Traffic Crash Investigation

BLET: 25D

TITLE: TRAFFIC CRASH INVESTIGATION

Lesson Purpose: To provide the student with information regarding the reporting procedures and initial investigation of traffic crashes.

Training Objectives: At the end of this block of instruction, the student will be able to achieve the following objectives in accordance with the information presented in class:

1. List the steps to be followed when responding to and beginning a preliminary investigation of a motor vehicle crash.

2. List the steps to be followed when responding to and beginning a preliminary investigation of a hit-and-run motor vehicle crash.

3. Explain, in writing, the procedures required upon arrival at a crash scene to:
   a. Protect the public
   b. Preserve evidence

4. Describe the methods used to inspect vehicles involved in a motor vehicle crash to determine:
   a. Damage
   b. Defective equipment (as a contributing factor)
   c. Post collision operability

5. Distinguish between a reportable and non-reportable motor vehicle crash.

6. Explain the procedures used to determine contributing factors to a motor vehicle crash.

7. Given the proper measuring devices, diagramming materials, and a simulated motor vehicle crash, complete a field sketch by recording the location of evidence using both...
triangulation and the coordinate method of measuring.

8. Describe the process used to determine the area of impact at the scene of a motor vehicle crash.

9. Given a simulated motor vehicle crash, demonstrate the ability to complete a DMV-349 Crash Report, to include damage estimates and insurance information.

10. Explain when additional assistance is required at the scene of a motor vehicle crash to ensure that the roadway is safe for vehicular travel.

11. List the steps necessary to conduct follow-up investigations of motor vehicle crashes to include:
   a. Fatalities/vehicular homicides
   b. Vehicular assaults
   c. Hit-and-runs
   d. Personal injury crashes

Hours
Twenty (20)

Instructional Method:
Lecture/Discussion/Demonstration/Practical Exercise

Materials Required:
Traffic Investigation Templates
DMV-349 Instruction Manual
DMV-349 Crash Report

Training Aids:
Flip Chart or Blackboard
Prepared Practical Exercises
Traffic Investigation Templates
DMV-349 Instruction Manual
DMV-349 Crash Report
100 Foot Measuring Tapes
300 Foot Measuring Tapes
Chalk/Lumber Crayon
Spray Paint
VCR/Monitor

Video:
Traffic Crash Investigation Series, NCJA (2001)
Traffic Crash Investigation

References:


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TITLE: TRAFFIC CRASH INVESTIGATION - INSTRUCTOR NOTES

Although this section of the BLET curriculum does not require a specialized instructor certification, it should be delivered by persons with extensive experience in traffic crash investigations.

The quality of future investigations depends greatly on the training received in this lesson.

1. Required Materials
   a. Most current versions of the DMV-349 Crash Report and Instruction Manual. The DMV-349 form changed drastically in 1999. Delivering instructors should be familiar with and trained on its use. DMV-349 Instruction Manuals may be ordered, free of charge, by contacting:

      North Carolina Department of Motor Vehicles
      1100 New Bern Ave
      Raleigh, North Carolina 27697-0001

      Or call, (919) 733-2725

   b. Civilian vehicles used for “staged” crash scenes.

   c. Instructors are encouraged to use actual photographs of crash scenes (when possible) to illustrate concepts.

2. Conducting Practical Exercises
   a. There is no substitute for actually performing practical exercises. Measuring lines on paper is not the same as locating a piece of evidence on the roadway, marking it, and measuring it for a field sketch.

   b. Each practical exercise must be completed as described. Students may work in small groups (2-4 students per group is recommended). Instructors should provide individual attention to ensure everyone understands the concepts taught.

   c. Staged crash scenes will combine training objectives to include measuring, diagramming, and completing the DMV-349.

   d. Instructors should create several “staged” crash scenes with enough room for everyone to work. Assistance may be needed if student
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groups are located far apart geographically, or if they are working on actual streets. This will allow the students to ask any questions they may have and also provide for student safety.

e. Instructors may create scenes in parking areas or on campus service roads. Each scenario should be listed as follows:

Vehicle A, driven by Roger Appleton, age 36, was traveling on a street, obeying the speed limit. There was one passenger in his vehicle, Jessica Appleton, 8 years of age. Both were wearing their seat belts.

