



# Chapter 12

# Traffic Crash

# Investigations

A comprehensive guide to managing and investigating traffic crash scenes





## Lesson 1

# Introduction to Traffic Crash Management

Law enforcement officers conduct traffic crash investigations using a systematic approach, similar to responding to other incidents like robbery or battery. This approach includes responding to, assessing, and protecting the scene; gathering and evaluating information and evidence; returning the scene to normal; taking appropriate enforcement action; and documenting the crash.



# Understanding Traffic Crashes

## Definition

A **Traffic Crash** is a collision involving one or more vehicles in motion causing property damage, personal injury, serious bodily injury, or death.

Most traffic crashes result from unintentional non-criminal acts. However, treat each crash as a potential crime scene until you determine otherwise.

## Legal Framework

**F.S. Chapter 316 State Uniform Traffic Control** is the statutory chapter that governs traffic crash investigations in Florida.

Understanding Florida traffic laws helps you manage crash scenes within the law and defend decisions in court by associating corresponding Florida law to incident facts.



# 10 Steps to Managing a Crash Scene

## Step 1

Approach the traffic crash scene safely

## Step 2

Assess the scene of the crash

## Step 3

Secure a safe environment at the crash scene

## Step 4

Provide first aid to injured people, if necessary

## Step 5

Gather traffic crash information



# 10 Steps to Managing a Crash Scene (cont'd.)

## Step 6

Investigate to determine how and why the crash occurred

## Step 7

Complete driver exchange of information

## Step 8

Take enforcement action

## Step 9

Return the scene to normal as quickly as possible

## Step 10

Document the crash

# Step 1: Safe Approach

After receiving a dispatch call for a traffic crash, drive immediately and safely to the scene. Safety is critical when responding. Follow sound driving principles and use lights and sirens according to your agency's policies and statutory requirements.

Gather as much information as possible from dispatch regarding location (street names, addresses, mile markers), vehicle descriptions, roadblocks, and other relevant details. This information enables you to plan for managing the crash scene upon arrival and make quick parking decisions based on the scene's nature.





## Lesson 2

# Assess a Traffic Crash Scene

Your initial response includes a quick assessment to decide if additional assistance is needed. As you approach, analyze the scene from a distance to identify the crash extent, number of involved vehicles, and risk for fire or hazardous materials. If additional resources appear necessary, have them dispatched immediately—you can always cancel them later if they're no longer needed.





# Locating All Involved Parties

Locating all involved vehicles, people, and damaged property identifies the parameters of the total traffic crash scene. Determine vehicle paths by examining evidence left on the road and surrounding property, such as skid marks, damaged road signs, landscaping, or buildings.

Thoroughly yet quickly scan the entire scene. Keep in mind that vehicles or people involved in the crash may have left the scene or are not immediately visible. Vehicles or people projected over embankments, shrubs, or into gullies or waterways may not be immediately visible during your initial assessment.



# Managing Fire Hazards



## Identify Dangers

Look for fire potential, downed power lines, or wires. Crash damage can block fire recognition; poor weather and darkness can conceal downed lines.



## Immediate Action

Small fires may be manageable with your vehicle's fire extinguisher. If necessary, request fire department assistance.



## Evacuate Safely

Decide how to evacuate everyone to a safe location. Consider traffic, weather, wind direction, and nearby buildings. Use verbal commands, gestures, or your PA system.



# Hazardous Materials Response

Dispatch might send you to a crash involving a vehicle carrying hazardous material, which can pose significant danger. OSHA defines **Hazardous Material (hazmat)** as any substance that, when released, may cause harm, serious injury, or death to humans or animals, or harm the environment.

Before approaching, look for hazardous conditions: fluids on the ground, clouds of gas or smoke, or injured people on the road. Use binoculars to locate placards on the vehicle's back or side identifying hazardous contents.





# Emergency Response Guidebook (ERG)

## Purpose

The ERG identifies hazardous materials, outlines basic actions for first responders, recommends protective action areas, and provides an initial safety plan. Available in print, online, or as a mobile app.

## Structure

- **White:** Introduction, instructions, guidance, placards
- **Yellow/Blue:** Material identification
- **Orange:** Response guidelines for hazards and safety
- **Green:** Evacuation details

## Identification Methods

Identify materials using the UN/NA four-digit numbering system by finding:

- Four-digit number on placard or orange panel
- Material name on shipping papers or packaging
- Material number on shipping papers or packaging

If hazmat is suspected, direct people to evacuate toward an upwind location. Enter the scene with extreme caution.



# Additional Resources



## Investigative Units

Traffic homicide units from your agency, county sheriff's office, or Florida Highway Patrol



## Emergency Services

Fire department or hazmat team for specialized response



## Transportation

DOT, FHP Commercial Vehicle Enforcement, local or state traffic engineering



## Technical Support

Crime scene investigators for evidence processing

Contact dispatch to arrange for additional resources and relay any unusual details, hazards, dangers, or medical issues relevant to the scene.



# Determining Jurisdiction

The **First Harmful Event**—the first event during a traffic crash that caused injury or property damage—determines the jurisdiction of the scene. This first harmful event determines the time, place, and type of crash.

Evidence of the first harmful event may be crash debris, fixed property damage, broken glass, gouge marks, or scrape marks. Should the first harmful event occur outside your jurisdiction, stay at the crash scene to protect the public and scene until the proper agency arrives.

When unable to determine jurisdiction, remain on scene and contact FHP, as they have statewide jurisdiction, or refer to your agency's policies. If the crash involves traffic homicide or serious bodily injury, call dispatch and wait for a traffic homicide investigator.



## Lesson 3

# Secure a Traffic Crash Scene

Traffic crash scenes draw drivers' attention away from the road, leading to distracted driving. This slows traffic flow and creates hazards as drivers focus more on the crash than on driving around the scene. Many secondary crashes happen because of distracted drivers.

Nighttime crash scenes compound this hazard due to limited visibility. Emergency vehicle lights, heavy traffic, or movement can reduce visibility. Following your immediate assessment, securing the scene requires quick thinking and swift action.



# Vehicle Positioning

## Primary Tool

Your vehicle is the primary tool for controlling traffic, warning motorists of the crash scene. Position your vehicle to protect the scene, prevent additional crashes, and redirect traffic flow.

## Best Practices

- Park in a safe location visible to oncoming traffic
- Stay away from hazards
- Avoid damaging any evidence
- Turn on emergency lights as caution or alert
- Adjust headlights to low beam
- Keep emergency lights on throughout the process





# Personal Safety at the Scene



## Visibility is Critical

While directing traffic or investigating a crash scene, ***remain visible to oncoming traffic at all times.***

## Reflective Equipment

Wear a reflective vest over your uniform while maintaining access to your gun belt. Use a flashlight with wand attachment and reflective gloves to increase visibility.

## Face Traffic

Work facing oncoming traffic whenever possible. This enables you to see hazardous situations that might develop.

# Relocating Crash Vehicles

If circumstances allow, move vehicles out of the roadway to prevent accidents, encourage traffic flow, and create room for emergency vehicles to access the crash site.

## Exceptions to Relocation

- Traffic crash with injuries or fatalities
- Vehicles too disabled to move
- Crash scene is a crime scene requiring processing

Before allowing drivers to relocate vehicles, obtain their driver's licenses and direct them where to move. Follow agency policies for relocating vehicles of traumatized or incapacitated drivers. Mark the final rest points of all four tires with chalk or per agency protocol.



# Warning Devices



## Traffic Cones

Highly visible markers for directing traffic flow



## Flares or Fuses

Effective at night, visible during day, easily stored



## Message Boards

Electronic displays for advance warning



## Barricades & Signs

Physical barriers and directional signage



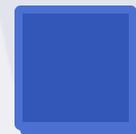
# Positioning Warning Devices

Based on multiple crash scene factors, decide what type of warning devices to use, how many are required, and how to position them to prevent further damage or injury.



## Scene Extent

Determine the distance between the first harmful event and the final resting place of vehicles and debris



## Speed of Travel

Place warning devices farther away from the scene the faster the traffic is moving



