

Chapter 2

The Crime Scene: Identification and Collection of Evidence

CHAPTER OVERVIEW

All crime scenes are different and it is critical that all evidence in a crime scene is identified, collected, and preserved. Proper presentation of evidence is important which is protected through the chain of evidence. Preliminary investigations are defined as an initial inquiry by officers to establish facts and circumstances of a suspect crime and to preserve any evidence related to that crime. Securing the crime scene, locating and securing possible suspects and witnesses, documentation of the crime scene and identifying and collecting evidence are all parts of the preliminary investigation. Locard's principle of evidence transfer is key to crime scene analysis. Physical evidence, direct evidence, indirect evidence, testimonial evidence, trace evidence and demonstrative evidence are all presented in this chapter. Discussions regarding how to handle different types of evidence are presented as well as search techniques. The responsibilities of the first arriving officer are clearly laid out and as well as the procedure and importance of securing the crime scene. Responding officers should only enter a crime scene only to determine if a crime has been committed, aiding victims, apprehending perpetrators, and securing the area. After the investigator has documented the crime scene, a proper search should be conducted following several distinct phases. Canvassing neighborhoods is one of the best ways to identify possible witnesses to a crime and should be conducted soon after the crime was committed. Preliminary investigations are followed with follow-up investigations that build on the initial information and evidence discovered.

CHAPTER OBJECTIVES

After reading this chapter the student will be able to:

- Describe the preliminary investigation, types of evidence, and legal considerations for obtaining evidence.
- List the first officer's responsibilities.
- Explain the significance of securing the scene.
- Explain how to assess the crime scene and conduct the "walkthrough."
- Describe crime scene search patterns and proper documentation and collection of evidence.
- Describe how to interview witnesses, contact the medical examiner, and conduct a neighborhood canvass.
- Describe how to perform the follow-up investigation.

LECTURE OUTLINE

- I. Introduction
 - a. The actions of the first arriving officer and initial investigative personnel often determine the success or failure of a criminal investigation.
 - b. The first arriving officer should aid the victim(s), apprehend the suspect(s), preserve the evidence, report their findings, and interview witnesses.
- II. The Preliminary Investigation

- a. The precursory investigation phase is known as the preliminary investigation and is the initial inquiry by officers to establish facts and circumstances of a suspected crime and to preserve evidence.
- b. The function of the preliminary investigation is closely linked to the duties of the first officer to arrive at the crime scene, who, in most cases, is a respondent from the patrol division.
- c. The crime scene represents the ultimate situation that places many responsibilities on the first officer arriving at the scene.
- d. Crime scenes are locations where evidence may be found, but not necessarily where the crime was committed.
 - i. There can be many crime scenes for one crime.

III. Crime Scene Evidence

- a. Crime scene evidence is dynamic.
- b. Contamination of a crime scene, loss of evidence, and movement of physical evidence can all be damaging to a criminal case.
- c. If evidence not properly secured, wrongfully mixed with other evidence, or is significantly altered it can be rendered inadmissible.
- d. The preliminary investigation involves the identification and preservation of evidence, much of which is minute or “trace” evidence.
 - i. When a crime is committed, fragmentary evidence needs to be collected from the scene.
- e. All evidence, including trace, must be photographed, collected, and placed into appropriate sterilized and labeled containers.
- f. Locard’s exchange principle
 - i. Every contact leaves a trace
- g. Utility of physical evidence should be clearly understood.
- h. Some types of physical evidence are more obvious in nature than others
 - i. It can prove the elements of a crime or reveal that a crime has been committed.
 - ii. It may be used to place a suspect at the scene.
 - iii. It can be used to eliminate an innocent person.
 - iv. Suspects confronted with physical evidence may confess to a crime.
 - v. It can be supported by witnesses.
 - vi. It can have a powerful positive impact on juries in criminal cases.
- i. Types of Evidence
 - i. Two commonly used classifications of evidence:
 - 1. *Corpus delicti* refers to evidence that established that a crime has been committed.
 - 2. Associative evidence links a suspect to a crime.
 - ii. Examples of evidence
 - iii.
 - 1.
 - iv. Physical evidence is self-explanatory in nature and generally speaks for itself in a court of law.
 - v. Direct or prima facie evidence is evidence established by law that at face value proves a fact in dispute.
 - vi. Indirect or circumstantial evidence tends to incriminate a person without offering conclusive proof.