Vehicle B, driven by Janis Travis, age 35, failed to stop for a stop sign and struck the side of Appleton’s car. Travis had one passenger in her car, her 8-year-old son Jared. Both were wearing their safety belts.

Roger Appleton complains of pain in his left arm and leg. There are no other injuries. Other needed information is below as well as a diagram to assist you in setting up the scenes.

(1) Intersections may be “T” or cross streets.

(2) Items to be measured for field sketch:
  
  • Final rest positions for each vehicle
  • Stop sign
  • Begin/end of skids (pre- and post-impact)
  • Area of impact
  • Lane/street widths

(3) Driver addresses:

  • Appleton
    102 Manor Court
    Kings Mountain, NC 28092

  • Travis
    5567 Lostor Way
    Hickory Hills, SC 29396

(4) Instructors may provide or allow students to create dates of birth matching the given ages of the individuals.

(5) Students may use actual vehicle information from vehicles used in the scenario.
(6) Instructors may provide or allow students to create names for the streets involved in the crash, or they may use actual street names. Students should also use actual directions of travel for the vehicles as the scenario is set up.

(7) Students must measure the following items and may use the legend below when creating their diagram:

<table>
<thead>
<tr>
<th>Spot</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Stop sign</td>
</tr>
<tr>
<td>B</td>
<td>Area of impact</td>
</tr>
<tr>
<td>C,D</td>
<td>Vehicle B scuff marks</td>
</tr>
<tr>
<td>E,F</td>
<td>Vehicle A pre-impact skids, beginning</td>
</tr>
<tr>
<td>G,H</td>
<td>Vehicle A pre-impact skids, end</td>
</tr>
<tr>
<td></td>
<td>These will also be post-collision skids, beginning</td>
</tr>
<tr>
<td>I,J</td>
<td>Vehicle A post-collision skids, end</td>
</tr>
<tr>
<td>K</td>
<td>Vehicle B rear tire @ final rest</td>
</tr>
<tr>
<td>L</td>
<td>Vehicle B front tire @ final rest</td>
</tr>
<tr>
<td>M</td>
<td>Vehicle A rear tire @ final rest</td>
</tr>
<tr>
<td>N</td>
<td>Vehicle B front tire @ final rest</td>
</tr>
</tbody>
</table>

3. To promote and facilitate law enforcement professionalism, three (3) ethical dilemmas are listed below for classroom discussion. At their discretion, instructors must provide students with each ethical dilemma listed below. Sometime during the lecture instructors should “set the stage” for the dilemma prior to taking a break. Instructors are encouraged to develop additional dilemmas as needed.

   a. While helping a fellow officer direct traffic around a crash involving minor damage (less than $250.00), the driver of one vehicle tells the investigating officer, in your presence, his shoulder is “a little sore” from the seatbelt. The investigating officer tells you later on that
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he/she is not going to complete a report because the estimated damage amounts are not more than $1000.00. What will you do?

b. Your field training officer is helping you collect skid mark measurements from a crash scene. You notice that he/she is walking or “pacing-off” each measurement and not using an approved measuring device/tape. What will you do?

c. While scanning the scene of a hit and run investigation, you observe a broken tail light assembly in the roadway. Without inspecting the evidence whatsoever, the investigating officer tells you to remove and discard the item(s) from the roadway immediately. What will you do?
I. Introduction

A. Opening Statement

NOTE: Show slide, "Traffic Crash Investigation."

Crash reporting is the first level of the investigation. This will be the primary focus of this lesson. The North Carolina DMV-349 Crash Report officially records events surrounding a crash. The accuracy and completeness of the report will depend on the quality of an officer's investigation and his/her attention to detail.

Note: Most vehicular collisions, regardless of driver intent, are referred to as a "crash" because the primary cause(s) typically result from specific driver actions.

B. Training Objectives

NOTE: Show slide, “Training Objectives.”