## Traffic Lanes

Consider how quickly drivers can react to the disturbance and change lanes



## Environmental Conditions

Consider how warning devices appear to oncoming traffic in rain or fog

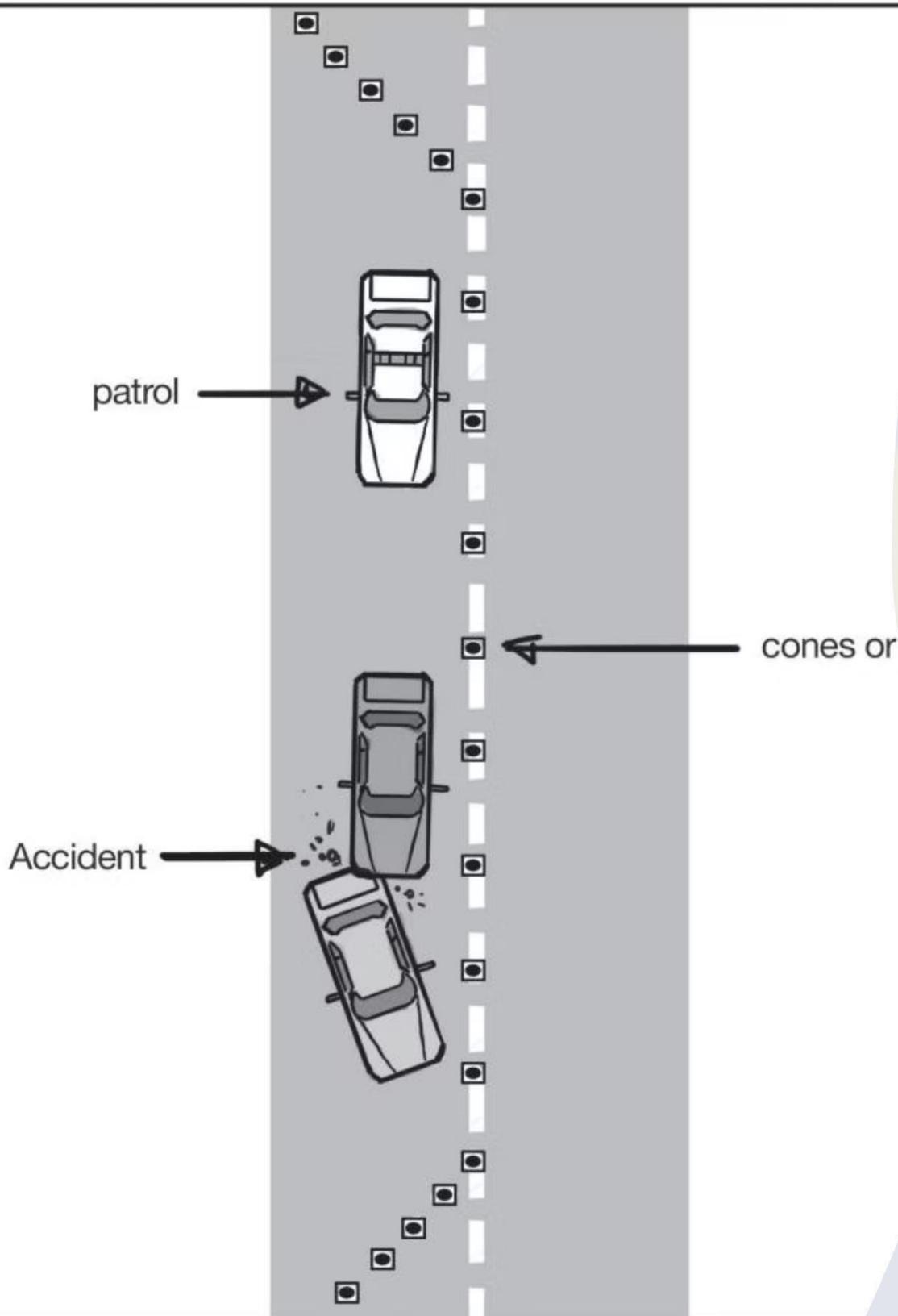
# Flare Safety Considerations

- ❏ **Important Safety Note:** Before placing flares, ensure there are no flammable items, liquids, chemicals, or hazardous materials within the crash scene. If there is any chance of a hazmat situation, use the ERG to determine a safe distance from the scene to place flares.

Be aware of drought conditions and keep flares away from dry grass on the roadside or any other combustible material that could cause a wildfire. Flares can serve as effective warning devices at night, are visible during the day, and are easily stored in your patrol vehicle trunk.



# Traffic Diversion Example



This example shows a traffic crash scene involving two disabled vehicles on a two-lane road. The officer parked the patrol vehicle in the road to block oncoming traffic from the crash scene and placed flares or cones in front of, alongside, and behind the involved vehicles.

This placement method draws drivers' attention to the cones or flares and directs them to drive around the scene. An alternative method involves parking the patrol vehicle near the scene with emergency lights activated, serving as both a physical barrier and warning device when flares and cones are unavailable.

# Roadblocks

If there is no safe way to protect the scene from traffic using barricades, flares, signs, or traffic cones, then create a roadblock. The roadblock can prevent injury or damage to motorists and protect the crash scene.

When setting up a roadblock, try to avoid redirecting traffic through residential areas, schools, and playgrounds. Immediately inform dispatch of the roadblock and redirection of traffic. Your agency will relay the information to appropriate resources and other affected jurisdictions.

Inform dispatch how long you estimate it will take to clear the scene and reopen the road. It is your responsibility to direct traffic around the crash scene until the road is completely clear.





# Protecting Property and Evidence

## Personal Property

If a traffic crash exposes driver or passenger property such as phones, purses, wallets, or anything in their vehicles, take a moment to return them to the motorist or secure them in a vehicle.

Should any involved vehicles require a tow, document on the tow receipt any personal property remaining in a crash vehicle.

## Crime Scene Considerations

A traffic crash scene can become a crime scene, so use crime scene processing techniques. If a crash is suspected to result from a criminal act involving homicide or serious bodily injury, do not touch or move anything except those who are injured.

Vehicles used in the commission of a crime and involved in a traffic crash resulting in death or serious bodily injury must be preserved for further investigation. Do not move these vehicles until after an investigator assesses the scene and documents evidence.

## Lesson 4

# Injuries at a Traffic Crash Scene

A traffic crash may involve people with injuries ranging from nonvisible to severe or fatal trauma. Your first-aid training should prepare you for responding to trauma-related issues associated with a traffic crash.



# Traffic Crash Injury Classifications



## None

No injury



## Possible Injury

Any injury reported or claimed that is not fatal, suspected serious, or suspected minor.  
Examples: momentary loss of consciousness, claim of injury, limping, complaint of pain or nausea



## Non-Incapacitating

A non-disabling injury such as laceration, scrape, or bruise



# Serious Injury Classifications

## Incapacitating Injury

A serious bodily injury that is non-fatal, resulting in one or more of the following:

- Severe laceration with tissue/muscle/organ exposure or significant blood loss
- Broken or distorted extremity
- Crush injuries
- Suspected skull, chest, or abdominal injury
- Significant burns (second- and third-degree over 10%+ of body)
- Unconsciousness when taken from crash scene
- Paralysis

## Fatal Injury

An injury resulting in an individual's death within a 30-day period after the traffic crash accident

## Non-Traffic Fatal Injury

A fatality unrelated to the traffic crash accident, such as heart attack, natural causes, suicide, or homicide



# Managing Injured People



## EMS Dispatch

During the initial call, dispatch will ask if there are injured people and send EMS if needed



## First on Scene

If you arrive first, locate all people involved and determine the extent of injuries



## Provide Aid

Remember your first-aid training. Move injured to safe location if possible, or remove hazards and provide aid in place



## Confirm EMS

If EMS is not present when you arrive, contact dispatch to ensure EMS is en route



## Lesson 5

# Gather Traffic Crash Information

After you secure the traffic crash scene, aid the injured, and protect any evidence or personal property, begin gathering information related to the traffic crash from people on the scene.

It is common for those involved in a crash to be emotionally upset, regardless of severity. Your role is to remain calm and empathetic to crash victims while managing the scene and investigating the crash. Remember to practice the three roles of a law enforcement officer—supporter, stabilizer, and enforcer.



# Obtaining Driver Information

## Required Documentation

After determining which drivers and vehicles were involved, ask them to provide:

- Driver's licenses
- Vehicle registrations
- Proof of insurance

Injuries or special circumstances may prevent immediate provision of this information. However, Florida Statutes require drivers involved in crashes resulting in injury, death, or property damage to provide this information if able.

## Verification Process

Document this information in your traffic crash report and verify it in:

- D.A.V.I.D.
- FCIC/NCIC
- Other appropriate databases

**IMPORTANT:** Ask the driver if there were any passengers in the vehicle, whether or not you see passengers present at the scene. This ensures you know, rather than assume, how many people were in the vehicle at the time of the crash.



# Interviewing People at the Scene

Before interviewing people at the crash scene, distinguish between drivers involved, those who witnessed the crash, those who may have heard but not seen the crash, and those providing information based on the final location of vehicles.

 **Remember:** Witnesses are not legally obligated to give any information or provide a statement about a traffic crash.

Witness accounts are often all a traffic crash investigator can rely on when determining how the crash occurred. Passenger statements are voluntary and important. However, if a driver involved in a traffic crash is unable to give a report or statement, Florida law requires passengers to make a statement on behalf of the driver.



# Separation and Safety

## Separate Parties

Separate drivers from witnesses to prevent them from influencing each other's statements or recollections. Do not allow drivers to discuss what happened with anyone on the scene, including other drivers and witnesses.

## Safe Locations

Locate safe places for drivers, passengers, non-motorists, and witnesses to stand or sit while you interview others. A safe location should be away from oncoming traffic, protected from environmental conditions, and out of the path of emergency vehicles.

## Interview Priority

When deciding interview order, be mindful of independent witnesses who choose to be on the scene because of their good intention to help. They usually provide more accurate and reliable information. Be courteous and do not detain them longer than necessary.



# Interview Techniques

To help witnesses recall specific events and details, try to interview them close to where they were at the time of the crash. Some witnesses may have had a better vantage point than others. When interviewing a passenger, determine their relationship to the driver to identify any potential biases in their statements.

Verify the drivers' and each witness' ability to understand your request for a statement. It is best to ask open-ended questions when conducting interviews. Ask questions that will clarify what happened and resolve any discrepancies between witnesses' statements, such as "Can you give me information about the crash?" and "Can you tell me how this person was hurt?"





# Documentation Requirements

## Contact Information

During each interview, record the interviewee's contact information:

- Name
- Current street address
- Phone number

This is for your report and in case you need to follow up on the interview later. If EMS needs to transport an injured person to a hospital, get that person's contact information and conduct a follow-up interview.

## First Responder Information

First responders such as EMS or fire department personnel may also have valuable information concerning post-crash events. For example, people involved in the crash may have made spontaneous statements in their presence.

Document in your report any indications of impairment caused by injury, dementia, intellectual disability, intoxication, medication, or any other cause that may affect the drivers' or witnesses' comprehension or memory.



# Written and Recorded Statements

Some traffic crash situations such as DUIs, hit-and-runs, or serious bodily injury investigations may require you to take written or recorded statements. These can be useful when investigating a traffic crash, such as confirming other witnesses' testimonies at the scene or for prosecuting drivers in court.

Written or recorded statements help collect more accurate information by prompting involved people to record their information immediately after the crash. Having witnesses write statements about what they saw and heard will help you obtain valuable information. Witnesses who write their own statements will free you up to perform other on-scene tasks.

People manage their emotions differently, so remember to practice empathy when gathering information from anyone involved in or witnessing the crash.



## Lesson 6

# Gather Traffic Crash Evidence

Knowledge of the three phases of a traffic crash will help you determine how and why the crash occurred, and how the vehicle reached its final resting place after the crash.



# Three Phases of a Traffic Crash

## Phase 1: Pre-Collision

Begins when the driver becomes aware of a danger or hazard. Includes point of perception, reaction time, evasive action, and point of no escape.

## Phase 2: At-Collision

Begins with the time of initial impact or contact. Includes encroachment (when vehicles/property/people enter the same space) and maximum engagement (greatest extent of crushing together).

## Phase 3: Post-Collision

Begins when vehicles, property, or people separate (disengagement), either naturally or from post-crash intervention. A second impact can occur in chain reaction collisions.

