



Crime Scene Investigation

CRIME SCENE DO NOT CROSS



A Guide for Law Enforcement

research report

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Crime Scene Investigation: A Guide for Law Enforcement

Written and Approved by the
Technical Working Group on Crime Scene Investigation

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Message From the Attorney General

Actions taken at the outset of an investigation at a crime scene can play a pivotal role in the resolution of a case. Careful, thorough investigation is key to ensure that potential physical evidence is not tainted or destroyed or potential witnesses overlooked.

While many agencies have programs in crime scene processing, the level of training and resources available varies from jurisdiction to jurisdiction, as does the opportunity to practice actual investigation. To help these agencies, the National Institute of Justice supported the development of this guide.

I commend the hard work of the 44 members of the technical working group that created this guide. They are representative of law enforcement, the prosecution, the defense, and forensic science, and their collective expert knowledge, experience, and dedication to the task made this effort a success.

The guide is one method of promoting quality crime scene investigation. The type and scope of a crime scene investigation will vary from case to case. Jurisdictions will want to carefully consider the procedures in this guide and their applicability to local agencies and circumstances.

Janet Reno

Attorney General

Technical Working Group on Crime Scene Investigation

The Technical Working Group on Crime Scene Investigation (TWGCSI) is a multidisciplinary group of content-area experts from across the United States, from both urban and rural jurisdictions, each representing his or her respective agency or practice. Each of these individuals is experienced in the area of crime scene investigation and evidence collection in the criminal justice system from the standpoints of law enforcement, prosecution, defense, or forensic science.

At the outset of the TWGCSI effort, the National Institute of Justice (NIJ) created a planning panel—composed of distinguished law enforcement, legal, and science professionals—to define needs, to develop initial strategies, and to steer the larger group. Additional members of the technical working group were then selected from recommendations solicited from the planning panel, NIJ’s regional National Law Enforcement and Corrections Technology Centers, and national organizations including the American Academy of Forensic Science, National District Attorneys Association, National Association of Criminal Defense Lawyers, National Legal Aid and Defender Association, International Association of Chiefs of Police, National Sheriffs’ Association, International Association for Identification, and the American Association of Crime Laboratory Directors/Laboratory Accreditation Board.

Collectively, over a 1-year period, the 44 members of TWGCSI listed below worked together to develop this guide, *Crime Scene Investigation: A Guide for Law Enforcement*.

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NIJ also wishes to thank Attorney General Janet Reno, whose support and commitment to the improvement of the criminal justice system made this work possible. In addition, appreciation is extended to David G. Boyd, Director of NIJ's Office of Science and Technology, and to Richard M. Rau, Ph.D., the NIJ Project Monitor, for his unwavering support of, and guidance through, the process and production of this guide.

NIJ would like to thank all the individuals from various national organizations who responded to the request for nominations of experts with a wide expanse of knowledge and experience in the field of crime scene investigation. It was from their recommendations that the members were selected. In particular, thanks to Jim Polley from the National District Attorneys Association, Dan Rosenblatt from the International Association of Chiefs of Police, Stuart Statler from the National Association of Criminal Defense Lawyers, Clinton Lyons from the National Legal Aid and Defender Association, Aldine N. "Bubby" Moser, Jr., from the National Sheriffs' Association, and Ronald C. Jackson from the International Association for Identification. NIJ would also like to thank Mike Grossman, Director of NIJ's Technology Assistance Division, for his nominations of law enforcement candidates and his help in obtaining

recommendations from NIJ's regional National Law Enforcement and Corrections Technology Centers (NLECTC), as well as the directors of those centers: James A. Keller, Robert Pentz, Chris Aldridge, John Ritz, Thomas Sexton, and Tom Burgoyne. NIJ would also like to thank the more than 120 individuals and organizations who were sent a copy of the draft guide for review and comment.

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Introduction

Note: A ↩ appears after terms that are defined in the glossary and is used the first time a glossary word or phrase occurs in each section of the document.

This guide is intended for use by law enforcement and other responders ↩ who have responsibility for protecting crime scenes, preserving physical evidence, and collecting and submitting the evidence for scientific examination. Physical evidence has the potential to play a critical role in the overall investigation and resolution of a suspected criminal act. Realization of this potential depends on actions taken early in the criminal investigation at the crime scene. Developments in technology and improvements in the analysis and interpretation of physical evidence recovered from crime scenes will place even greater importance on properly documented and preserved evidence. An important factor influencing the ultimate legal significance of this scientific evidence is that investigators follow an objective, thorough, and thoughtful approach. The goal of this process is to recognize and preserve physical evidence that will yield reliable information to aid in the investigation.

Investigators should approach the crime scene investigation as if it will be their only opportunity to preserve and recover these physical clues. They should consider other case information or statements from witnesses or suspects carefully in their objective assessment of the scene. Investigations may change course a number of times during such an inquiry and physical clues, initially thought irrelevant, may become crucial to a successful resolution of the case.

It is recognized that all crime scenes are unique. The judgment of the investigator on the scene, with the assistance of other responders, such as the prosecutor, should be given deference in the implementation of this guide. It is impossible to propose a single, step-by-step procedure to approach every type of situation. There are, however, fundamental principles of investigating a crime scene and preserving evidence that

should be practiced in every case. This document is not intended as a comprehensive or rigid scheme of activities, but as a guide for law enforcement, while recognizing the authority of Federal and State statutes, case law, and local policies and procedures.

Although the development of a guide for crime scene investigation is instructive in addressing issues surrounding the management of crime scenes, the Technical Working Group on Crime Scene Investigation (TWGCSI) recognizes that local logistical and legal conditions may dictate the use of alternative procedures. Further, crime scene investigation procedures that differ from the practices in this guide may not necessarily invalidate or detract from the evidence in a particular case.

The authors encourage crime scene personnel to develop and continually update their knowledge, skills, and abilities with respect to the processing of a crime scene through training. In fact, successful implementation of this guide can be realized only if staff possess basic (and in some cases advanced) training in the fundamentals of investigating a crime scene. However, this document does not address the mechanics of evidence collection or the training requirements of investigative personnel.