- vii. Testimonial evidence consists of a verbal statement offered by a witness while under oath or affirmation, or by way of a sworn deposition.
- viii. Trace evidence consists of extremely small items of evidence.
- ix. Demonstrative evidence is used to demonstrate or clarify an issue rather than prove something.

x.

Teaching note: Handout slips of paper to each student with different items on them. Have the students determine what type of evidence the item is and provide a rationale as to why that item is that type of evidence. Note: some items can be several types of evidence, so the rationale is important.

j. Legal Considerations

- i. There are many state and federal laws surrounding the handling and collection of evidence.
 - 1. Law enforcement officers must abide by them or the evidence may become inadmissible.
 - 2. Law enforcement officers will be required to testify regarding the collection and handling of evidence.

k. Search Warrants

- i. Fourth Amendment puts constraints on the seizure of property by government agents.
- ii. Search warrants designate a specific place and specific items to be seized.
- iii. There are exceptions to the warrant requirements:
 - 1. Search incident to arrest, consent, plain view, hot pursuit, exigent circumstances, and items uncovered during “stop and frisks”.

l. Continuity of Evidence

- i. Evidence must be preserved untainted by the passage of time and documentation of the chain of custody.

m. Custody and Disposition

- i. Evidence must be held in custody until released by prosecutor or judge.
 - 1. If not released, the evidence might be forfeited.
- ii. There are many state and federal laws surrounding the custody of evidence.
- iii. Evidence custodians must also be familiar with federal and state regulations relating to the handling, storage, transportation, and disposal of chemical wastes.

n. Records Maintenance

- i. Various records are related to the control and management of evidence in custody, many of which vary by state law or local custom.
- ii. Evidence custodians must take the steps necessary to ensure that these records are properly compiled, organized, and preserved.

IV. The First Officer’s Responsibilities

- a. The initial response to a call by the responding officer is critical, and is usually made by patrol officers.
- b. The first responding officer remains in charge until relieved by superior officers.
- c. Actions of the first officer that should be taken as soon as circumstances permit:

- i. Actions while en route to the crime scene
 - 1. Proper actions are important.
 - 2. Officers should be alert to perpetrators or perpetrator's vehicles fleeing from the scene.
- ii. Initial actions upon arrival
 - 1. Verify that a crime has been committed
- iii. Assistance to victims and protection of witnesses and bystanders
- iv. Arrest of the perpetrator
- v. Follow-up communications
 - 1. With headquarters and investigators
- vi. Identification of witnesses and vehicles
- vii. Briefing investigators and superiors
- d. Broadcasting a Flash Description
 - i. Also known as "be on the lookout" –BOLO.
 - ii. Should be facts about possible suspects, weapons, and vehicles so other officers in the vicinity can watch for the possible suspect.
- e. Managing Emergency Situations
 - i. Unless a life-threatening situation or other exigent circumstances exist, the responding officer must attend to any injured.
 - 1. This takes precedent over the apprehension of a suspect, until emergency personnel arrive on the scene.

V. Securing the Scene

- a. Requires responding officers to ensure their actions or the actions of others do not disturb the crime scene.
- b. Officers or others should only enter the crime scene to determine if a crime occurred, aid victims, apprehend perpetrators, and secure the area.
- c. Improper entry to the crime scene may:
 - i. Destroy or contaminate evidence.
 - ii. Introduce items into the crime scene that may mislead investigators.
 - iii. Provide defense attorneys a basis for discrediting findings.
- d. In general, the following actions should be taken:
 - i. The crime scene should be clearly defined.
 - ii. Backup should be requested to help restrict access to the defined crime scene and to control onlookers.
 - iii. The interior of the crime scene should be cleared.
 - iv. A record of the actions of the responding officer should be made.
 - v. Access to the scene should be restricted.