# Pre-Collision Phase Details

## Point of Perception

Driver becomes aware of a danger or hazard

1

## Evasive Action

Any action to alter speed or direction:  
applying brakes, turning steering wheel,  
moving vehicle

2

3

4

## Reaction Time

Length of time between perception and  
beginning of evasive action

## Point of No Escape

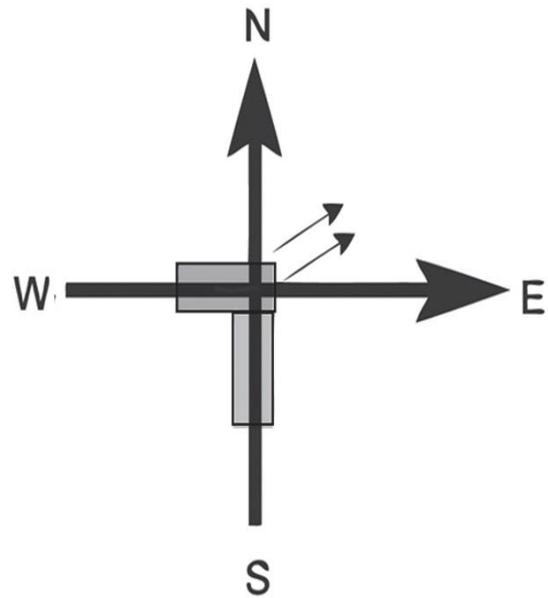
Point when crash is inevitable,  
regardless of evasive action taken

# Vehicle Dynamics During a Crash

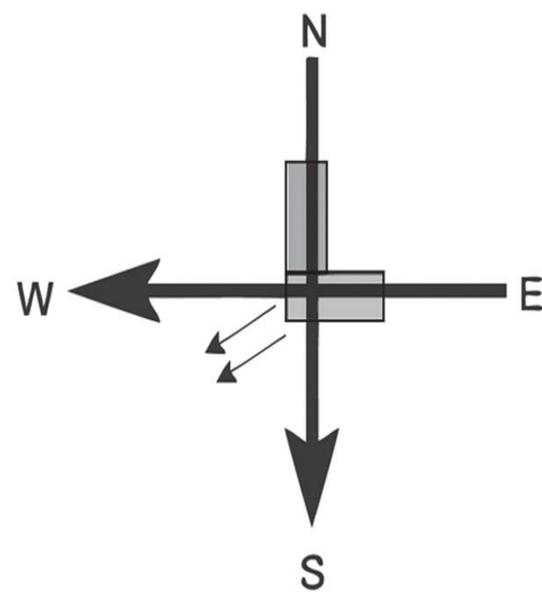
Basic physics states that an object in motion continues to remain in motion until acted upon by an external force. **Vehicle dynamics** refers to vehicle movement during and after a collision. It can help you determine how and why the crash occurred and the area of collision.

The **Area Of Collision (AOC)** is the location of the first harmful event. The AOC indicates where the collision occurred, assists in determining the direction a vehicle was traveling, and the probable location of the debris field. The **Point Of Impact** is where a moving vehicle or object struck another vehicle, object, or the road.

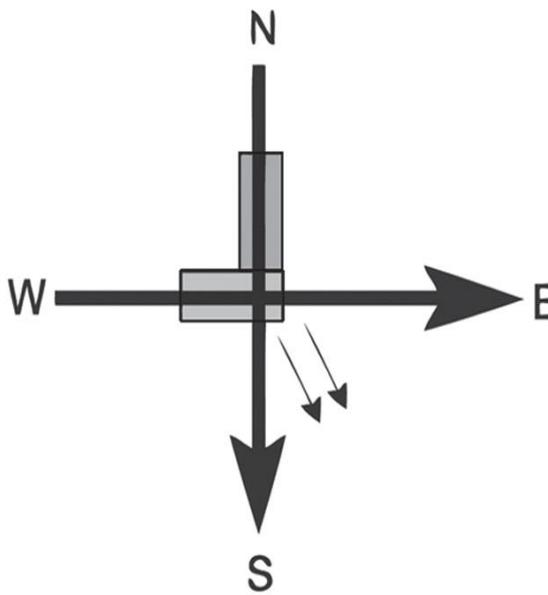
Example 1



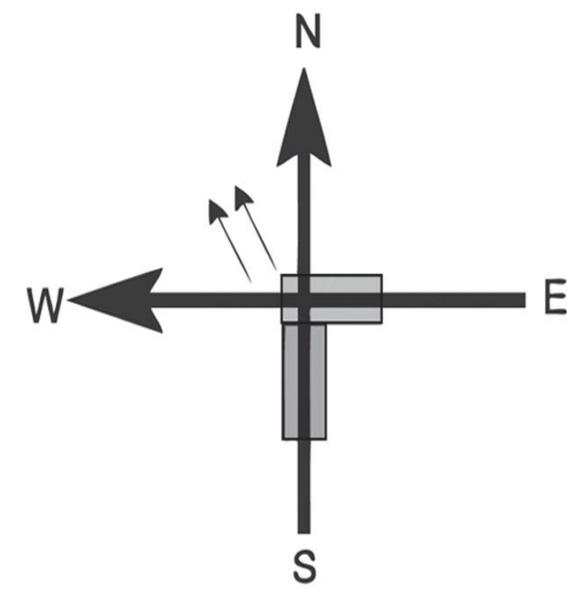
Example 2



Example 3



Example 4





# Vehicle Dynamics Examples

## Understanding Movement Patterns

Struck or moved objects in the vehicle's path may alter vehicle dynamics and help determine the AOC by showing the path a vehicle followed before or after the crash.

Look for objects or items at the scene moved from their original location and inconsistent with the original direction of the vehicles or with the direction of force.

Examining these objects, the vehicle dynamics, the AOC and point of impact may help explain damage done to all vehicles and whether there may have been other factors involved in the crash.

## Directional Examples

- **Example 1:** Vehicle traveling north strikes vehicle traveling east → both travel into northeast quadrant
- **Example 2:** Vehicle traveling south strikes vehicle traveling west → both travel into southwest quadrant
- **Example 3:** Vehicle traveling south strikes vehicle traveling east → both travel into southeast quadrant
- **Example 4:** Vehicle traveling north strikes vehicle traveling west → both travel into northwest quadrant



# Vehicle Evidence: Contact Damage

**Pre-existing damage** is any damage existing on a vehicle before the crash. It is usually identifiable as damage that does not fit the pattern of the crash and appears rusted, dirty, or weathered.

**Contact damage** is any damage that did not exist on a vehicle before the crash. Contact damage results from the direct pressure of any object in a collision or rollover and appears as:

- Scrape marks or striations (parallel scrapes or scratches) on the vehicle body
- Material rub-off, such as paint from the other vehicle (paint transfer), rubber, or tree bark
- Fiber transfer, such as from a person's clothing
- Hair or blood
- Punctures to or imprints on a bumper, guardrail, or other fixed object

# Vehicle Evidence: Induced Damage

Contact damage should tell you the part of the vehicle hit first by examining the direction of the damage on the vehicle and tracing the damage backwards to the first appearance of damage. Contact damage should be consistent with other physical evidence, statements from people involved, and independent witnesses.

**Induced damage** is any damage that did not exist before the crash, but unlike contact damage, is not visually evident at the crash scene. Induced damage often occurs as bending, breaking, crumpling, twisting, distortion, or buckling of vehicle metal.





# Road Evidence

## Gouge

A cut into the road surface where some part of the vehicle removed the road surface material. For example, a bolt on the underside of a vehicle cuts into the pavement, leaving a trench or gouge. May indicate an AOC.

## Scrape

A broad area of a hard surface covered with many scratches, striations, or streak marks made without great pressure by a sliding metal part. Scrapes occur between the AOC and the vehicle's final rest.

## Runoff

A pool or trail of fluids escaping from a vehicle because of impact. Hard impacts make radiators, hoses, and brake lines burst. Liquids leave a trail from the AOC to the final resting place, providing evidence of the general location.



# Debris Evidence

**Debris** is loose material spread across the road due to the crash. Debris can be dirt, liquids, vehicle parts, and other materials from the involved vehicles. Identifying where debris begins on the road may help indicate the AOC.

Locating vehicle parts such as bumpers, headlights, and tail light lenses can also indicate the AOC and the direction a vehicle was traveling. Vehicle parts continue to move in the direction of the force of the impact until stopped by an object or the road surface.

The forces involved in collisions cause debris from the vehicle to fall loose and in the direction of the force. Matching the damage on the vehicles to the debris found at the scene may serve as additional evidence in determining the AOC. Recently broken glass has sharp, well-defined edges; glass that has been on the road for some time will have rounded edges.



# Tire Marks Overview

A **surface mark** is any mark created by a vehicle's tire at a crash scene. Each type of surface mark on the road at the scene can provide specific information.

Tires can create several different types of marks, depending on:

- The road surface
- What the brakes are doing
- How the vehicle is accelerating or decelerating
- What the steering wheel is doing during the traffic crash

Your task is to determine which mark came from which vehicle, and from which tire of the vehicle.





# Skid Marks

## Characteristics

A **Skid Mark** is the black mark left by a tire sliding while it is unable to rotate. Skid marks tend to be straight, although they can show some curvature due to asymmetrical braking or the crown of the road.

The tire grooves are generally visible and easy to see in a skid mark. Front tire skid marks tend to be darker than rear tire marks, as weight shifts toward the front of the vehicle when braking. The outside edges of the tire mark may be darker than the inside area. Rear tire skid marks tend to be even in appearance with no dark outside edges.

## Incipient Skid

When a vehicle brakes hard, tire rotation will stop before skid marks begin. The tires leave a light discoloration, or shadow mark, which is often difficult to see on the road.

This discoloration, or **Incipient Skid** or **Impending Skid Mark**, is the place you will begin to measure the skid mark. It is temporary and may be visible for only 15 to 20 minutes after the crash.



# ABS and Intermittent Marks



## ABS Scuff Marks

Patterns left by a vehicle with anti-lock brakes when a driver brakes hard. A scuff mark is a tire mark from a wheel that is both rotating and slipping on the road surface. The ABS prevents wheels from locking by rapidly applying and releasing the brake while allowing the driver to remain in control of steering. Vehicles equipped with ABS may leave faint, intermittent, visible skid marks that do not resemble solid skid marks and may disappear 15 to 20 minutes after the incident.



## Intermittent Skid Marks

A series of heavy skid marks with long gaps of more than 15 feet between them, caused by a driver who rapidly applies and releases the brakes to stop the vehicle. Skid marks made by a bouncing vehicle that just struck a pothole or bump in the road are not continuous. However, the length of the skid mark and the length of the space between them are uniform, consistent, and less than 3 feet to 4 feet apart.



# Specialized Tire Marks

## Skip Skid Marks

A series of skid marks, usually short in length with irregular intervals between them. This pattern appears when a vehicle has a sudden load shift from braking hard, causing the vehicle to bounce. Typically from trailer vehicles, but can occur on bumpy roads.

## Offset Skid Marks

Skid marks indicating a sudden change in tire direction due to collision forces. They are the direct result of vehicle movement by the force of collision and occur at the moment of impact. The only evidence pinpointing the exact AOC on the road.