C. Reasons

Each subsequent level of investigation relies heavily on the quality of the initial investigation. The location of the crash, road conditions at the time of crash, and other evidence at the scene cannot be replaced or recreated, unless documented by the officer during the initial investigation.

The public, insurance adjusters, the Department of Motor Vehicles, and other involved personnel will see the results of crash investigations. The quality of an officer's work will reflect directly upon him/her as the investigator.

II. Body

A. Responding to the Scene of a Crash

NOTE: Show slide, "Responding to a Crash."

1. Gather as much information as possible before responding. The presence of hazardous materials or personal injury may alter an officer's response.
2. Follow the shortest and quickest possible route to the scene.
3. Always employ safe driving techniques when responding.

B. Responding to the Scene of a Hit-and-Run Crash

**NOTE:** Show slide, "Responding to a Hit-and-Run Crash."

Hit-and-run response procedures should be the same for other crash events, with a few additional suggestions.

1. Gather all available information on the suspect vehicle.
2. While responding to the scene, look for vehicles that match descriptions given.
3. If suspect information was not available, obtain and broadcast a description to all surrounding law enforcement agencies as soon as possible.
4. Keep in mind that some collisions are intentional. Whether insurance fraud or assault, be prepared to investigate suspect intent.

C. The Investigator

1. When starting an investigation, the greatest enemy may be the investigator's own prejudices.
2. View each collision as a separate investigation, even when similarities exist from previous crashes.

D. Arriving at the Scene of a Crash

**NOTE:** Show slide, “Arriving at the Scene."

1. Select a safe location to park the patrol vehicle. When deciding on a position, remember to:
   a) Use the patrol vehicle emergency lighting;
   b) Not blind oncoming traffic with the patrol vehicle's lights at night;
   c) Use the patrol vehicle as a “barrier.”
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2. Request additional assistance as needed. This includes:
   a) Emergency medical or fire personnel
   b) Additional officer(s) for crowd control or traffic direction
   c) Utility companies for downed power lines, etc.
   d) Request wrecker service/tow truck to remove non-drivable vehicles from scene.

   Note: Agency policy may determine wrecker call-out procedures.

3. Make certain all injured persons are receiving first aid.

   Note: Providing first aid to those injured is of primary importance, followed by protecting those at the scene from any further injury. Do not overlook the importance of preserving the evidence at the scene. Many of the precautions used to protect involved persons will also preserve evidence.

4. When possible, prevent other vehicles and involved persons from entering the scene (prevent tampering).

5. Mark and collect evidence as soon as possible.

6. Locate and separate any witnesses as soon as possible.

7. Locate and separate drivers as soon as possible.

   Note: Keep all involved persons separated until they can be interviewed.

8. Make every attempt to keep traffic flow moving around crash scene. This can be accomplished by requesting back-up units to direct traffic and/or moving involved vehicles out of roadway as soon as the investigating officer has documented his/her position.

   NOTE: Show NCJA video, Traffic Crash Investigation - "Arriving at the Scene" (5 minutes).

E. Interviewing Persons at the Scene of a Crash
NOTE: Show slide, "Interviewing Persons at the Scene."

1. Whether dealing with a witness, driver, or passenger, certain steps should be followed.
   a) Interview involved persons alone and away from others.
   b) Be tactful, patient, and employ good communication skills.
   c) Gather identification from the person.
   d) Allow the person to tell his or her version of the events without interruption. Investigators should refrain from telling the person being interviewed "what happened."
   e) Be sure to ask the person exactly where they were (position) when the crash occurred. This may help prove or disprove statements made later in the investigation.
   f) Pay close attention to any signs or actions that suggest injury, illness, or impairment.
   g) When interviewing drivers be aware of the person's constitutional rights (see “Arrest, Search and Seizure/Constitutional Law” block of instruction).

2. Officers may also request persons to provide a written statement for future use.

3. Try to interview witnesses as soon as possible since they are under no obligation to remain at the scene.

4. Witness, driver, and passenger statements are just one part of the total investigation. Officers should also remember that these statements are sometimes the least reliable pieces of evidence.