VI. Handling Special Situations at the Scene

- a. Dead Body
 - i. The cause should be determined, the body should not be disturbed, and the police supervisor should be notified.
- b. Hanging Victim
 - i. The body should not be moved and the knot should be preserved.
- c. Firearms
 - i. All items should remain untouched, shell casings and location are important pieces of evidence, nothing should be inserted into the barrel, and adjusting the safety or unloading the weapon should not be done.
- d. Discovery of Human Remains

- i. Are often exposed to weather and discovered by citizens, so securing and preserving the scene is very important.
 - e. Aquatic Body Recovery
 - i. Must be done with great care.
 - f. Collecting Electronic Evidence
 - i. Can be latent, transcend borders, can be easily altered, damaged, or compromised.
 - ii. Department of Justice in 2002 released a manual on how to process electronic evidence.
 - iii. Technical Working Group for Electronic Crime Scene Investigation (TWGECSI) in 2002 released detailed guide for law enforcement officers to use in gathering electronic evidence.
 - g. Biohazardous Materials
 - i. It must be assumed that all fluids have the potential to cause infections; known as universal precaution.
 - h. Chemical and Other Hazardous Wastes
 - i. Require proper training and often stem from clandestine drug manufacturing.
 - VII. Assessing the Crime Scene
 - a. Evaluate safety procedures, perimeter security, adequacy of investigative resources, witness/suspect identification, and preliminary documentation.
 - b. Conduct crime scene walkthrough.
 - c. Determine need for search warrant.
 - d. Assess evidence before collection.
 - e. Identify evidence collection team.
 - f. Identify protective equipment and clothing required.
 - g. Set up staging and gathering area.
 - h. Assign one officer to record and collect evidence.
 - i. Determine the evidence search method.
 - j. Develop a collection plan.
 - k. Select the best progression of processing and collection.
 - VIII. Conducting the Crime scene “Walkthrough”
 - a. Before examining the scene, investigators should gather as much information as possible.
 - b. A plan and notes/photographs should be taken.
 - c. The “trail” is the area where all apparent actions of crime took place.
 - i. Close to the point of entry.
 - ii. Examine the floors before walking on them, search over their heads, do not touch anything, and use good lighting.
 - IX. Beginning the Search
 - a. Is used to determine the facts of the crime, identify and arrest the perpetrator, and to aid in prosecution.
 - b. Search Patterns
 - i. Searches are conducted in a systematic way.
 - ii. The most common method is the spiral search, the grid search, the strip or line search, and the quadrant or zone search method.
- Teaching note: Place several objects in the classroom and break the class up into four groups. Assign each group one of the four search patterns and have them conduct a search. Students can then share their experiences orally or write-up their experience.
- iii. Indoor Crime Scene Searches