The application of this guide may vary from case to case. Most of the procedures described in this document are typically ones that would be followed in a major crime scene investigation. Some of the procedures listed may not necessarily be followed in less serious or less complex investigations. In addition, the order in which actions may be performed will vary depending on the nature of the particular crime scene. In some investigations, the responsibilities described in each section may be performed by the same individual. The authors acknowledge that law enforcement agencies may be faced with the dilemma of responding to more reported crimes than their resources allow. It is one of the primary responsibilities of the investigator to assess the case at hand and, after judging the seriousness of the case and the availability of resources, to decide the level of investigation that will take place. For potentially devastating situations, such as biological weapons or radiological or

chemical threats^⑥, the appropriate agencies should be contacted. The user should refer to the National Institute of Justice's (NIJ's) publications for fire and arson investigation, bomb and explosives investigation, electronic crime investigation, and death investigation where applicable.

The authors recognize that the size of the agency, availability of resources, and the level of expertise vary greatly from jurisdiction to jurisdiction. The experts who have proposed this guide strongly suggest that agencies unable to adhere to it seek assistance from other agencies. Assistance may take the form of securing additional training, sharing resources, forming partnerships with neighboring jurisdictions, and/or seeking additional funding. The authors also recognize that many agencies already have programs in crime scene processing, and much of the information contained in this document is derived from these sources, including many of the resources identified in the reference list.

Based on this guide, agencies may determine that improvements are needed in their training and policies concerning the investigation of crime scenes. This guide may be a justification for strengthening an agency's resources.

Background

NIJ was asked by Attorney General Janet Reno in 1995 to study cases in which convicted sex offenders were later exonerated by DNA testing. This study resulted in the 1996 publication, *Convicted by Juries, Exonerated by Science: Case Studies in the Use of DNA Evidence to Establish Innocence After Trial*. After being briefed on this publication, Attorney General Reno asked NIJ to develop a consistent approach to the processing of crime scenes. As a result, NIJ initiated the Technical Working Group on Crime Scene Investigation to develop recommended practices for crime scene management.

Origin of the National Crime Scene Planning Panel and the Technical Working Group on Crime Scene Investigation

In the spring of 1998, the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB) and ASCLD supported the principle of NIJ's establishment of TWGCSI. The NIJ Director selected an 11-member planning panel called the National Crime Scene Planning Panel (NCSPP). The NCSPP members represent independent, multidisciplinary organizations whose constituents are responsible for investigating, evaluating, and analyzing evidence from crime scenes. The rationale for their involvement was twofold: they represent the diversity of the professional disciplines and each organization is a key stakeholder in the conduct of crime scene investigations and the implementation of this guide.

The NCSPP was charged with the development of the outline for a guide for crime scene investigations using the format in *Death Investigation: A Guide for the Scene Investigator*. The NCSPP also was charged with identifying the expertise necessary for the composition of a Technical Working Group on Crime Scene Investigation, a task the panel completed at a meeting in Washington, D.C., in August 1998.

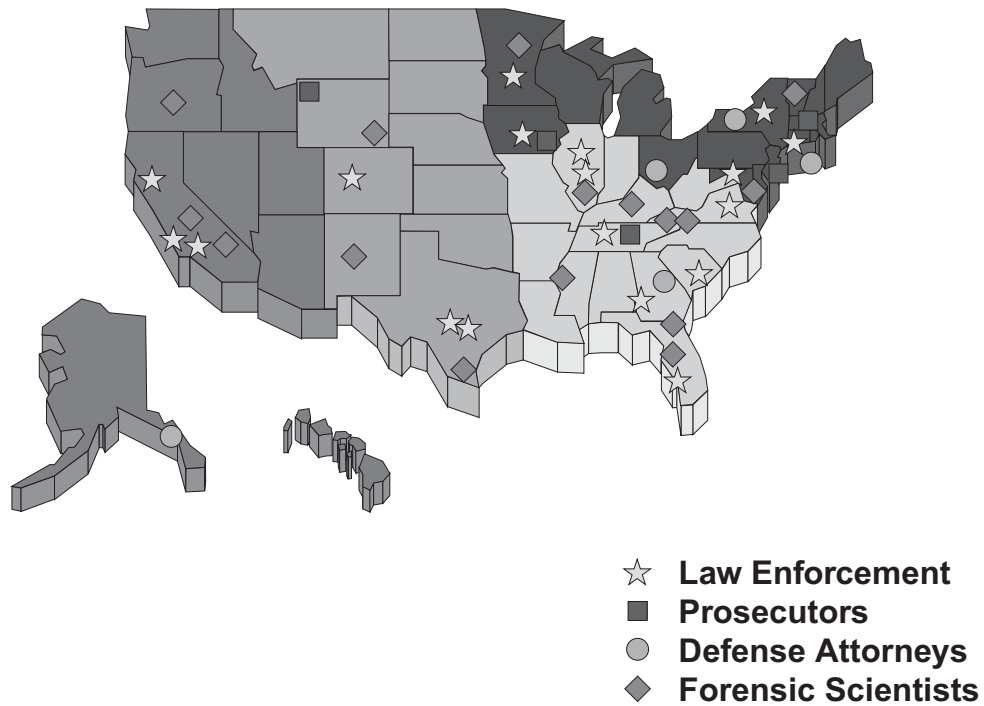
Candidates for TWGCSI were recommended by organizations representing law enforcement, forensic science, crime scene training, the prosecution, and the defense. The following criteria were used to select TWGCSI members:

- ◆ Each member was nominated/selected for the position by the NCSPP, national organizations, and NIJ's four regional National Law Enforcement and Corrections Technology Centers—Northeast, Southeast, Rocky Mountain, and West.
- ◆ Each member had specific knowledge regarding the investigation of crime scenes.
- ◆ Each member had specific experience with the process of crime scene investigation and the outcomes of positive and negative scene investigations.

- ◆ Each member could commit to the project over at least a 6-month period.

The experts invited to TWGCSI consisted of 44 members from 25 States. Their expertise was distributed among 18 law enforcement officers and trainers, 16 forensic analysts and educators, 5 prosecutors, and 5 defense attorneys. This distribution of expertise, detailed below, brought together all the nonmedical crime scene investigators to develop this guide.