## Squeegee Mark

A strip of dry pavement remaining after a vehicle skids on a wet road. The locked tire acts like a window squeegee by removing water from the skid path. These marks disappear quickly and are temporary evidence.



# Additional Tire Mark Types

## Furrow Mark

A type of trench dug by locked tires moving across a soft surface such as gravel, sand, grass, or dirt. The furrow is shallow at the beginning of the skid and deepens with a piling of the surface material in front of the tire at the place where the vehicle finally rests.

## Scuff or Yaw Mark

Occurs when a vehicle loses tire traction from entering a curve too fast or from oversteering. The tires continue rotating but slide sideways at the same time, leaving marks that remain on the road. Always curved and will show sideways striping or striation from the side motion of the tires. May be evidence of the driver beginning to lose control.

## Acceleration Scuff Marks

Result from rapid acceleration from a stop, causing the tires to produce gradually fading dark tire marks.

## Tire Print

A mark left by a tire rolling over a soft material such as sand or dirt, or rolling through a liquid on a hard surface, such as oil, which leaves an identifiable pattern matching the tread of the tire.



# Photographing the Crash Scene

The best way to preserve the location of evidence found at the traffic crash scene is with a combination of photographs, measurements, and sketches. Photographs serve as a true and accurate depiction of the crash scene. You can use photographs later to recall facts and discover information that you may have overlooked at the scene.

Photographs also serve as evidence to prosecute traffic violators and document the extent of damage. They record the scene's physical condition, supplement other documentation, aid in drawing conclusions about the crash, and can assist a traffic homicide investigator in reconstructing the crash.

# Photography Guidelines



## When to Photograph

Photograph the crash scene immediately after the emergency is under control, but before someone can disturb the evidence or alter the scene.

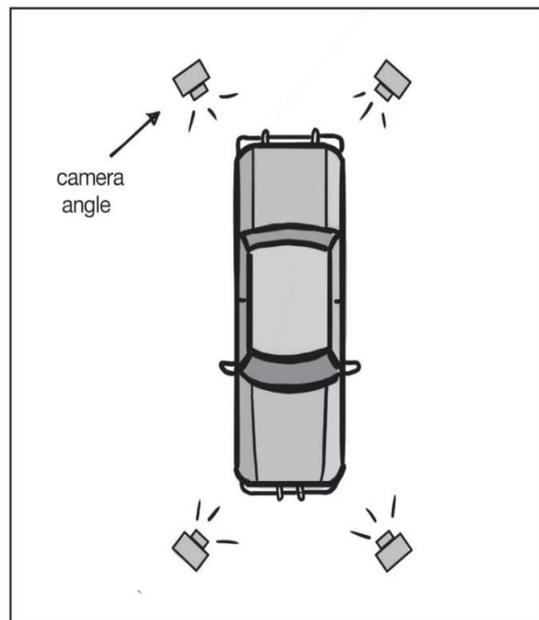
## What to Document

- Record the date, time, and person taking the photographs
- Photograph all relevant evidence and damage from several angles
- For involved vehicles, photograph all corners, sides, approach paths, and the AOC

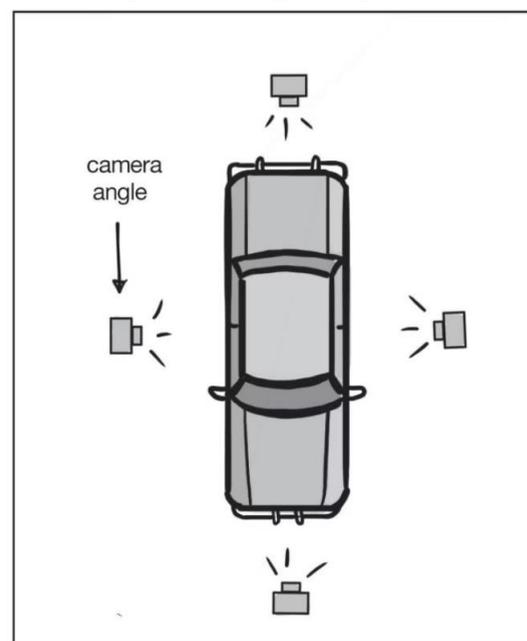
## Agency Policies

Your agency policies and the severity of injuries determine how you will photograph evidence in a crash investigation.

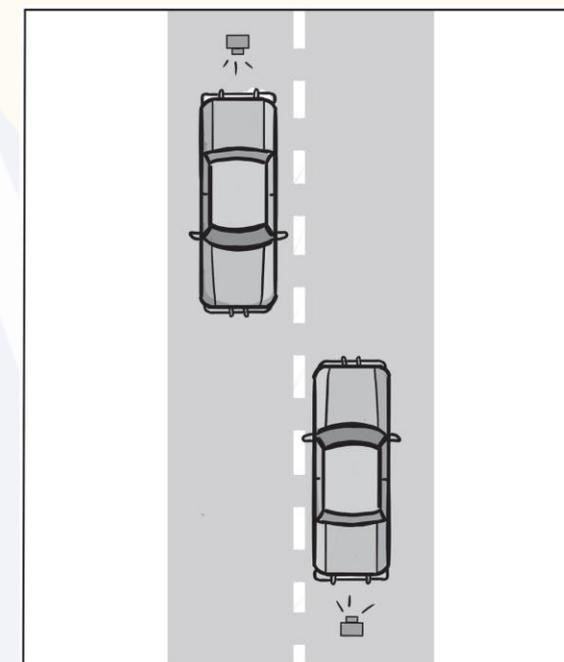
### *Photographing from the four corners*



### *Photographing all four sides*



### *Photographing from approaching paths*

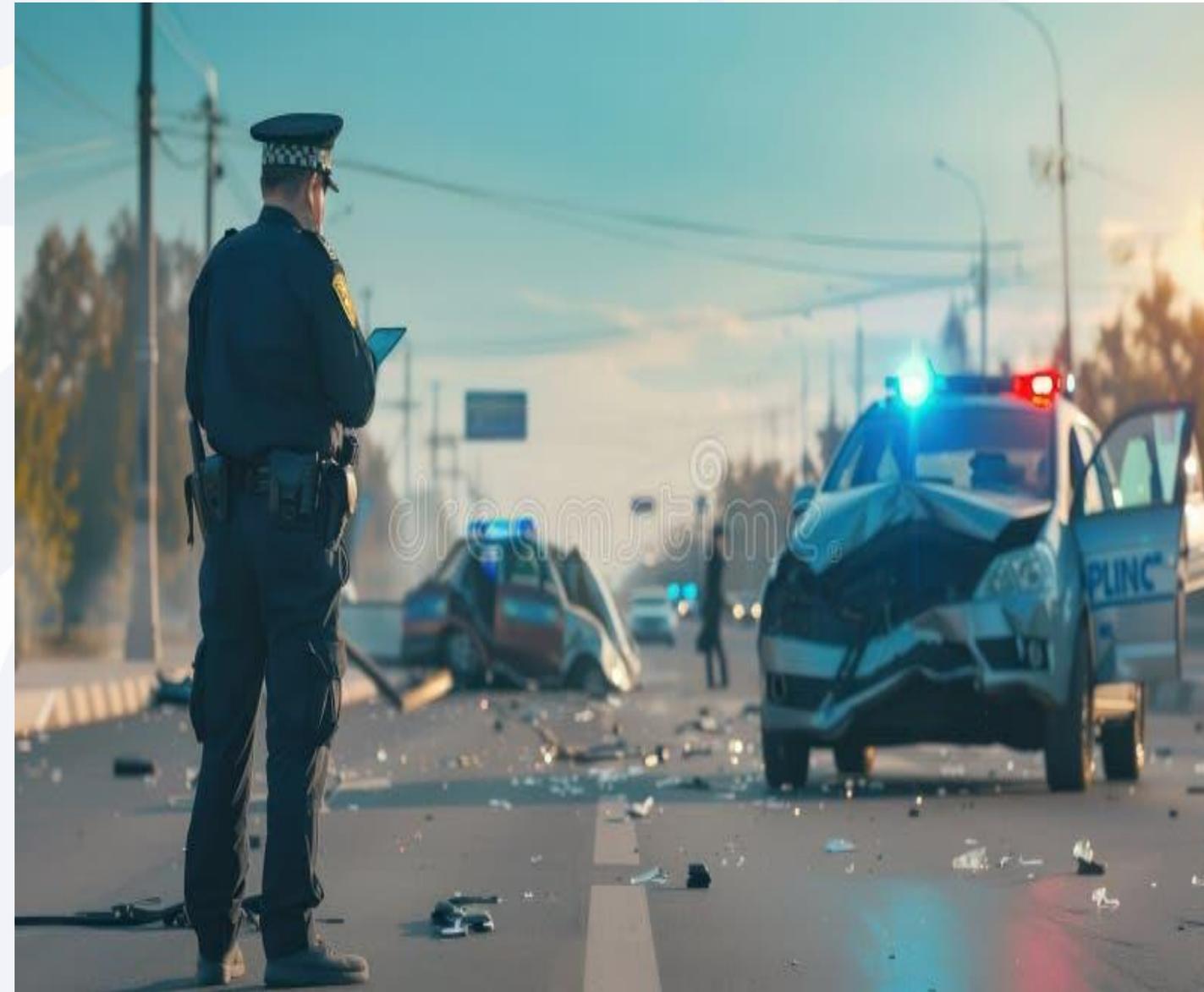




# Measuring the Crash Scene

After photographing the traffic crash scene, take measurements to document distances, locations, and the length of tire marks and roadway evidence. Use crash scene measurements to precisely locate significant objects in the crash, to document the events of the crash accurately, and to later ensure accurate testimony in court.

When taking measurements at the crash scene, be aware of safety issues for people on the scene. Instruments to measure evidence include rolling measuring wheels, fiberglass and steel measuring tapes of various lengths, and laser measuring devices.





# Measurement Priorities

## Measure Temporary Evidence First

- The AOC
- Scuff marks
- Squeegee marks
- Tire marks, skid marks, tire prints
- Gouges and scratches
- Debris of any type
- Vehicle parts
- Liquids or runoff
- Any item damaged or struck as a result of the crash
- Final resting positions of vehicles and bodies

## Measure Permanent Evidence as Soon as Practical

- Road dimensions
- Sight distances
- Grade or slope
- Locations of traffic-control devices
- Distances between landmarks



# Measuring Skid Marks

If a crash is suspected to be the result of a criminal act involving homicide or serious bodily injury, after photographing the crash scene and taking measurements of other evidence, a traffic homicide investigator uses mathematical formulas to calculate the possible speed a vehicle was traveling when the skid occurred.