F. The Involved Vehicle or Vehicles

1. Officers must inspect the vehicle(s) involved.

2. Focus on any newly damaged parts of the vehicle and classify the type of damage.
Note: Officers should be mindful/aware of “old” damage that was not caused during the current investigation.

a) **Contact Damage** is damage caused by direct contact with some object that is not a part of the vehicle itself.²

b) **Induced Damage** is damage that is caused by the vehicle being hit in one area and the vehicle reacting in another. An example is the roof buckling when the vehicle is hit on the front.³

3. All damage observed should closely match object(s) that came in contact with that area of the vehicle. If damage patterns do not match, officers should investigate further.

4. Check for any sign(s) of defective equipment that may have contributed to the crash.

a) Some drivers may blame malfunctioning vehicle equipment for the crash, such as brake or tire failure.

b) Officers should pay close attention to equipment.

c) To properly identify an equipment malfunction, officers may need to arrange a mechanical inspection by a qualified mechanic.

d) Less than one percent of all crashes are caused by mechanical failure annually.

e) Take detailed notes of any equipment issues found to be deficient.

5. Involved vehicle(s) should be checked to see if they are operable or will need removal by a wrecker. A visual inspection of wheel and tire systems and fluids under the vehicle are suggested.

G. Other Contributing Factors to a Crash

There are three basic elements involved in any crash.

NOTE: Show slide, "Three Basic Crash Elements."
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1. People: this includes, but is not limited to, impairment, experience, and actions.

2. Vehicle(s): this includes, but is not limited to, size and equipment.

3. Roadway: this includes, but is not limited to, weather (wet, dry, snow) conditions (construction, debris). Officers should also locate and preserve any evidence from the collision found in the roadway.

H. Evidence from the Roadway

There are five types of physical evidence from the roadway:

NOTE: Show slide, "Roadway Evidence."

1. Final resting positions of vehicles and bodies

There are two types of final resting positions. They are controlled and uncontrolled.

a) Controlled final resting positions are perpetuated by the driver since they are in control and able to steer and brake.

b) Uncontrolled positions are very important in the investigation. The forces of physics determine the point and time objects come to rest.

2. Tire marks

Tire marks fall into one of three categories: skids, yaws, or prints.

a) Skids are made by a tire that is locked and is not free to rotate, i.e., sliding.

(1) As evidence, skids show:

NOTE: Show slide, "Skids."

(a) The location and direction of travel for the vehicle.
The most important information an officer needs is the total distance the vehicle slid.

(a) To make this measurement, officers must match skids on the roadway with the creating tire.

(b) Skid marks must be measured from the first point of the impending skid to the area that the positive skid mark stops.

(c) Officers must know how to measure different types of skids correctly.

i) Skip skids
   Measure as one complete skid. Be sure to note them as skip skids.\(^5\)

ii) Gap skids
    Measure each set of skids separately as well as the gap. Record and label all measurements.\(^6\)

iii) Curved skids
    Measure entire length of skid, note as curved skid mark and direction of curvature.

b) Yaw marks are made by tires freely rotating but also sliding to the side.

NOTE: Show slide, “Yaw Marks.”
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(1) **Yaw** marks are always curved and have very distinctive striations that show the vehicle was sliding sideways.

(2) As evidence, the *yaws* show:

(a) The vehicle was traveling too fast to negotiate the curve.

(b) The vehicle's location and direction on the roadway.

(c) The driver's intention was not to stop but rather to steer.

(d) Very accurate in determining speed of vehicle.

(3) To measure a *yaw* mark officers need to measure the chord and middle ordinate in the first one third of the yaw mark.

c) Tire prints are caused by tires rotating in normal fashion and freely.

(1) Tire prints are typically seen when a vehicle's wheels travel through soft material or fluid (slush, sand, or snow).

(2) As evidence, tire prints can illustrate:

(a) The location and direction of the vehicle.

(b) The driver's intention was not to brake, and it may indicate that the driver was steering.