Technical Working Group on Crime Scene Investigation Membership Distribution



Region	Number of Participants	Percentage
Northeast	14	31.8%
Southeast	16	36.4%
Rocky Mountain	7	15.9%
West	7	15.9%
Total:	44	100%

Chronology

NCSPP meeting. In August 1998, the NCSPP met in Washington, D.C., to review the existing literature and technology, prepare the project objectives, and begin the guide development process. The NCSPP's objective was to develop an outline for a guide based on existing literature and present it for review to the assembled TWGCSI at a later date. During this initial session, four investigative tasks were identified. Each task included subsections which when developed provided a guide for investigators to follow while conducting a crime scene investigation.

The guide's format has the following content:

- ◆ A statement of *principle*, citing the rationale for following the guide.
- ◆ A statement of *policy* to the investigator on performing each section of the guide.
- ◆ The *procedure* for performing each section of the guide.
- ◆ A *summary* statement citing justification for performing the procedures.

TWGCSI meetings. In December 1998, TWGCSI assembled in Washington, D.C., and, after introductory remarks, separated into four breakout sections to draft the guide. The four sections were: Arriving at the Scene: Initial Response/Prioritization of Efforts, Preliminary Documentation and Evaluation of the Scene, Processing the Scene, and Completing and Recording the Crime Scene Investigation. An editor from Aspen Systems Corporation attended each breakout section to audibly record the proceedings. Once all breakout sections completed their work, the full TWG reassembled to review the initial draft.

The full TWG met again in January 1999 in Washington, D.C., to make revisions and complete initial review as a group. The draft was edited and TWGCSI members were asked to recommend organizations, persons, or agencies they felt should comment. The draft was then mailed to this wider audience and to all TWG members.

Organization review. The NCSPP reassembled in March 1999 in Washington, D.C., to review and incorporate comments received from the wider audience into the document. In April 1999, TWGCSI met in La Jolla, California, to review the latest draft, make revisions, and approve changes. The document was edited, and the NCSPP met in Washington, D.C., in July 1999 to review the glossary, title, introduction, and appendixes for the document.

This document is divided into five sections: Arriving at the Scene: Initial Response/Prioritization of Efforts, Preliminary Documentation and Evaluation of the Scene, Processing the Scene, Completing and Recording the Crime Scene Investigation, and Crime Scene Equipment. At the end of the document are appendixes containing a glossary, a reference list, and a list of organizations to which a draft copy of the document was sent.

Training Guide

The national crime scene investigation project includes tasks to develop training criteria to fit the investigative guide. For each of the investigative tasks presented in this document, “minimum levels of performance” will be developed and verified by TWGCSI members. This “training guide” will provide both individuals and educational organizations the material needed to establish and maintain valid training programs. A set of sample forms with suggested information to be recorded at the crime scene will be included in the training guide.

—Technical Working Group on Crime Scene Investigation

Crime Scene Investigation: A Guide for Law Enforcement

Section A

Arriving at the Scene: Initial Response/Prioritization of Efforts

Section B

Preliminary Documentation and Evaluation of the Scene

Section C

Processing the Scene

Section D

Completing and Recording the Crime Scene Investigation

Section E

Crime Scene Equipment

Authorization: Actions taken pursuant to this guide shall be performed in accordance with department policies and procedures and Federal and State laws.

This handbook is intended as a guide to recommended practices for crime scene investigation.

Jurisdictional, logistical, or legal conditions may preclude the use of particular procedures contained herein.

For potentially devastating situations, such as biological weapons or radiological or chemical threats, the appropriate agencies should be contacted. The user should refer to the National Institute of Justice's publications for fire and arson investigation, bomb and explosives investigation, electronic crime investigation, and death investigation where applicable.

Arriving at the Scene: Initial Response/ Prioritization of Efforts

1. Initial Response/Receipt of Information



Principle: One of the most important aspects of securing the crime scene is to preserve the scene with minimal contamination and disturbance of physical evidence. The initial response to an incident shall be expeditious and methodical. Upon arrival, the officer(s) shall assess the scene and treat the incident as a crime scene.

Policy: The initial responding officer(s) shall promptly, yet cautiously, approach and enter crime scenes, remaining observant of any persons, vehicles, events, potential evidence, and environmental conditions.

Procedure: The initial responding officer(s) should:

- a. Note or log dispatch information (e.g., address/location, time, date, type of call, parties involved).
- b. Be aware of any persons or vehicles leaving the crime scene.
- c. Approach the scene cautiously, scan the entire area to thoroughly assess the scene, and note any possible secondary crime scenes. Be aware of any persons and vehicles in the vicinity that may be related to the crime.
- d. Make initial observations (look, listen, smell) to assess the scene and ensure officer safety before proceeding.
- e. Remain alert and attentive. Assume the crime is ongoing until determined to be otherwise.
- f. Treat the location as a crime scene until assessed and determined to be otherwise.

1. Initial Response/Receipt of Information

Summary: It is important for the initial responding officer(s) to be observant when approaching, entering, and exiting a crime scene.

2. Safety Procedures

Principle: The safety and physical well-being of officers and other individuals, in and around the crime scene, are the initial responding officer(s)' first priority.

Policy: The initial responding officer(s) arriving at the scene shall identify and control any dangerous situations or persons.

Procedure: The initial responding officer(s) should:

- a. Ensure that there is no immediate threat to other responders — scan area for sights, sounds, and smells that may present danger to personnel (e.g., hazardous materials such as gasoline, natural gas). If the situation involves a clandestine drug laboratory, biological weapons, or radiological or chemical threats the appropriate personnel/agency should be contacted prior to entering the scene.
- b. Approach the scene in a manner designed to reduce risk of harm to officer(s) while maximizing the safety of victims, witnesses, and others in the area.
- c. Survey the scene for dangerous persons and control the situation.
- d. Notify supervisory personnel and call for assistance/backup.


Summary: The control of physical threats will ensure the safety of officers and others present.

3. Emergency Care

Principle: After controlling any dangerous situations or persons, the initial responding officer(s') next responsibility is to ensure that medical attention is provided to injured persons while minimizing contamination of the scene.