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## Identify Wheels

Determine how many wheels were skidding and match each skid mark to a specific wheel using abbreviations: LF (left front), LR (left rear), RF (right front), RR (right rear)

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## Mark Locations

Locate the beginning, the end, and all gaps made by each wheel and mark using an agency-approved method. Photograph the skid marks again after making your marks.

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## Measure Carefully

For offset skid marks, measure in two parts, recording lengths separately. Measure each surface mark separately when marks cross multiple surfaces.

# Common Measurement Mistakes

## Wrong Surface Type

Identifying the wrong type of surface where the skid marks were made

## Including Gaps

Including gaps when measuring the skid

## Wrong Starting Point

Incorrectly identifying the beginning of a skid mark





# Field Sketch

Record the locations and lengths of all skid marks and other evidence at the crash scene in a field sketch. A **field sketch** is a rough drawing of the scene. The sketch uses simple symbols to indicate the details of the crash.

Use whatever symbols you choose, but use them consistently. This sketch will help document information concerning the crash and help recreate the crash scene diagram later. The amount of detail on the sketch will depend on the seriousness of the crash, the amount of evidence, or the information collected.

## Key Points

- Include only significant factual and observable items
- Clearly indicate all relevant evidence and measurements
- Must be consistent with any photographs taken
- May be used as evidence in court along with the final sketch
- May be used to complete the crash diagram later



# LESSON 7: Driver Information Exchange

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## Lesson Goal

Know how to facilitate driver information exchange and complete appropriate forms at traffic crash scenes.

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## Legal Requirement

State law requires drivers to complete and exchange information forms at all traffic crashes.

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## Insurance Processing

Exchanging information provides insurance companies with necessary data to process damage claims.

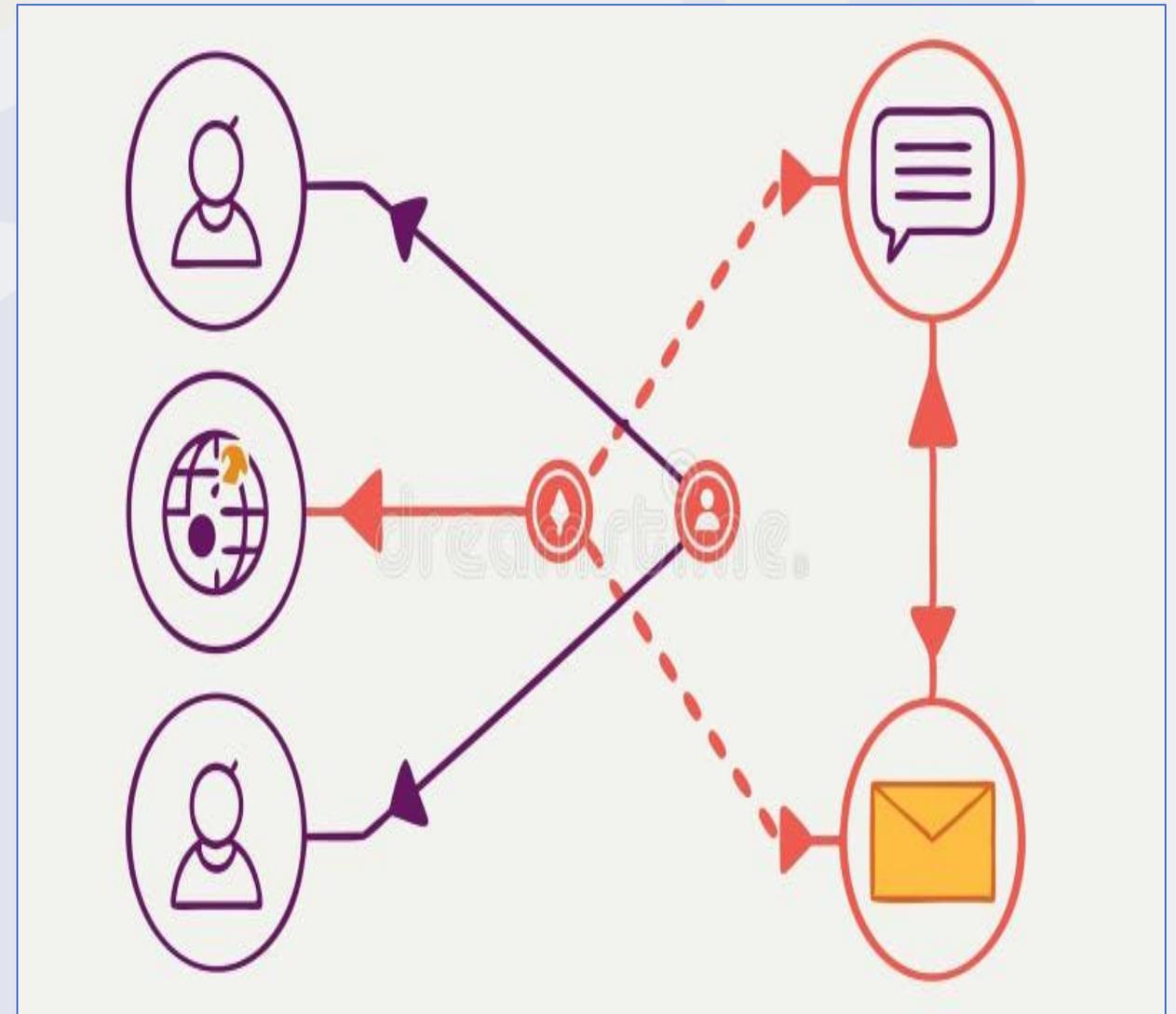
# Step 7: Complete Driver Exchange of Information

## Officer Responsibilities

If the officer completes the crash report, the exchange of information is included as part of the report. The officer must provide drivers with this information and submit the report within 10 days if it meets criteria outlined in chapter 316, F.S.

## Driver Responsibilities

If the officer is not present, Florida law requires drivers to exchange information and report it to DHSMV within 10 days of the traffic crash incident.





# Form HSMV 90011S

1

## Dual Purpose Form

Driver Report of Traffic Crash  
(Self Report) or Driver Exchange  
of Information form

2

## Show Drivers

What fields to complete and  
where to sign, as each agency  
may have different versions

3

## Instruct Properly

Print legibly using black  
ballpoint pen, sign and date  
before exchanging





# Accommodating Driver Limitations

Practice empathy and patience when drivers cannot adequately read or complete the form due to language or physical limitations.

1

## Gather Information

Collect required information from the driver

2

## Complete Form

Fill out the form for the driver accurately

3

## Obtain Signature

Instruct driver to sign and date the completed form

Drivers can also complete the form online on the Florida Highway Safety and Motor Vehicles website.

# LESSON 8: Issue a Traffic Citation

## Lesson Goal

Know how to identify traffic violations and issue citations based on evidence found at the scene.



# Step 8: Take Enforcement Action

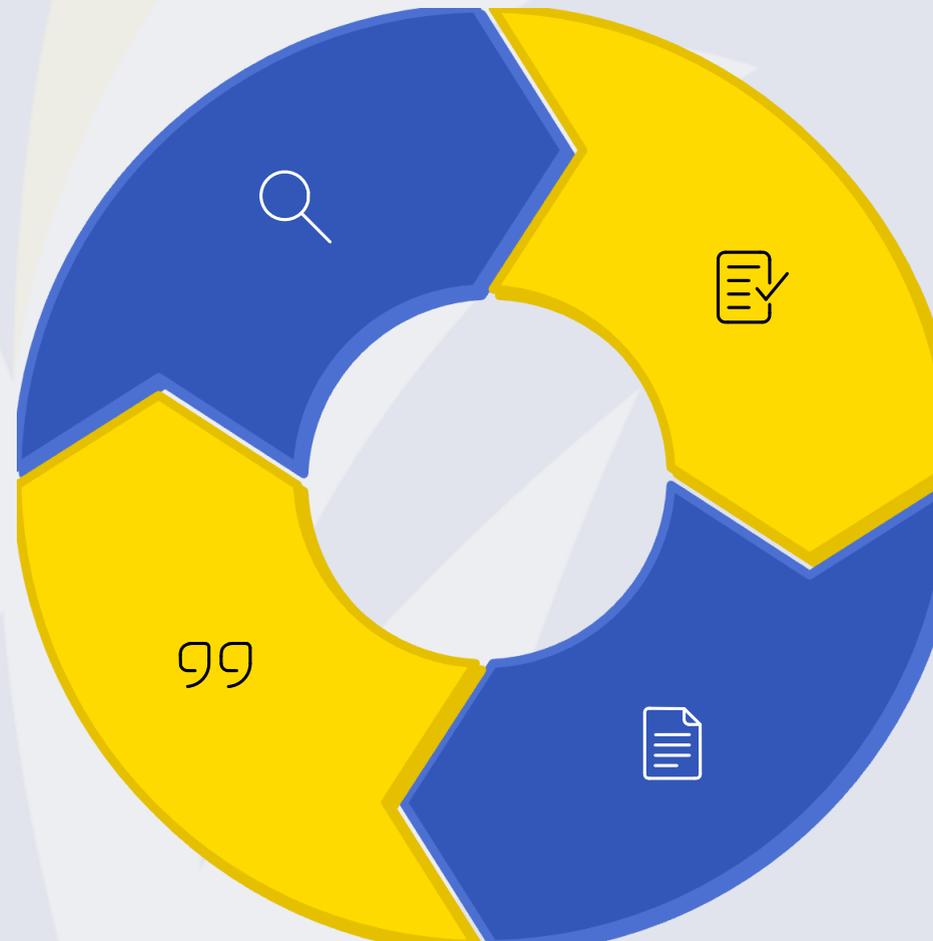
All evidence found on the crash scene, when viewed as a whole, should provide an accurate location of the AOC and point to how and why the crash occurred.

## Compare Observations

Vehicle and road evidence with statements

## Issue Citations

Identify violations and take action



## Include Factors

Road conditions, lighting, weather, distracted driving

## Determine Cause

How and why crash occurred



# Three Types of Traffic Violations

1

## Contributing Traffic Violation

Direct cause or contribution to the traffic crash itself, such as running a red light and striking another vehicle.

2

## Non-Contributing Traffic Violation

No direct bearing on the cause of the crash; discovered during investigation. Examples: expired license plate, lack of insurance, seat belt violations.

3

## Non-Traffic Violation

Criminal offense discovered during crash investigation. Example: cocaine discovered during vehicle inventory or outstanding warrant.