1. Indoors it is generally recommended two officers conduct the search.
 - a. Each take a side and then switch sides.
- iv. Outdoor Crime Scene Searches
 1. Outdoor scenes often cover a broader area than the indoor scenes.
 - a. Larger scenes require more systematic searches.
- v. Nighttime Crime Scene Searches
 1. If it is nighttime, if allowed, it is best to wait until daylight.
 - a. Inclement weather or emergency circumstances may require a night search.
 - b. Lighting can be brought in.
- vi. Vehicle Searches
 1. Vehicle searches require same degree of attention, but the type of crime dictates the area to be searched.
- c. The Crime Scene Search
 - i. Evidence is dynamic, unique, fragile, and undergoes change.
 - ii. Observations and documentation prior to a search is important.
 - iii. Distances of an object that is evidence to a victim is important.
 - iv. Notes, photographs, videos, and statements are also very important.
- d. Collecting Evidence
 - i. Evidence must be collected in a comprehensive, nondestructive manner.
 - ii. Collected within a reasonable time period.
 - iii. Collected with a minimum of unnecessary movement about the scene.
 - iv. An organized search prevents errors.
- e. Gathering and Preserving Evidence
 - i. Evidence is collected after the search and photographing have been done.
 - ii. Collections should be done in accordance to policy and rules of evidence.
 - iii. Fragile evidence (like fingerprints) are collected first.
 - iv. One investigator should be the collector.
- f. Chain of Custody
 - i. Evidence must be safeguarded until the case goes to court.
 - ii. Law enforcement is responsible for the chain of custody.
 - iii. Anyone who handles the evidence should affix their name/badge number to the evidence package.
- g. Marking the Evidence
 - i. All evidence must be marked immediately upon seizure- usually initials of the seizing officer.
 - ii. Evidence labels should have the case number, exhibit number, date and time of seizure, name and description of the article, location at time of discovery, initials of officer making discovery and those that witnessed the discovery.
- X. Special Cases in Evidence Handling
 - a. Good judgement, common sense, and experience aid the officer in determining if something is evidence.
 - i. When in doubt, collect it.
 - b. Infected Evidence

- i. Crime scene investigators work in an uncontrolled, adverse environment, and gloves and masks do not provide protection from cutting or puncturing.
- c. Firearms
 - i. Extreme care should be taken when handling firearms because of the types of trace evidence typically found on such evidence.
- d. Bullets, Cartridges, and Empty Shell Casings
 - i. Should be handled with particular attention paid to the portions used in identification.
 - ii. Analysis may determine the exact caliber of the weapon.
 - iii. Certain areas of cartridges are typically used for identification:
 - 1. The base
 - 2. The rim or cannelure
 - iv. Exact location of spent cases should be noted and bullets must be removed carefully from their points of impact.
- e. Blood Spatter
 - i. Blood is the stain most commonly found at a crime scene.
 - ii. A bloodstain might be long to the perpetrator, who might have been injured while committing the crime.
 - iii. Analyzing Bloodstains
 - 1. Bloodstain pattern analysis (BPA) is the interpretation of bloodstains at the crime scene in order to recreate the actions that caused the bloodshed.
 - 2. BPA provides information not only about what happened, and what could not have happened.
 - 3. Aids in reconstruction of the crime, corroborating statements, and inclusion or exclusion of potential perpetrators.
 - 4. Passive stains include drops, flows, and pools, and are the result of gravity.
 - 5. Transfer stains result from objects coming into contact with existing bloodstains and leaving blood behind on those objects.
 - 6. Impact stains result from blood projecting through the air and are usually seen as splatter.
 - 7. Examples of spatter
 - a. Gunshot Spatter
 - i. Includes both forward spatter from the exit wound and back spatter from the entrance wound.
 - ii. Will vary depending on numerous factors.
 - b. Castoff
 - i. Results when an object swung in an arc flings blood onto nearby surfaces.
 - ii. Analysts can tell the direction of the impacting object by the shape of the spatter.
 - c. Arterial Spray
 - i. Refers to the spurt of blood released when a major artery is severed.
 - d. Expirated Spatter
 - i. Usually caused by blood from an internal injury mixing with air from the lungs being expelled

through the nose, mouth, or an injury to the airways or lungs.