Policy: The initial responding officer(s) shall ensure that medical attention is provided with minimal contamination of the scene.

Procedure: The initial responding officer(s) should:

- a. Assess the victim(s) for signs of life and medical needs and provide immediate medical attention.
- b. Call for medical personnel.
- c. Guide medical personnel to the victim to minimize contamination/alteration of the crime scene.
- d. Point out potential physical evidence to medical personnel, instruct them to minimize contact with such evidence (e.g., ensure that medical personnel preserve all clothing and personal effects without cutting through bullet holes, knife tears), and document movement of persons or items by medical personnel.
- e. Instruct medical personnel not to “clean up” the scene and to avoid removal or alteration of items originating from the scene.
- f. If medical personnel arrived first, obtain the name, unit, and telephone number of attending personnel, and the name and location of the medical facility where the victim is to be taken.
- g. If there is a chance the victim may die, attempt to obtain “dying declaration.” 
- h. Document any statements/comments made by victims, suspects, or witnesses at the scene.



3. Emergency Care

- i. If the victim or suspect is transported to a medical facility, send a law enforcement official with the victim or suspect to document any comments made and preserve evidence. (If no officers are available to accompany the victim/suspect, stay at the scene and request medical personnel to preserve evidence and document any comments made by the victim or suspect.)

Summary: Assisting, guiding, and instructing medical personnel during the care and removal of injured persons will diminish the risk of contamination and loss of evidence.

4. Secure and Control Persons at the Scene

Principle: Controlling, identifying, and removing persons at the crime scene and limiting the number of persons who enter the crime scene and the movement of such persons is an important function of the initial responding officer(s) in protecting the crime scene.

Policy: The initial responding officer(s) shall identify persons at the crime scene and control their movement.

Procedure: The initial responding officer(s) should:

- a. Control all individuals at the scene—prevent individuals from altering/destroying physical evidence by restricting movement, location, and activity while ensuring and maintaining safety at the scene.
- b. Identify all individuals at the scene, such as:
 - Suspects: Secure and separate.
 - Witnesses: Secure and separate.

- Bystanders: Determine whether witness, if so treat as above, if not, remove from the scene.
 - Victims/family/friends: Control while showing compassion.
 - Medical and other assisting personnel.
- c. Exclude unauthorized and nonessential personnel from the scene (e.g., law enforcement officials not working the case, politicians, media).



Summary: Controlling the movement of persons at the crime scene and limiting the number of persons who enter the crime scene is essential to maintaining scene integrity, safeguarding evidence, and minimizing contamination.

5. Boundaries: Identify, Establish, Protect, and Secure

Principle: Defining and controlling boundaries provide a means for protecting and securing the crime scene(s). The number of crime scenes and their boundaries are determined by their location(s) and the type of crime. Boundaries shall be established beyond the initial scope of the crime scene(s) with the understanding that the boundaries can be reduced in size if necessary but cannot be as easily expanded.

Policy: The initial responding officer(s) at the scene shall conduct an initial assessment to establish and control the crime scene(s) and its boundaries.

Procedure: The initial responding officer(s) should:

- a. Establish boundaries of the scene(s), starting at the focal point and extending outward to include:
 - Where the crime occurred.

5. Boundaries: Identify, Establish, Protect, and Secure

- Potential points and paths of exit and entry of suspects and witnesses.
 - Places where the victim/evidence may have been moved (be aware of trace and impression evidence ☞ while assessing the scene).
- b. Set up physical barriers (e.g., ropes, cones, crime scene barrier tape, available vehicles, personnel, other equipment) or use existing boundaries (e.g., doors, walls, gates).
 - c. Document the entry/exit of all people entering and leaving the scene, once boundaries have been established.
 - d. Control the flow of personnel and animals entering and leaving the scene to maintain integrity of the scene.
 - e. Effect measures to preserve/protect evidence that may be lost or compromised (e.g., protect from the elements (rain, snow, wind) and from footsteps, tire tracks, sprinklers).
 - f. Document the original location of the victim or objects that you observe being moved.
 - g. Consider search and seizure issues to determine the necessity of obtaining consent to search and/or obtaining a search warrant.

Note: Persons should not smoke, chew tobacco, use the telephone or bathroom, eat or drink, move any items including weapons (unless necessary for the safety and well-being of persons at the scene), adjust the thermostat or open windows or doors (maintain scene as found), touch anything unnecessarily (note and document any items moved), reposition moved items, litter, or spit within the established boundaries of the scene.

Summary: Establishing boundaries is a critical aspect in controlling the integrity of evidentiary material.

6. Turn Over Control of the Scene and Brief Investigator(s) in Charge

Principle: Briefing the investigator(s) taking charge assists in controlling the crime scene and helps establish further investigative responsibilities.

Policy: The initial responding officer(s) at the scene shall provide a detailed crime scene briefing to the investigator(s) in charge of the scene.

Procedure: The initial responding officer(s) should:

- a. Brief the investigator(s) taking charge.
- b. Assist in controlling the scene.
- c. Turn over responsibility for the documentation of entry/exit.
- d. Remain at the scene until relieved of duty.

Summary: The scene briefing is the only opportunity for the next in command to obtain initial aspects of the crime scene prior to subsequent investigation.

7. Document Actions and Observations

Principle: All activities conducted and observations made at the crime scene must be documented as soon as possible after the event to preserve information.

Policy: Documentation must be maintained as a permanent record.

Procedure: The initial responding officer(s) should document:

- a. Observations of the crime scene, including the location of persons and items within the crime scene and the appearance and condition of the scene upon arrival.



7. Document Actions and Observations

- b. Conditions upon arrival (e.g., lights on/off; shades up/down, open/closed; doors, windows, open/closed; smells; ice, liquids; movable furniture; weather; temperature; and personal items.)
- c. Personal information from witnesses, victims, suspects, and any statements or comments made.
- d. Own actions and actions of others.

Summary: The initial responding officer(s) at the crime scene must produce clear, concise, documented information encompassing his or her observations and actions. This documentation is vital in providing information to substantiate investigative considerations.

Preliminary Documentation and Evaluation of the Scene

1. Conduct Scene Assessment

Principle: Assessment of the scene by the investigator(s) in charge allows for the determination of the type of incident to be investigated and the level of investigation to be conducted.