# Contributing Traffic Violations

## Speed & Control

- Driving too fast for conditions
- Driving carelessly
- Driving left of center

## Maneuvers

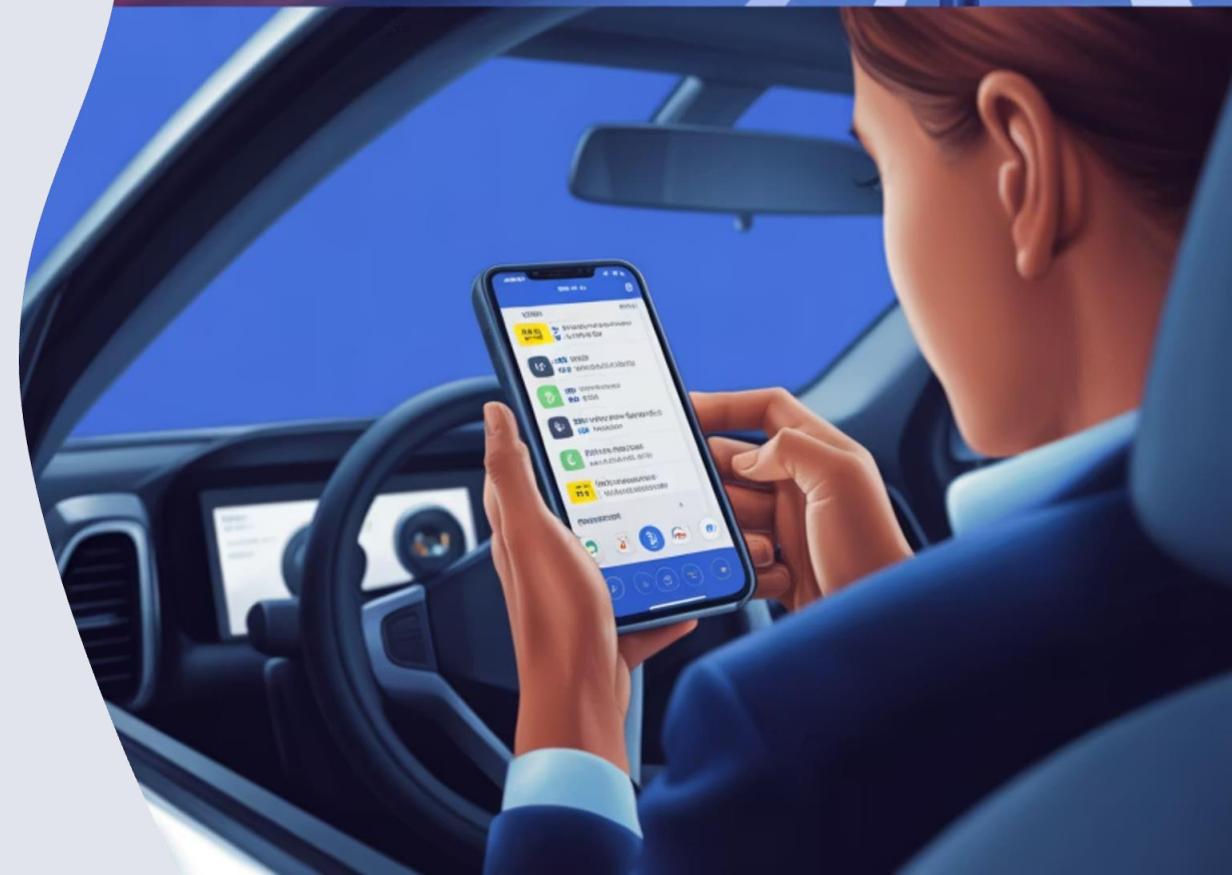
- Making improper U-turn
- Making improper pass
- Violating right-of-way

## Equipment & Signals

- Having defective equipment
- Violating traffic control device

## Traffic Controls

- Running a red light
- Running a stop sign
- Texting while driving





# Anatomy of a Crash

## **Driver Error**

Most crashes result from driver error,  
not vehicle defects

## **Violations Per Crash**

At least one driver commits one or  
more contributing violations

## **Two-Vehicle Crashes**

Both drivers may have committed  
violations

You are responsible for detecting all violations drivers may have committed and taking appropriate law enforcement action.



# Issuing Traffic Citations

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## Issue UTC

For each traffic violation, issue a Uniform Traffic Citation

---

## Identify Violations

Note specific violations and relevant statutes

---

## Court Information

Indicate court location and scheduling information

---

## Mandatory Hearings

Obtain signature for violations requiring mandatory hearing (death or serious bodily injury)

# Certifying Citations

## Prima Facie Evidence

For infractions not requiring a hearing, certify that you issued a UTC to the person cited when their signature is not required.

This serves as *prima facie* evidence—sufficient evidence to establish a fact or raise a presumption unless someone disproves or rebuts it.



# LESSON 9: Clear the Traffic Crash Scene

## Lesson Goal

Know how to safely clear a traffic crash scene of vehicles and debris.



# Step 9: Return Scene to Normal

Officers have an additional responsibility at a traffic crash scene: returning the scene to the same condition it was before the crash, if possible. This can be as simple as removing hazards and debris from the road.



## Move Vehicles

Florida law requires drivers to move operable vehicles off the road



## Request Tow

If vehicle is immovable, request tow truck to remove vehicle and debris



## Hazmat Protocol

Follow agency policies or call hazmat team if needed



# Equipment and Scene Clearance



## Retrieve Equipment

Scan area and retrieve all equipment: tape measure, blanket, flashlight, cones, barricades, identifying markers



## Verify Road Safety

Ensure road is safe for normal traffic flow before removing traffic redirection equipment



## Contact Agencies

Contact appropriate agency to repair or replace traffic control signs or devices





# Final Law Enforcement Actions

## Forms Completed

Verify all forms completed and copies distributed to appropriate people

## Citations Issued

Issue all appropriate citations

## Documents Returned

Return all personal documents (driver's license, vehicle registration, proof of insurance) to owners

- ☐ If a safety risk remains or you make an arrest, stay at the scene until danger no longer exists or until you make other arrangements for scene safety.



# LESSON 10: Complete a Traffic Crash Report

## Lesson Goal

Know how to correctly complete appropriate traffic crash report forms to document the traffic crash.





# Step 10: Document the Crash

**Think About This:** You are dispatched to a two-vehicle crash, and upon arrival, one vehicle has to be towed. What type of report has to be completed?

DHSMV creates and publishes the Florida Traffic Crash Report forms and the *Uniform Traffic Crash Report Manual*. These forms and the instruction manual are available from the DHSMV website.

DHSMV is the official records custodian for completed crash reports and is responsible for all applicable records retention requirements.



# Florida Traffic Crash Report Forms

## HSMV 90011S

Driver Report of Traffic Crash (Self-Report)  
AND  
Driver Exchange of Information

## HSMV 90010S

Florida Traffic Crash Report: Long Form  
Florida Traffic Crash Report: Short Form  
Florida Traffic Crash Report: Update Form



# HSMV 90010S—Long Form Criteria

You have a duty to investigate and submit a long form for traffic crashes that meet any of the following criteria:

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## Injury or Death

Crash resulted in death, personal injury, or any indication of complaints of pain or discomfort

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## Hit-and-Run

Driver left the scene involving damage to attended vehicles or property

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## DUI

Driver drove while under the influence

---

## Vehicle Inoperable

Vehicle rendered inoperable requiring wrecker removal

---

## Commercial Vehicle

Commercial motor vehicle was involved

Your agency may have additional criteria requiring a long form.

# Assembling Information for Long Form

## Driver & Vehicle Data

- Validated driver identification
- Verified vehicle registration
- Verified license plate number
- Verified VIN
- Verified proof of insurance

## Investigation Data

- Information from drivers, passengers, non-motorists, witnesses
- Evidence collected, measurements, field sketch
- Road and environmental conditions
- EMS run or call number
- DOT/MC number for commercial vehicles





# Long Form Sections

---

## Event Section

Crash report fields or characteristics section

## Vehicle Section

Vehicle information, characteristics, events, and consequences

## Person Section

Person data elements, characteristics, actions, and consequences

---

## Narrative Section

Description of all key events: pre-collision, at-collision, post-collision phases

## Diagram Section

Illustration of traffic crash scene with all key events

The investigating agency report number and eight-digit HSMV crash report number must be identical on all report pages. The narrative must match the diagram.



# Driver Re-Examination or Medical Review

If you believe a driver has a physical or mental impairment that contributed to the crash, indicate this on the Person page of the long form by checking "Recommend Driver Re-exam."

1

## Narrative Explanation

Explain request in separate paragraph on Narrative section of Long Form

2

## Medical Form

Attach completed Medical Reporting Form **HSMV 72190** to Long Form

3

## DAVID Request (Preferred)

Request "Report Driver for Medical Review" in DAVID system in addition to Long Form



# Finalizing the Long Form

1

## Check Box

Check "Long Form" box in upper-left corner

2

## Complete Form

Follow guidelines in manual, number pages "page 1 of —"

3

## Submit

Submit to DHSMV within 10 days of completing investigation

4

## Distribute

Keep copy with agency, provide copy to each driver

# Diagram Section Overview

Use the Diagram section to illustrate how the traffic crash occurred. The diagram is the finished product showing what occurred during the crash.

It should be able to stand alone and match the description in the Narrative section.

Carefully prepare a drawing of your field sketch and notes using diagramming software or a traffic crash template.



# Diagram Tools and Symbols



## Template Features

Scales of measure, angles, curves, straight edges, cutouts

The template or software helps make diagramming easier and more accurate, resulting in a professional-looking crash diagram.



## Common Symbols

Cars, trucks, trailers, motorcycles, pedestrians



## Scene Elements

Signs, traffic signals, buildings, camera directions, directional arrows



# Creating the Diagram: Bird's-Eye View

Diagram the crash scene using the bird's-eye view—depicting a scene as if looking down from an altitude or distance. Include only relevant items so the diagram will not be cluttered and will be easy to read and understand.