3. **Gouge** marks

**NOTE:** Show slide, "Gouge Marks."

a) Although sometimes called by different names, a *gouge* mark is physical damage caused to the road when some part of the vehicle strikes the roadway.
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b) *Gouge* marks typically occur when vehicle parts impact the roadway. *Gouge* marks usually indicate the area of impact.

c) For *gouge* marks to be beneficial, officers must match *gouge* marks with objects on the vehicle that made it.

4. *Debris*

**NOTE:** Show slide, “Debris.”

a) *Debris* is the most common type of physical evidence found at the scene of a crash. *Debris* refers to broken parts, dirt, or fluid dislodged from the vehicle during the impact.

b) *Debris* is not always the best way to locate the exact point of impact because *debris* will travel with the car and continue forward after the vehicle stops. *Debris* can be thrown a considerable distance from the vehicle.

c) *Debris* can be used as evidence in solving hit and run collisions.

**NOTE:** Give an example you are familiar with in which debris (such as a lens cover, bumper, etc.) was used to identify a hit-and-run vehicle.

d) Vehicle fluids and blood from pedestrians can show the path traveled to reach the final resting position.

5. Damage to roadside objects

a) Damaged objects such as trees, mailboxes, ditch culverts, signs, fences, and other structures can help officers understand events that have occurred.

b) Roadway shoulders may show signs that the vehicle has left the ground (went airborne) at some point. Officers should look for the sudden absence of tire impressions and signs of a “landing.”

6. Some type of physical evidence will be present at most crash scenes. Examples include vehicles involved, vehicular fluid,
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body fluids, and/or damage to the roadway. Some of this evidence may be collected and submitted. Other types must be photographed. All evidence should be documented in the field sketch.

I. Determining the Area of Impact

NOTE: Show slide, "Determining the Impact Area."

Also referred to as the “point of impact,” but generally agreed upon that the exact point is difficult, if not impossible to locate given the size of the objects involved. Therefore, officers should refer to this location as the “area of impact.” This area can be located by looking for signs on the roadway.

1. Indicators of impact area are:

   a) Dirt and debris on the roadway

      Dirt and other debris from the vehicle's undercarriage may dislodge during the collision. Parts may also become dislodged. This debris may be an indicator of the area of impact.

   b) Gouge marks on the road

      The force of a collision can actually push down parts of the vehicle's undercarriage into the roadway. Items such as bolts on the shock assembly and leaf springs will gouge holes and scrapes on the roadway. These gouge marks may indicate the area of impact.

   c) Sharp angles in skid marks (offsets)

      Abrupt changes in skid mark direction as correlated to vehicle damage patterns. For example: Vehicle A's front tires are locked and creating skid marks. Vehicle B's front bumper collides with Vehicle A's right rear quarter panel. Vehicle A's skid marks abruptly change on the road, but the actual area of impact was back further near the rear quarter panel.

NOTE: Show NCJA video, Traffic Crash Investigation - “Name That Impact/Quiz” (5 minutes).
J. Completing the Field Sketch

The field sketch is an important tool for crash scene investigators. Typically not drawn to scale, these diagrams can help officers illustrate evidence and re-create future drawings needed for the DMV-349 Crash Report.

NOTE: Show slide, “Field Sketch.”

1. The amount of detail needed on a field sketch will be dictated by the seriousness of the crash. It should include, at a minimum, the following locations:
   a) Final resting positions of the vehicles;
   b) Area of impact;
   c) Any evidence located at the scene such as skid marks, bodies, debris, or fluid, and any other objects which are damaged during the crash.

2. Once evidence items have been located and photographed, officers may mark the location of such items. This can be done using a road crayon or other device. This will allow officers to preserve the location even after the item has been removed.

   Note: Photographs should be taken before any marks are placed at the scene.

3. Marking evidence

   NOTE: Show slide, “Marking Evidence.”

   For marking on the roadway officers may use chalk, lumber crayon, or spray paint. For marking spots off the roadway use wooden stakes.

   a) For small items one mark will be sufficient. Items which generally require one mark are:

   (1) Gouges or small groups of gouges less than three feet across (when marking a small group, officers should place one mark in the middle of the group).
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(2) Splatter areas or puddles less than three feet across.