Policy: The investigator(s) in charge shall identify specific responsibilities, share preliminary information, and develop investigative plans in accordance with departmental policy and local, State, and Federal laws.

Procedure: The investigator(s) in charge should:

- a. Converse with the first responder(s) regarding observations/activities.
- b. Evaluate safety issues that may affect all personnel entering the scene(s) (e.g., bloodborne pathogens, hazards).
- c. Evaluate search and seizure issues to determine the necessity of obtaining consent to search and/or obtaining a search warrant.
- d. Evaluate and establish a path of entry/exit to the scene to be utilized by authorized personnel.
- e. Evaluate initial scene boundaries.
- f. Determine the number/size of scene(s) and prioritize.
- g. Establish a secure area within close proximity to the scene(s) for the purpose of consultation and equipment staging.
- h. If multiple scenes exist, establish and maintain communication with personnel at those locations.
- i. Establish a secure area for temporary evidence storage in accordance with rules of evidence/chain of custody.

B

1. Conduct Scene Assessment

- j. Determine and request additional investigative resources as required (e.g., personnel/specialized units, legal consultation/prosecutors, equipment).
- k. Ensure continued scene integrity (e.g., document entry/exit of authorized personnel, prevent unauthorized access to the scene).
- l. Ensure that witnesses to the incident are identified and separated (e.g., obtain valid ID).
- m. Ensure the surrounding area is canvassed and the results are documented.
- n. Ensure preliminary documentation[Ⓢ]/photography of the scene, injured persons, and vehicles.

Summary: Scene assessment allows for the development of a plan for the coordinated identification, collection[Ⓢ], and preservation of physical evidence and identification of witnesses. It also allows for the exchange of information among law enforcement personnel and the development of investigative strategies.

2. Conduct Scene “Walk-Through” and Initial Documentation

Principle: The scene “walk-through”[Ⓢ] provides an overview of the entire scene, identifies any threats to scene integrity, and ensures protection of physical evidence. Written and photographic documentation provides a permanent record.

Policy: The investigator(s) in charge shall conduct a walk-through of the scene. The walk-through shall be conducted with individuals responsible for processing the scene.

Procedure: During the scene walk-through, the investigator(s) in charge should:

- a. Avoid contaminating the scene by using the established path of entry.
- b. Prepare preliminary documentation of the scene as observed.
- c. Identify and protect fragile and/or perishable evidence (e.g., consider climatic conditions, crowds/hostile environment). Ensure that all evidence that may be compromised is immediately documented, photographed, and collected.

Summary: Conducting a scene walk-through provides the investigator(s) in charge with an overview of the entire scene. The walk-through provides the first opportunity to identify valuable and/or fragile evidence and determine initial investigative procedures, providing for a systematic examination and documentation of the scene. Written and photographic documentation records the condition of the scene as first observed, providing a permanent record.



Processing the Scene

1. Determine Team Composition

Principle: Based on the type of incident and complexity of the scene, the investigator(s) in charge shall determine team composition. Trained personnel shall perform scene processing.

Policy: The investigator(s) in charge shall assess the scene to determine specialized resources required.

Procedure: Following the walk-through, the investigator(s) in charge should:

- a. Assess the need for additional personnel. Be aware of the need for additional personnel in cases of multiple scenes, multiple victims, numerous witnesses, or other circumstances.
- b. Assess forensic needs and call forensic specialists to the scene for expertise and/or equipment.
- c. Ensure that scene security and the entry/exit documentation are continued.
- d. Select qualified person(s) to perform specialized tasks (e.g., photography, sketch, latent prints, evidence collection).
- e. Document team members and assignments.

Summary: The scene(s) assessment determines the number of personnel and how responsibilities will be assigned.

C

2. Contamination Control

Principle: Contamination control and preventing cross-contamination at single or multiple scenes is essential to maintaining the safety of personnel and the integrity of evidence.

Policy: The investigator(s) in charge shall require all personnel to follow procedures to ensure scene safety and evidence integrity.

Procedure: Other responders and/or team members should:

- a. Limit scene access to people directly involved in scene processing.
- b. Follow established entry/exit routes at the scene.
- c. Identify first responders and consider collection of elimination samples.
- d. Designate secure area for trash and equipment.
- e. Use personal protective equipment (PPE) to prevent contamination of personnel and to minimize scene contamination.
- f. Clean/sanitize or dispose of tools/equipment and personal protective equipment between evidence collections and/or scenes.
- g. Utilize single-use equipment when performing direct collection of biological samples.

Summary: Minimize contamination by being safe, clean, and careful to ensure the welfare of personnel and the integrity of the evidence.

3. Documentation

Principle: An assessment of the scene determines what kind of documentation is needed (e.g., photography, video, sketches, measurements, notes).

Policy: The investigator(s) in charge shall ensure documentation of the scene.

Procedure: The team member(s) should:

- a. Review assessment of the scene to determine the type of documentation needed.
- b. Coordinate photographs, video, sketches, measurements, and notes.
- c. Photograph:
 - Scene utilizing overall, medium, and close-up coverage.
 - Evidence to be collected with and without measurement scale and/or evidence identifiers.
 - Victims, suspects, witnesses, crowd, and vehicles.
 - Additional perspectives (e.g., aerial photographs, witness' view, area under body once body is removed).
- d. Videotape as optional supplement to photos.
- e. Prepare preliminary sketch(es) and measure:
 - Immediate area of the scene, noting case identifiers and indicating north on the sketch.
 - Relative location of items of evidence and correlate evidence items with evidence records.
 - Evidence prior to movement.
 - Rooms, furniture, or other objects.
 - Distance to adjacent buildings or other landmarks.
- f. Generate notes at the scene:
 - Documenting location of the scene, time of arrival, and time of departure.
 - Describing the scene as it appears.



3. Documentation

- Recording transient evidence (e.g., smells, sounds, sights) and conditions (e.g., temperature, weather).
- Documenting circumstances that require departures from usual procedures.

Summary: A well-documented scene ensures the integrity of the investigation and provides a permanent record for later evaluation.