## Position Template

Center template on page corresponding to approximate center of AOC

## Draw Road

Include all lanes, turn lanes, bike lanes, median. Label road names

## Insert Elements

Add vehicles, pedestrians, and other information from field sketch



# Vehicle Representation in Diagrams

## Directional Arrow

Each vehicle should have arrow indicating front and direction of travel

## Vehicle Numbers

Label each vehicle with number in circle corresponding to assigned vehicle number in report

## Pre-Impact Movement

Draw solid directional arrows behind vehicles showing where they came from

## Post-Impact Movement

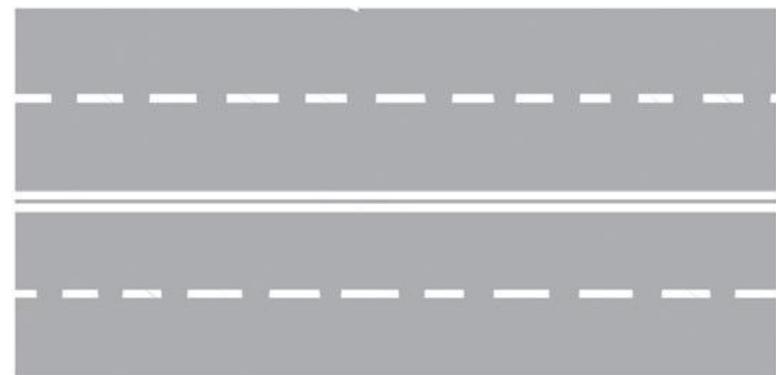
Use dashed directional arrows from impact to final rest position



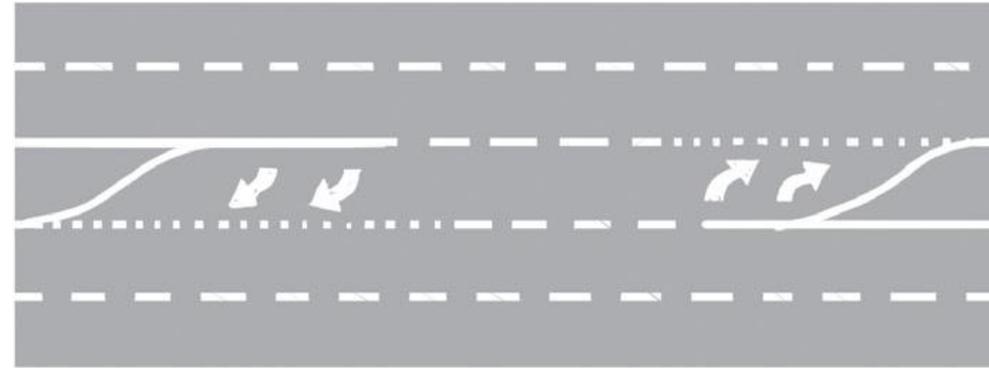
2 - Lane



2 - Lane (with turn lane)

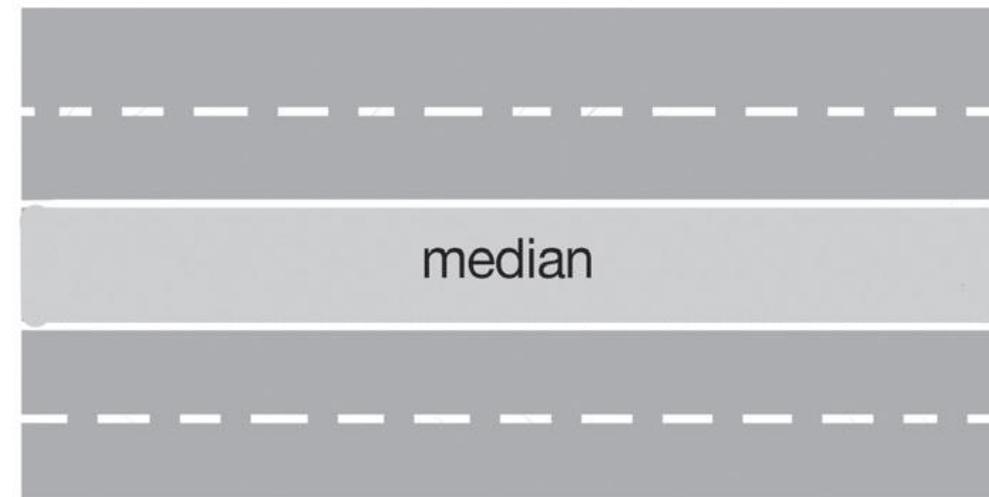


4 - Lane (undivided)



4 - Lane (with turn lane)

*Note: Turn lanes are not counted when determining number of lanes.*



4 - Lane (divided)

# Counting Number of Lanes

When documenting road dimensions in your diagram, accurately count and label all travel lanes. Include measurements for lane width and road markings.



# Additional Diagram Details

## Freehand Elements

If crash scene has debris or extensive damage to vehicles or property, freehand draw vehicle damage, debris, or other details using suggested symbols provided with template.

## Ejections & Pedestrians

If people were ejected from car or pedestrians were hurt, mark where they came to final rest, including distance traveled.

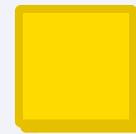


# Minimum Diagram Documentation



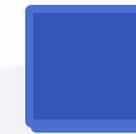
## Location

Location of traffic crash (road names)



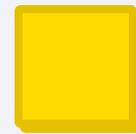
## Road Details

Road markings and width of each lane



## North Arrow

North directional arrow placed upward or to the right when looking at page



## Physical Evidence

Any physical evidence on road (skid marks, ruts, holes, standing water, vehicle debris)



## Vehicle Positions

Each vehicle's position pre-collision, at-collision, and post-collision



## Final Rest

Where vehicle was located at final rest on arrival, even if moved



## Measurements

Measurements of skid mark length and road dimensions





# HSMV 90010S—Short Form

Use the short form to report other types of traffic crashes that do not require the long form. Check the box marked "Short Form" in the upper-left corner.

1

## Event Section

Crash report fields or characteristics section

2

## Vehicle Section

Vehicle information, characteristics, events, and consequences

3

## Person Section

Person data elements, characteristics, actions, and consequences

Complete the report with exception of narrative or diagram. Provide signature in Narrative section even though not completing it. Number pages "page 1 of \_\_\_". Submit to DHSMV within 10 days. Keep copy with agency and provide copy to each driver.



# HSMV 90010S—Update Form

You must update all open traffic crash investigations every 30 days until you close the investigation.

Use the update form to update information previously recorded on the original traffic crash report using the long or short form.

Check the box marked "Update Form" in the upper-left corner. Complete only the appropriate updates, upgrades, or continuing information.





# Update Form Examples

## Test Results

Blood-alcohol content (BAC) results

## Insurance

Insurance information updates

## Injury Status

Any injury status changes

## Follow-Up

Hit-and-run follow-up information

## Corrections

Corrections to original report

Indicate in Narrative section the updates made to report. Continue page numbering from initial report. Keep copy with agency and provide copy to each driver.



# Common Errors in Crash Reports

Traffic crash report forms are fairly easy to complete; however, officers sometimes make errors or fail to provide adequate or correct information.

## Location & Intersection

- Intersection type or junction type
- Location of the crash

## Vehicle Information

- Vehicle-towed indicator
- First harmful event
- Motor vehicle in transport

## Driver Details

- Florida driver's license check
- Required endorsement for vehicle operated



# More Common Errors

## Safety & Speed

- Posted speed limit
- Ejection
- Airbag deployment

## Timing

- Time scene was cleared
- Time on scene and time dispatch
- Military time vs. 12-hour clock
- Crash date when different from report date

## Documentation

- Matching code identifier and description
- Number for each identifier
- Appropriate box for type of form
- HSMV crash report number in proper box

## Address & Testing

- Current addresses (not just license address)
- BAC test results
- Update of BAC when results known
- Agency case number after system downtime



# Common Road Lane Counting Error

- ❏ **Important:** Only travel lanes are counted when documenting number of road lanes. Turn lanes do not apply to the lane count.



# BAC Testing Documentation

## Initial Report

If you do not know BAC test results when completing report, enter "pending"



## Submit Update

Use update form to document BAC results

## Results Available

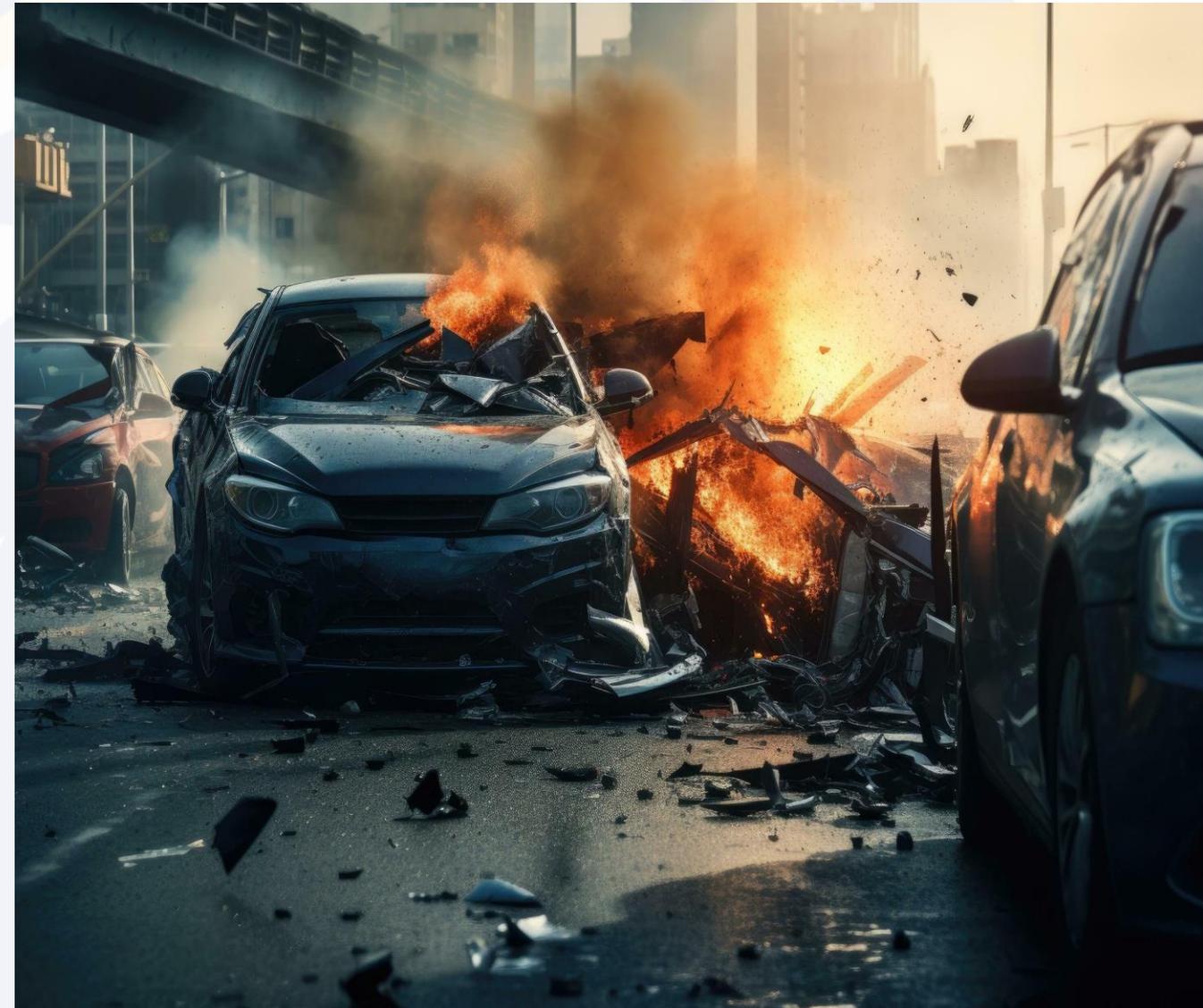
Update BAC testing information when results become known

# LESSON 11: Manage Unique Traffic Crashes

## Lesson Goal

Be able to manage traffic crashes that shift from a civil to a criminal investigation and crashes with unique circumstances.