(3) Grooves, scrubs, and other tire marks less than three feet long (mark these spots in the middle).

(4) Small parts of the vehicle which may have become detached.

b) Two marks can be used to locate most larger items. Items which generally require two marks are:

(1) Bodies - placing one mark at the head and one at the center of mass.

(2) Vehicles - mark the center of each tire on one side.

(3) Straight grooves, skid marks, or other tire marks - place a mark at each end of the mark.

(4) Long sections of railing or fences scraped or damaged - mark a spot on each end.

(5) Dribble paths - mark each end.

4. Officers may need to use three or more marks on some items, such as:

a) Curved tire marks such as yaw marks and curved skid marks - mark these by marking at 5, 10, or 15 foot intervals, depending on the length and radius of the curve.

b) Straight irregular marks, such as deviated skid marks - mark a spot at each end and one at the point of irregularity.

c) Debris areas larger than three feet - place several marks around the perimeter of the debris field but do not try to locate each and every item.

5. Once these items are located and marked, they should also be labeled. This is done by assigning each item a letter. This
information will be recorded on a legend. There are certain materials officers will need to mark these locations.

K. Reference Points

Taking measurements at the scene requires officers to use reference points. A reference point is a permanent location that officers or someone else can locate at the scene. There are two types of reference points---tangible and intangible.¹¹

NOTE: Show slide, "Reference Points."

1. **Tangible** reference points

   A tangible reference point is a fixed object or landmark already at the scene. Examples of a tangible reference point are:

   a) Fire hydrants
   b) Utility poles
   c) Bridges
   d) Buildings
   e) Manhole covers
   f) Surveying nails
   g) Waterline caps
   h) Storm drains

2. **Intangible** reference points

   Intangible reference points are those which the officer places at the scene and must be related to and measured from a tangible reference point. Examples of intangible reference points are:

   a) Points at which extended curb lines intersect.
   b) Points located on the roadway which are a measured distance from a tangible reference point.
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Intangible reference points should be marked on the roadway with paint or chalk, then measured in the same manner as a tangible reference point.

L. Measuring

1. After the reference points have been determined, officers need to take measurements. Equipment needed to take measurements is:

   a) Two measuring tapes—one at least 100 feet and one 25 feet. Steel tape is the most accurate because it does not stretch, like fabric or fiberglass tape. However, steel tape will rust once wet.

   b) Wheel tape. These can be used on smooth surfaces, but make sure that the wheel stays in contact with the ground at all times.

   Note: Never “pace off” (walking pace estimates) distances when conducting an investigation of a motor vehicle collision. This method is very inaccurate and should not be used under any circumstances.

2. Measurements should be recorded to the closest inch. When there is more than one officer measuring, the officer reading the measuring device should record the numbers.

3. Write all measurements in feet and inches by listing the number of feet and an underlined superscript to indicate inches.

   NOTE: Write an example on the board or flip chart illustrating the proper procedure for recording measurements.

4. Methods of measuring

   NOTE: Show slide, "Measuring."

   There are two primary methods used to take measurements: the coordinate method and the triangulation method.
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a) Coordinate method

The coordinate method involves taking two measurements from a reference point. Officers need to record both the distance and direction for each measurement. For instance, item A may be 25 feet 3 inches NORTH, and 8 feet 2 inches WEST of the reference point. Regardless of distance or direction, both measurements will always create a right angle.

When using the coordinate method, officers may wish to place one of the measuring tapes on the ground directly in line with the reference point. This becomes a baseline. Using the other tape, measure the distance from the item to the baseline. If several items must be measured, this is a convenient way to take several measurements in a relatively short period of time.

Note: The edge of the roadway is often a good location for a baseline.

b) Triangulation

The triangulation method is appropriate in the absence of a good reference point.

When using the triangulation method, take three measurements for each mark. Use two reference points for each mark. The mark is measured from each reference point and the distance between the reference point. These three measurements form a triangle.

The triangulation method is complex. However, there are times when it is preferred or more practical.