4. Prioritize Collection of Evidence

Principle: Prioritize the collection of evidence to prevent loss, destruction, or contamination.

Policy: The investigator(s) in charge and team members shall determine the order in which evidence is collected.

Procedure: The team member(s) should:

- a. Conduct a careful and methodical evaluation considering all physical evidence possibilities (e.g., biological fluids, latent prints, trace evidence).
- b. Focus first on the easily accessible areas in open view and proceed to out-of-view locations.
- c. Select a systematic search pattern for evidence collection based on the size and location of the scene(s).
- d. Select a progression of processing/collection methods so that initial techniques do not compromise subsequent processing/collections methods.
 - Concentrate on the most transient evidence and work to the least transient forms of physical evidence.

- Move from least intrusive to most intrusive processing/ collection methods.
- e. Continually assess environmental and other factors that may affect the evidence.
- f. Be aware of multiple scenes (e.g., victims, suspects, vehicles, locations).
- g. Recognize other methods that are available to locate, technically document, and collect evidence (e.g., alternate light source, enhancement, blood pattern documentation, projectile trajectory analysis).

Summary: Prioritization provides for the timely and methodical preservation and collection of evidence.

5. Collect, Preserve, Inventory, Package, Transport, and Submit Evidence



Principle: The handling of physical evidence is one of the most important factors of the investigation.

Policy: The team member(s) shall ensure the effective collection, preservation, packaging, and transport of evidence.

Procedure: The team member(s) should:

- a. Maintain scene security throughout processing and until the scene is released.
- b. Document the collection of evidence by recording its location at the scene, date of collection, and who collected it.
- c. Collect each item identified as evidence.
- d. Establish chain of custody.
- e. Obtain standard/reference samples from the scene.

5. Collect, Preserve, Inventory, Package, Transport, and Submit Evidence

- f. Obtain control samples. ☞
- g. Consider obtaining elimination samples.
- h. Immediately secure electronically recorded evidence (e.g., answering machine tapes, surveillance camera videotapes, computers) from the vicinity.
- i. Identify and secure evidence in containers (e.g., label, date, initial container) at the crime scene. Different types of evidence require different containers (e.g., porous ☞, nonporous ☞, crushproof).
- j. Package items to avoid contamination and cross-contamination.
- k. Document the condition of firearms/weapons prior to rendering them safe for transportation and submission.
- l. Avoid excessive handling of evidence after it is collected.
- m. Maintain evidence at the scene in a manner designed to diminish degradation or loss.
- n. Transport and submit evidence items for secure storage.

Summary: Evidence at crime scenes that is in the process of documentation, collection, preservation, or packaging should be handled with attention to scene integrity and protection from contamination or deleterious change. During the processing of the scene, and following documentation, evidence should be appropriately packaged, labeled, and maintained in a secure, temporary manner until final packaging and submission to a secured evidence storage facility or the crime laboratory.

Completing and Recording the Crime Scene Investigation

1. Establish Crime Scene Debriefing Team

Principle: The crime scene debriefing enables law enforcement personnel and other responders to share information regarding particular scene findings **prior to releasing the scene**. It provides an opportunity for input regarding followup investigation, special requests for assistance, and the establishment of post-scene responsibilities.

Policy: Law enforcement personnel and other responders shall participate in or initiate a crime scene debriefing to ensure the crime scene investigation is complete and to verify post-scene responsibilities.

Procedure: The investigator(s) in charge of the crime scene should establish a crime scene debriefing team. When participating in a scene debriefing, law enforcement personnel and other responders should:

- a. Establish a crime scene debriefing team, which includes the investigator(s) in charge of the crime scene, other investigators and evidence collection personnel (e.g., photographers, evidence technicians, latent print personnel, specialized personnel, and initial responding officer(s) if still present).
- b. Determine what evidence was collected.
- c. Discuss preliminary scene findings with team members.
- d. Discuss potential technical forensic testing and the sequence of tests to be performed.
- e. Initiate any action(s) identified in discussion required to complete the crime scene investigation.

1. Establish Crime Scene Debriefing Team

- f. Brief person(s) in charge upon completion of assigned crime scene tasks.
- g. Establish post-scene responsibilities for law enforcement personnel and other responders.

Summary: The crime scene debriefing is the best opportunity for law enforcement personnel and other responders to ensure that the crime scene investigation is complete.

2. Perform Final Survey of the Crime Scene

Principle: Final survey of the crime scene ensures that evidence has been collected and the scene has been processed prior to release. In addition, a systematic review of the scene ensures that evidence, equipment, or materials generated by the investigation are not inadvertently left behind and any dangerous materials or conditions have been reported and addressed.

Policy: The investigator(s) in charge shall direct a walk-through[Ⓢ] at the conclusion of the scene investigation and ensure that the scene investigation is complete.

Procedure: The investigator(s) in charge should ensure that:

- a. Each area identified as part of the crime scene is visually inspected.
- b. All evidence collected at the scene is accounted for.
- c. All equipment and materials generated by the investigation are removed.
- d. Any dangerous materials or conditions are reported and addressed.

- e. The crime scene is released in accordance with jurisdictional requirements.

Summary: Conducting a scene walk-through ensures that all evidence has been collected, that materials are not inadvertently left behind, and that any dangerous materials or conditions have been reported and addressed.

3. Documentation of the Crime Scene

Principle: Reports and other documentation pertaining to the crime scene investigation shall be compiled into a “case file” by the investigator(s) in charge of the crime scene. This file shall be a record of the actions taken and evidence collected at the scene. This documentation shall allow for independent review of the work conducted.

Policy: The investigator(s) in charge shall ensure that reports and other documentation pertaining to the crime scene investigation are compiled.

Procedure: The investigator(s) in charge should obtain the following for the crime scene case file:

- a. Initial responding officer(s’) documentation.
- b. Emergency medical personnel documents.
- c. Entry/exit documentation.
- d. Photographs/videos.
- e. Crime scene sketches/diagrams.
- f. Evidence documentation.
- g. Other responders’ documentation.
- h. Record of consent form or search warrant.



3. Documentation of the Crime Scene

- i. Reports such as forensic/technical reports should be added to this file when they become available.