- e. Latent blood stains
 - i. They cannot be seen with the naked eye.
 - f. Human Hair
 - i. Two samples of human hair can be compared to see if they have a common origin.
 - ii. All hair should be recovered and left intact.
 - iii. In rape cases:
 - 1. Victim's pubic region should be combed prior to collecting standards.
 - 2. A total of 50 to 100 hairs is the desired number.
 - 3. Generally, collection of pubic hair is considered a medical procedure that requires a medical professional typically working with a rape kit.
 - g. Broken Glass
 - i. Broken glass should be photographed and collected.
 - ii. It can aid in the determination of angles and can be transferred onto suspects/victim's body and clothing.
 - h. Impressions
 - i. Can be made by tools, tires, feet, and teeth.
 - i. Soil Evidence.
 - i. Can provide useful information about linking persons to crime scenes, but forensic soil analysis is complex.
 - j. Botanical Evidence
 - i. Examines botanical evidence as it relates to crimes and looks at such items as pollen transfer, spores, pieces of leaves, twigs, and seeds.
 - k. Bite-Mark Evidence
 - i. Known as forensic odontology.
 - ii. Close to DNA in terms of accuracy, but 25 people have been exonerated because of mistakes made in bite mark analysis.
 - l. Drugs
 - i. Drug abuse is the greatest contributor to the commission of crime.
 - ii. Drugs come in many forms and each form must be collected and preserved correctly.
 - m. Concealed Evidence: Strip Searches
 - i. Must be done in a private and controlled environment.
 - ii. The suspect is to completely undress and the clothing is searched.
 - iii. Officers are allowed to search ears, mouth, and nose visually, but the vaginal and rectal areas may be searched only by authorized medical personnel.
 - n. Concealed Evidence: Body Cavity Searches
 - i. Body-packing is the concealing of drugs by taping or otherwise attaching illicit drugs to the body.
 - ii. Are among the most problematic types of searches for police today.
- XI. Interviewing Witnesses
- a. Witnesses' full identities should immediately be collected.
 - b. Witnesses should remain on the scene until they are interviewed.
 - c. Investigators should determine if potential witnesses have left prior to the arrival of the police.

- XII. Contacting the Medical Examiner
 - a. Medical examiners or county coroner should be called according to the agency's standard operating procedure.
- XIII. The Neighborhood Canvass
 - a. Canvasses may be conducted during the early phases of the investigation to identify material witnesses and general witnesses.
 - b. Conducting the Canvass
 - i. The canvass is a critical assignment.
 - ii. Officers should:
 - 1. Be thorough
 - 2. Speak to everyone associated with a location
 - 3. Ask for and get proof of the names of everyone
 - 4. Interview everyone separately
 - 5. Document every canvass interview and attempt
 - 6. Interview persons who say they were not present at the crime scene
 - 7. Not be afraid to interview
 - 8. Take advantage of permission to search
 - 9. Not search if legal grounds do not exist to search
- XIV. Performing the Follow-up Investigation
 - a. The investigator's duties end at the crime scene.
 - b. Follow-up investigations are not a negative reflection, but show follow-up on leads gleaned during the initial investigation.
 - c. Organizational skills and attention to details in the fragmented pieces of information are highly needed.

LIST OF CHANGES/TRANSITION GUIDE

Aside from the previously mentioned updates and additions, Chapter 2 added expanded information on crime scene walkthrough and neighborhood canvass.

ADDITIONAL ASSIGNMENTS AND CLASS ACTIVITIES

1. Create a mini crime scene in the classroom. Do not let the students enter the classroom; instead have them wait in the hall. Explain to them that they are the first arriving officer of a crime. Then have them enter the classroom one or two at a time for 5 minutes with only their notepad. They are to take field notes of the scene and walk through the steps of a first arriving officer. Each student should turn in their findings and a class discussion should follow.
2. Have students find, print, and bring to class examples of chain of custody forms. What do they have in common? Are any unusual characteristics in some of the forms?

SUGGESTED ANSWERS TO END-OF-CHAPTER DISCUSSION QUESTIONS

1. Define the term preliminary investigation and discuss how it applies to a crime scene.

A preliminary investigation is defined as an initial inquiry by officers to establish facts and circumstances of a suspected crime and to preserve any evidence related to that crime. A preliminary investigation should include securing the crime scene, possibly arresting the

suspect, locating and questioning witnesses and victims, documenting the crime scene, and identifying and collecting evidence.

2. What is meant by the term contamination of evidence and why is it important to ensure that evidence from a crime scene does not become contaminated?