Not all traffic crash situations are alike. Some may involve unattended vehicles, property damage, or single moving vehicles. Others can result from criminal activity or may be part of a different criminal act.





# Shifting From Civil to Criminal Investigation

Initially, you will conduct most crash investigations as a civil investigation. A driver has a statutory duty to make a report and provide information to the officer making the crash report.

**Critical Point:** At some point in the civil investigation, you may find evidence that could shift to a criminal investigation. You must separate the civil crash investigation from the criminal crash investigation by specifically telling the driver that the civil crash investigation is complete, and a criminal crash investigation is beginning.



# Crash Privilege Protection

## Cannot Use Civil Statements

You cannot include any information the driver provided during the civil investigation portion in the criminal investigation portion.

## Exception for Other Evidence

You cannot use a driver's statement from civil portion admitting they drove, **EXCEPT** if there is other evidence that places the driver behind the wheel ***while committing the crime.***

## Observations Allowed

Follow procedural justice when using observations made during civil investigation. For example, noting odors, balance issues, and slurred speech supports reasonable suspicion of impairment.



# Understanding Crash Privilege

The same statutory duty that requires drivers to provide information during a *civil investigation* of a traffic crash also prohibits that information from becoming self-incriminating if the civil investigation becomes a criminal investigation.

The driver has a legal **Crash Privilege** that lets them provide information about the crash to law enforcement without worrying that it will be used against them in a criminal case.

- ❏ You cannot use any driver statements given during the civil investigation portion as evidence in a criminal trial.



# "Changing Hats" Rule

---

## Notify Driver

Tell driver investigation is changing from civil to criminal—their crash privilege ends

## Read Miranda Rights

If driver is no longer free to leave because you are detaining them, read Miranda rights

## Re-Ask Questions

Questions asked during civil investigation that support criminal charges must be asked again

---

## Use New Answers

New answers can be used as evidence in criminal investigation

The changing hats rule applies not only to DUI offenses but to any crime revealed during a traffic crash investigation, such as illegal drug possession.



# Hit-and-Run Vehicle Crash

If one of the vehicles involved in a crash leaves the scene, consider this a hit-and-run; based on the elements, this may be a misdemeanor or a felony.

If there are witnesses, ask them to describe the fleeing vehicle, the driver, or both. Contact dispatch to initiate a BOLO, if necessary.





# Hit-and-Run Investigation Tools



## Written Statements

From all witnesses and the victim



## Vehicle Description

Description of vehicle damage or unique identifiers



## Direction of Flight

Direction vehicle fled in BOLO



## Time Elapsed

Time between driver fleeing and officer arrival



## Plate Information

License plate information from victims or witnesses



## Video Evidence

Video if incident occurred at video-equipped intersection



## Vehicle Debris

Debris to help determine vehicle make and model

# Video Evidence Collection

When checking for video footage of an incident, carefully scan the immediate area to see if there is closed-circuit television (CCTV) or video surveillance on area buildings or businesses.

Witnesses may also have a video of the event on their phones; you may be able to procure that video from them according to your agency's policies.





# Driver Fled, Vehicle Remained

If the vehicle has remained on the scene and the driver has fled, carefully look for clues of the driver's presence:

## Personal Items

Left-behind wallets, purses, purchase receipts

## DNA Evidence

DNA from airbag deployment

- ❏ **Important:** Crash privilege does not apply to hit-and-run suspects. They are not protected under this rule. As a result, you will read *Miranda* rights to the suspect before you start an interview.



# Unattended Vehicle or Property Damage

Dispatch may send you to the scene of a crash that involves an unattended or parked vehicle damaged during a traffic crash.



## 1 Identify Owner

Give license plate number to dispatch for owner contact information

## 2 Notify Owner

Contact owner directly about the damage

## 3 Leave Information

If owner not located, leave contact or driver exchange information

A traffic crash can also damage roadside property, such as a billboard, fence, or mailbox. If attempts to locate property owner fail, leave your contact information on damaged property, on the door, or send a registered letter to the owner.



# Single-Vehicle Crash Investigation

Sometimes, when you arrive at the scene of a single-vehicle crash, the driver is outside of the vehicle. Often there is a wheel witness who can establish what happened and identify that the person standing at the scene is the same person who got out from behind the wheel.

## Wheel Witness

Witness can establish driver identity and what happened

## Physical Evidence

Evidence inside vehicle: interior damage, skin and blood on deployed airbags consistent with person's injuries

## Carroll Doctrine

Searching vehicle interior is legal if probable cause indicates vehicle contains evidence of crime

## Owner Contact

If driver is not owner, contact owner to determine who was driving



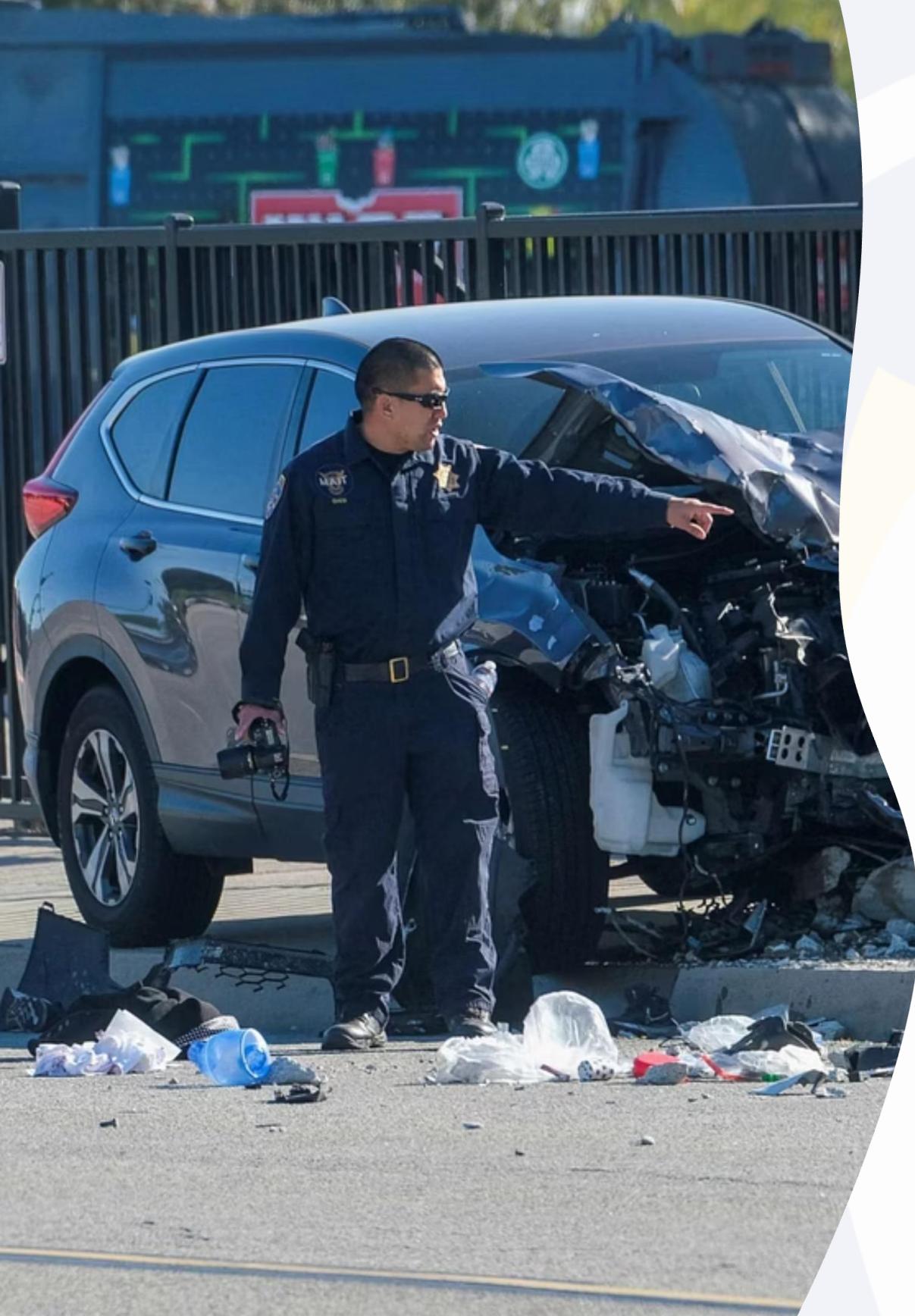
# Identifying the Driver

## Interview and Compare

Once you identify the driver, interview them to compare any driver injuries with evidence found in the vehicle, such as bruising from a deployed airbag or a seat belt.

## Canine Tracking

If you cannot locate the driver of a crashed vehicle involved in a felony, consider using a canine team to track the driver's scent from the seat of the vehicle to a potential suspect.





# Traffic Crash Involving Fatality or Serious Bodily Injury

If a traffic crash results in life-threatening injuries or death, protect the scene as you would a crime scene. Do not move any vehicles or objects within the scene. Do not disturb anything inside the vehicle.

---

## Secure Scene

Maintain scene integrity by immediately securing the area

---

## Follow Protocols

Follow protocols for a crime scene as described in Chapter 9

---

## Notify Supervisor

Notify your supervisor immediately

---

## Request Investigator

Request traffic homicide investigator per agency policies



# Death Investigation Considerations

Sometimes, when the traffic crash involves a death, the crash itself may not be the cause. These situations can be difficult to determine during the initial investigation.

Investigate all crashes involving deaths in the same manner until you discover that an intentional act or a significant medical event caused the traffic crash.

## Intentional Act

Examples: suicide or vehicular homicide

## Medical Event

If significant medical event preceded or contributed to crash, investigate as traffic crash until medical examiner provides cause of death unrelated to crash