NOTE: Show video Traffic Crash Investigations - “Measuring and Diagramming Crash Scenes” (15 minutes).

NOTE: Distribute handouts, "Coordinate Method of Measurement Data Sheet" and “Triangulation Method of Measurement Data Sheet.”

M. DMV-349 Crash Report
1. Definitions

a) Motor vehicle traffic crash

NOTE: Show slide, "Motor Vehicle Crashes."

A motor vehicle traffic crash is any event that results in the unintended injury or property damage directly or indirectly related to the motion of a motor vehicle or its load.

Note: Refer to “Motor Vehicle Law” lesson plan to review the definition of a motor vehicle.

b) Examples of motor vehicle crashes:

(1) Motor vehicle with another motor vehicle, parked or in motion.

(2) Motor vehicle, parked or in motion, with a bicycle, moped, or other vehicle, and vice versa.

(3) Motor vehicle with a train.

(4) Motor vehicle with a domestic or wild animal.

(5) Motor vehicle with objects not vehicles such as poles, bridges, fences, vehicle loads, and rocks falling from vehicles.

c) Examples that are NOT motor vehicle crashes:

(1) A train with a pedestrian.

(2) An aircraft crashes and collides with a motor vehicle.

(3) An individual throws a rock off a bridge and strikes a vehicle.

(4) A bicycle with another device that is NOT a motor vehicle.

d) Reportable crash (NCGS 20-4.01(33b)
NOTE: Show slide, “A Reportable Crash.”

The DMV-349 Crash Report must be completed when the crash, or collision, is a “reportable crash.” A reportable crash is a collision involving a motor vehicle and when one of the following conditions is present:

1. There is a death or injury to a human being

   When personal injury is observed or claimed, the event must be recorded on the DMV-349 Crash Report.

2. Total property damage is $1000 or more.

   In the matter of property damage, take into account the sum of all damages to all vehicles and all property at the time of the crash. If the sum of all property involved is $1000 or more then the crash is reportable and a DMV-349 Crash Report must be completed.

   Domestic animals are considered to be property. Wild animals, such as deer, are not.

NCGS 20-166.1 requires the appropriate law enforcement agency to record all “reportable” crashes on the DMV-349 Crash Report. Officers may not decline to conduct an investigation simply because it was not reported in a timely manner.

Note: The NC DMV requires law enforcement officers to complete the DMV-349 Crash Report for vehicles involved in collisions subject to DWI seizure, regardless of damage amount.

e) Types of areas

1. **Public Highways/Streets:** The entire width between property or right of way lines of every way or place of whatever nature, when any part thereof is open to the use of the public as a matter of right for the purpose of vehicular traffic.
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(2) Public Vehicular Areas (PVA): Any area that is generally open to the public for use of vehicular traffic. Most common are parking lots to shopping centers, hospitals, schools, etc.

(3) Private Property (PP): An area not open to the public for use of vehicular traffic. This can include roads, driveways, residential property, fields, etc. Generally, access is denied to the motoring public.

2. Completing the DMV-349 Crash Report

NOTE: Refer to the DMV-349 Instruction Manual and a DMV-349 Crash Report.

NOTE: After thoroughly reviewing the DMV-349 Crash Report, assign practical exercises. Students will use information and the scene provided to complete the DMV-349 and the field sketch.

N. Additional Assistance

Additional assistance may be needed at the scene of a crash.

Some examples are as follows:

1. Roadway is blocked

Make sure all debris is cleared from the roadway before reopening the area to traffic. Wrecker drivers have been known to do this, but it is the officer's responsibility to see that it is done.

a) Additional personnel may be needed to help with traffic control.

b) The Department of Transportation may be needed for:

(1) Detour signs

(2) To repair damage to:

(a) The roadway
Traffic Crash Investigation

(b) Highway signs

(c) Bridge railing

2. Hazardous material spills

a) The local fire department or hazardous material response team should be notified immediately, to assist with:

(1) Determining seriousness of spill.

(2) Containment and clean-up of the spill.

