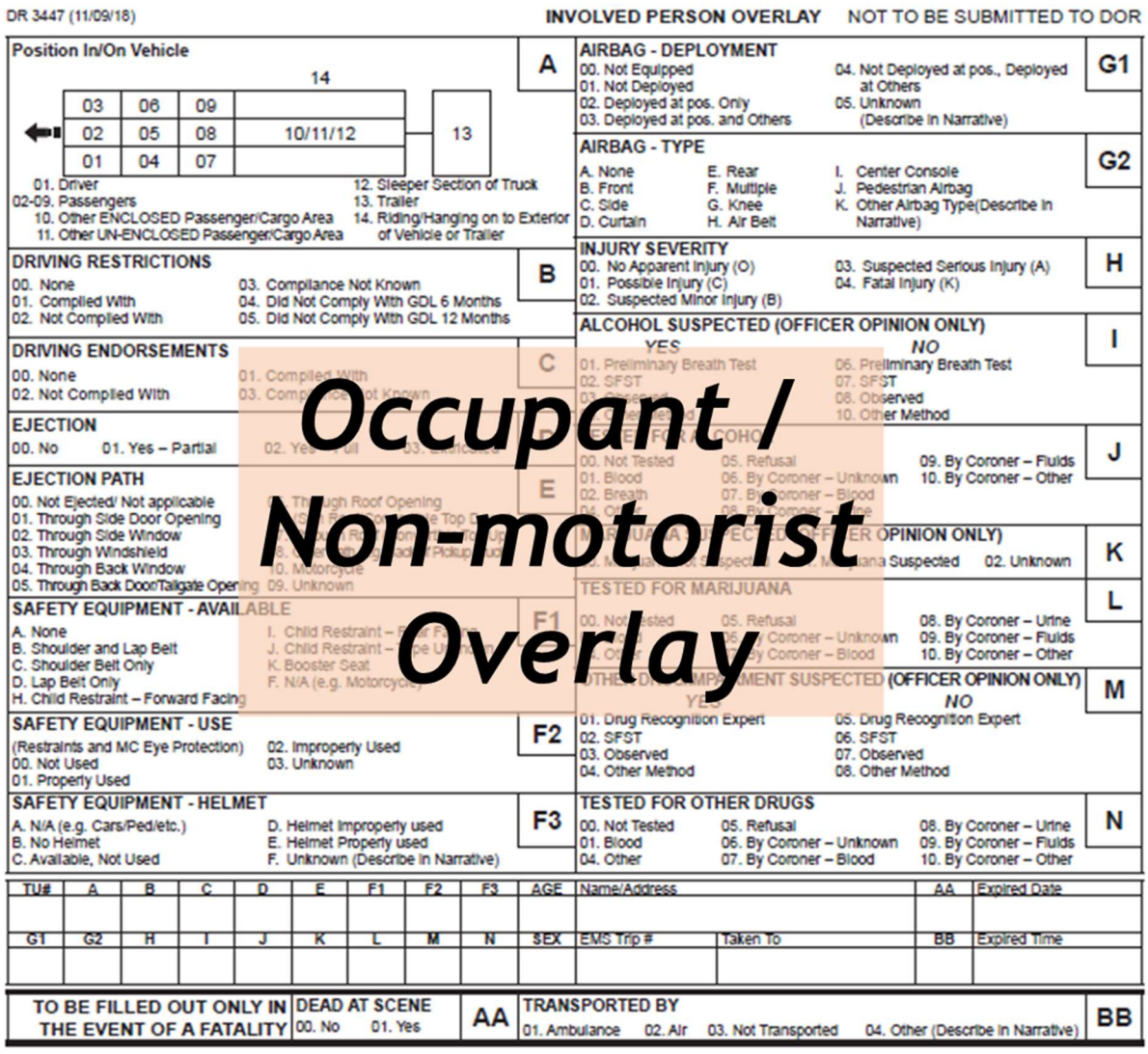
This page has the same layout as the damaged property section on the NARRATIVE/DIAGRAM page.

The Involved Person Overlay

Overall Layout

Rolled in fields that were used only on Fatal Supplement which are highlighted by the dark border around those fields.

This overlay applies consistently to the DRIVER/OCCUPANT section on the vehicle page, the NON-MOTORIST DETAILS section on the non-motorist page, and the Additional Motor Vehicle Occupants page (if needed)



Occupant / Non-motorist Overlay