Note: The above list is limited to crime scene documentation. This should not be considered a comprehensive list of the documents involved in an investigative case file.

Summary: This will ensure that reports and other documentation pertaining to the crime scene investigation are compiled into a case file by the investigator(s) in charge of the crime scene and allow for independent review of the work conducted.

Crime Scene Equipment

1. Initial Responding Officer(s)

*Essential**

Consent/search forms.
Crime scene barricade tape.
First-aid kit.
Flares.
Flashlight and extra batteries.
Paper bags.
Personal protective equipment (PPE). ☞

* These items should be in police vehicles or readily available to initial responding officer(s). ☞

Optional

Audiotape recorder.
Camera with flash and extra film.
Chalk.
Directional marker/compass.
Disinfectant.
Maps.
Plastic bags.
Pocket knife.
Reflective vest.
Tape measure.
Tarps to protect evidence from the weather.
Traffic cones.
Waterless hand wash (towelette with germicide).
Wireless phone.

2. Crime Scene Investigator/Evidence Technician

*Essential**

Bindle paper. ☞
Biohazard bags. ☞
Body fluid collection kit.
Camera (35 mm) with flash/film/tripod.
Casting materials.

Consent/search forms.
Crime scene barricade tape.
Cutting instruments (knives, box cutter, scalpel, scissors).
Directional marker/compass.
Disinfectant.
Evidence collection containers.

E

2. Crime Scene Investigator/Evidence Technician

Evidence identifiers. ☞
Evidence seals/tape.
First-aid kit.
Flashlight and extra batteries.
High-intensity lights.
Latent print kit.
Magnifying glass.
Measuring devices.
Permanent markers.
Personal protective equipment (PPE).
Photographic scale (ruler).
Presumptive blood test ☞ supplies.
Sketch paper.
Tool kit.
Tweezers/forceps.

* These items should be in police vehicles or readily available to initial responding officer(s).

Optional

Audiotape recorder.
Bloodstain pattern examination kit.
Business cards.
Chalk.
Chemical enhancement ☞ supplies.
Entomology (insect) collection kit.
Extension cords.

Flares.
Forensic light source (alternate light source ☞, UV lamp/laser, goggles).
Generator.
Gunshot residue kit.
Laser trajectory kit.
Maps.
Marking paint/snow wax.
Metal detector.
Mirror.
Phone listing (important numbers).
Privacy screens.
Protrusion rod set.
Reflective vest.
Refrigeration or cooling unit.
Respirators with filters.
Roll of string.
Rubber bands.
Sexual assault evidence collection kit (victim and suspect).
Shoe print lifting equipment.
Templates (scene and human).
Thermometer.
Traffic cones.
Trajectory rods.
Video recorder.
Wireless phone.

3. Evidence Collection Kits (Examples)

Blood Collection

Bindle.
Coin envelopes.
Disposable scalpels.
Distilled water.
Ethanol.
Evidence identifiers.
Latex gloves.
Photographic ruler (ABFO scales[Ⓢ]).
Presumptive chemicals.
Sterile gauze.
Sterile swabs.
Test tubes/test tube rack.

Bloodstain Pattern Documentation

ABFO scales.
Calculator.
Laser pointer.
Permanent markers.
Protractor.
String.
Tape.

Excavation

Cones/markers.
Evidence identifiers.
Metal detectors.
Paintbrushes.
Shovels/trowels.
Sifting screens.
String.
Weights.
Wooden/metal stakes.

Fingerprint

Black and white film.
Brushes.
Chemical enhancement supplies.
Cyanoacrylate (super glue) wand/
packets.
Flashlight.
Forensic light source.
Lift cards.
Lift tape.
Measurement scales.[Ⓢ]
One-to-one camera.
Powders.

Impression

Bowls/mixing containers.
Boxes.
Dental stone (die stone).
Evidence identifiers.
Measurement scales.
Permanent markers.
Snow print wax.
Water.

Pattern Print Lifter

Chemical enhancement supplies.
Electrostatic dust lifter.
Gel lifter.
Wide format lift tape.

Toolmarks

Casting materials.



3. Evidence Collection Hits (Examples)

Trace Evidence Collection

Acetate sheet protectors.
Bindle paper.
Clear tape/adhesive lift.
Flashlight (oblique lighting).
Forceps/tweezers.
Glass vials.
Slides and slide mailers.
Trace evidence vacuum with
disposable collection filters.

Trajectory

Calculator.
Canned smoke.
Dummy.
Laser.
Mirror.
Protractor.
String.
Trajectory rods.

Appendixes

Appendix A

Glossary

Appendix B

Reference List

Appendix C

List of Organizations

Appendix A. Glossary

The definitions contained herein apply to terms as used in this document.

ABFO scales: (American Board of Forensic Odontology scales). An L-shaped piece of plastic used in photography that is marked with circles, black and white bars, and 18-percent gray bars to assist in distortion compensation and provide exposure determination. For measurement, the plastic piece is marked in millimeters.

Alternate light source: Equipment used to produce visible and invisible light at various wavelengths to enhance or visualize potential items of evidence (fluids, fingerprints, clothing fibers, etc.).

Bindle paper: Clean paper folded to use to contain trace evidence, sometimes included as part of the packaging for collecting trace evidence.

Biohazard bag: A container for materials that have been exposed to blood or other biological fluids and have the potential to be contaminated with hepatitis, AIDS, or other viruses.

Biological fluids: Fluids that have human or animal origin, most commonly encountered at crime scenes (e.g., blood, mucus, perspiration, saliva, semen, vaginal fluid, urine).

Biological weapon: Biological agents used to threaten human life (e.g., anthrax, smallpox, or any infectious disease).

Bloodborne pathogen: Infectious, disease-causing microorganisms that may be found or transported in biological fluids.

Boundaries: The perimeter or border surrounding potential physical evidence related to the crime.

Case file: The collection of documents comprising information concerning a particular investigation. (This collection may be kept in case jackets, file folders, ring binders, boxes, file drawers, file cabinets, or

rooms. Sub-files are often used within case files to segregate and group interviews, media coverage, laboratory requests and reports, evidence documentation, photographs, videotapes, audiotapes, and other documents.)