NOTE: Instruct students to follow guidelines for handling hazardous material spills in accordance with instructions found in the BLET “Explosives and Hazardous Materials Emergencies” lesson.

b) Additional personnel may be needed at the scene to assist with detours and evacuations.

3. Utility, telephone, and cable companies may be needed when their property has been damaged (i.e., downed power lines, pole struck by car, etc.)

O. Follow-Up Investigations

NOTE: Show slide, "Follow-Up Investigations."

Follow-up investigations may be necessary. The amount of time needed to conduct a thorough follow-up investigation will vary, depending on the crash.

As mentioned earlier, intentional vehicular assaults do occur. Based on initial and follow-up investigations, officers may believe the collision was an intentional act. If that appears to be the case, appropriate charges should be filed.

1. Fatalities and serious personal injury crashes

Most agencies have specific procedures for investigating traffic fatalities. Each officer should follow agency guidelines.
Traffic Crash Investigation

a) Detailed, written statements should be obtained from all parties involved.

b) Officers should attempt to gather as much information as possible about each driver's or pedestrian's activities prior to the crash to include:

(1) Alcohol use

(2) Drug use

(3) Medication (prescribed and actual use)

(4) Illness

(5) Lack of sleep

c) Take detailed measurements during the investigation keeping in mind that the information gathered at the scene may be turned over to a traffic crash reconstructionist. Remember, investigations turned over to specialists will rely heavily on information provided by the officer who wrote the initial report.

NOTE: Explain to the students the advanced training received by the traffic crash reconstructionist.

d) Contact medical examiner in accordance with local protocol.

e) Photographs

Photography is one of the best means of recording information at the scene. Photographs can help investigators recall what they observed at the scene and illustrate to others not present significant details about the crash. Photographs should never be used to replace a thorough investigation. They are only a supplement to a thorough investigation.

f) Vehicles should be inspected for defects which may have contributed to the crash.
**Traffic Crash Investigation**

g) When considering criminal charges, particularly when gross negligence or reckless disregard for life are involved, officers may want to contact the district attorney before placing any charges.

**NOTE:** Tell of a situation in which someone was charged with manslaughter or second degree murder as a result of a traffic crash.

2. Follow-up investigation of hit-and-run crashes

**NOTE:** Show slide, "Hit-and-Run Follow-up Investigations."

a) Interview witnesses

(1) Obtain written statements.

(2) Consider video or audio taping statements, if available, in serious cases.

b) Gather as much information as possible about the hit-and-run vehicle and operator/occupants

(1) Color, make, model, area of damage, direction of travel, and any other pertinent information about the vehicle.

(2) Age, size, sex, clothing description, and any other distinguishing characteristics of the driver and passengers.

**NOTE:** This information should be communicated to the telecommunicator, as soon as practical, who can then broadcast it to other officers and surrounding agencies.

c) Follow the path of the suspect vehicle. This can be determined by fluid leaks and other marks left at the scene.

d) Collect all evidence from the scene which could link the suspect vehicle to the crash.

(1) Head and tail light lenses and other debris.
Traffic Crash Investigation

(2) Pedestrian clothing can be sent to the lab for examination for trace evidence.

NOTE: Review elements of GS 20-166, highlight the following:

(1) Suspect was driving.

(2) Suspect knew he was, or should have known he was involved in a collision which resulted in property damage or injury.

(3) Failed to stop or left the scene without providing the required information (name, address, operator license number, registration number of vehicle).

III. Conclusion

A. Summary

Investigating a collision requires more than checking boxes on a form. Officers must recognize, preserve, and collect all relevant evidence. They must also document the event thoroughly, possibly for others not present, so they can fully understand what happened.

NOTE: Show slide, "Training Objectives."

B. Questions

C. Closing Statement

The investigation of traffic collisions is one of the most common in law enforcement. Many times it involves the least serious crimes, with the most serious consequences. The dedication and commitment exercised by the investigator could mean the difference between an investigation and a report.
Traffic Crash Investigation

NOTES


2. Ibid., 20-10.

3. Ibid.


5. Ibid., 17-12.

6. Ibid., 17-11.

7. Ibid., 28-5.


10. Ibid.