Contamination of evidence occurs most commonly when evidence is not properly secured, is wrongfully mixed with other types of evidence, or is altered significantly from its original condition at the crime scene. When this occurs, the evidence is usually rendered inadmissible or “incompetent” by the court.

3. Explain the significance of the “crime scene walkthrough.”

After assessing the crime scene has been completed, a walkthrough should be included. This starts at the area along the “trail” of the crime where all apparent actions associated with the crime took place. This is usually identified by the presence of physical evidence. The purpose of the walkthrough is to note the location of potential evidence and to mentally outline how the scene will be examined. Examination of the ground, so as to not step on any evidence should be done, and any evidence noted should be marked with a marker. Officers take care to not touch or move items. This process serves as an overview of the entire scene.

4. List and discuss the preliminary duties of the responding officer at a crime scene and measures that must be taken to ensure that a crime scene is secured.

The first responding officer is usually a patrol officer and is a critical stage of the criminal investigation. Actions while en route to the crime scene are very important, as the officer must be alert to the possible presence of perpetrators or perpetrators’ vehicles fleeing from the scene. The initial actions upon arrival involves, first verifying that a crime has been committed. Communication of this verification, or the officer’s reasonable suspicion, to the dispatcher or supervisor should then follow, immediately. Providing assistance to victims and protecting witnesses and bystanders is the next step. Administer first aid to and summon medical assistance for any victims. If the perpetrator is at the scene and probable cause for arrest exists or an arrest warrant has been issued, arrest the suspect. Follow-up communications involves informing superiors of the apparent nature of the offenses. Provide a full description of any perpetrator who has fled the scene, along with information regarding the perpetrator’s mode and direction of flight; similar information should be provided for any accomplices if relevant. Identify witnesses and vehicles. Brief investigators and supervisors.

5. Give examples of the ways in which a crime scene can become contaminated if not properly secured.

If a crime scene is not properly secured evidence can be destroyed, items or substances can be introduced into the crime scene that may mislead investigators, and it can provide defense attorneys with a basis for discrediting the investigators or the findings of the crime laboratory.

6. With the exception of any unusual circumstances, explain why evidence at a crime scene should be recorded before any objects are collected or removed.

Evidence is crucial to the successful prosecution of a case. Evidence is dynamic, unique, and fragile. There is usually only one chance to search a crime scene properly. Often specific importance is the relative distance of an object to the victim. Jurors often need to “see” the crime scene and this is often done through crime scene sketches, photographs, and videos. Once evidence has been collected or removed it can never be photographed or recorded in its original location. The original photographs and videos are extremely important to the prosecution’s case and solidifying a conviction.

7. Discuss some of the special cases that may arise in evidence handling and explain why it is important to properly collect and manage evidence.

All crime scenes are unique. The textbook discusses dead bodies, hanging victims, firearms, aquatic body recovery, collecting electronic evidence, biohazardous materials, and chemical or other hazardous wastes.

8. What is a neighborhood canvass and explain why it may be important to conduct during the early phases of an investigation.

The neighborhood canvass is one of the best ways to identify possible witnesses to a crime. It should be conducted as soon after the discovery of the crime as possible. A thorough canvass involves interviewing everyone associated in a particular area and documenting the interviews with details. People interviewed, need not to have been present at the crime scene, but may have heard or seen something that they were unaware were related to a crime. Also, officers may be granted consent to search areas outside the immediate scope of the crime scene and could produce valuable evidence.

9. Discuss the goals of a follow-up investigation.

The follow-up investigation builds on what has been learned in the preliminary investigation. Follow-up investigations can include: Analyzing reports of officers conducting the preliminary phases of the investigation, Reviewing official departmental records and mode of operation (MO) files, Gathering information on friends and associates of suspects, Examining the victim’s background, Checking police intelligence files to develop potential suspects, Organizing police actions, such as neighborhood canvassing, raids, and search warrants.