Case identifiers: The alphabetic and/or numeric characters assigned to identify a particular case.

Chain of custody: A process used to maintain and document the chronological history of the evidence. (Documents should include name or initials of the individual collecting the evidence, each person or entity subsequently having custody of it, dates the items were collected or transferred, agency and case number, victim's or suspect's name, and a brief description of the item.)

Chemical enhancement: The use of chemicals that react with specific types of evidence (e.g., blood, semen, lead, fingerprints) in order to aid in the detection and/or documentation of evidence that may be difficult to see.

Chemical threat: Compounds that may pose bodily harm if touched, ingested, inhaled, or ignited. These compounds may be encountered at a clandestine laboratory, or through a homemade bomb or tankard leakage (e.g., ether, alcohol, nitroglycerin, ammonium sulfate, red phosphorus, cleaning supplies, gasoline, or unlabeled chemicals).

Clean/sanitize: The process of removing biological and/or chemical contaminants from tools and/or equipment (e.g., using a mixture of 10-percent household bleach and water).

Collect/collection: The process of detecting, documenting, or retaining physical evidence.

Comparison samples: A generic term used to describe physical material/evidence discovered at crime scenes that may be compared with samples from persons, tools, and physical locations. Comparison samples may be from either an **unknown/questioned** or a **known** source.

Samples whose source is **unknown/questioned** are of three basic types:

1. Recovered crime scene samples whose source is in question (e.g., evidence left by suspects, victims).
2. Questioned evidence that may have been transferred to an offender during the commission of the crime and taken away by him or her. Such questioned evidence can be compared with evidence of a known source and can thereby be associated/linked to a person/vehicle/tool of a crime.
3. Evidence of an unknown/questioned source recovered from several crime scenes may also be used to associate multiple offenses that were committed by the same person and/or with the same tool or weapon.

Samples whose source is **known** are of three basic types:

1. A **standard/reference** sample is material of a verifiable/documented source which, when compared with evidence of an unknown source, shows an association or linkage between an offender, crime scene, and/or victim (e.g., a carpet cutting taken from a location suspected as the point of transfer for comparison with the fibers recovered from the suspect's shoes, a sample of paint removed from a suspect vehicle to be compared with paint found on a victim's vehicle following an accident, or a sample of the suspect's and/or victim's blood submitted for comparison with a bloodstained shirt recovered as evidence).
2. A **control/blank** sample is material of a known source that presumably was uncontaminated during the commission of the crime (e.g., a sample to be used in laboratory testing to ensure that the surface on which the sample is deposited does not interfere with testing. For example, when a bloodstain is collected from a carpet, a segment of unstained carpet must be collected for use as a blank or elimination sample).

3. An **elimination** sample is one of known source taken from a person who had lawful access to the scene (e.g., fingerprints from occupants, tire tread impressions from police vehicles, footwear impressions from emergency medical personnel) to be used for comparison with evidence of the same type.

Contamination: The unwanted transfer of material from another source to a piece of physical evidence.

Control/blank sample: *See* comparison samples.

Cross-contamination: The unwanted transfer of material between two or more sources of physical evidence.

Documentation: Written notes, audio/videotapes, printed forms, sketches and/or photographs that form a detailed record of the scene, evidence recovered, and actions taken during the search of the crime scene.

Dying declaration: Statements made by a person who believes he or she is about to die, concerning the cause or circumstance surrounding his or her impending death.

Elimination sample: *See* comparison samples.

Evidence identifiers: Tape, labels, containers, and string tags used to identify the evidence, the person collecting the evidence, the date the evidence was gathered, basic criminal offense information, and a brief description of the pertinent evidence.

First responder(s): The initial responding law enforcement officer(s) and/or other public safety official(s) or service provider(s) arriving at the scene prior to the arrival of the investigator(s) in charge.

Impression evidence: Objects or materials that have retained the characteristics of other objects that have been physically pressed against them.

Initial responding officer(s): The first law enforcement officer(s) to arrive at the scene.

Investigator(s) in charge: The official(s) responsible for the crime scene investigation.

Known: *See* comparison samples.

Latent print: A print impression not readily visible, made by contact of the hands or feet with a surface resulting in the transfer of materials from the skin to that surface.

Measurement scale: An object showing standard units of length (e.g., ruler) used in photographic documentation of an item of evidence.

Multiple scenes: Two or more physical locations of evidence associated with a crime (e.g., in a crime of personal violence, evidence may be found at the location of the assault and also on the person and clothing of the victim/assailant, the victim's/assailant's vehicle, and locations the victim/assailant frequents and resides).

Nonporous container: Packaging through which liquids or vapors cannot pass (e.g., glass jars or metal cans).

Other responders: Individuals who are involved in an aspect of the crime scene, such as perimeter security, traffic control, media management, scene processing, and technical support, as well as prosecutors, medical personnel, medical examiners, coroners, forensic examiners, evidence technicians, and fire and rescue officers.

Personal protective equipment (PPE): Articles such as disposable gloves, masks, and eye protection that are utilized to provide a barrier to keep biological or chemical hazards from contacting the skin, eyes, and mucous membranes and to avoid contamination of the crime scene.

Porous container: Packaging through which liquids or vapors may pass (e.g., paper bags, cloth bags).

Presumptive test: A nonconfirmatory test used to screen for the presence of a substance.

Projectile trajectory analysis: The method for determining the path of a high-speed object through space (e.g., a bullet emanating from a firearm).

Radiological threat: The pending exposure to radiation energy. (This energy can be produced by shortwave x-rays or through unstable isotopes.)

Single-use equipment: Items that will be used only once to collect evidence, such as biological samples, then discarded to minimize contamination (e.g., tweezers, scalpel blades, droppers).

Standard/reference sample: *See* comparison samples.

Team members: Individuals who are called to the scene to assist in investigation or processing of the scene (e.g., scientific personnel from the crime laboratory or medical examiner's office, other forensic specialists, photographers, mass disaster specialists, experts in the identification of human remains, arson and explosives investigators, clandestine drug laboratory investigators, as well as other experts).

Trace evidence: Physical evidence that results from the transfer of small quantities of materials (e.g., hair, textile fibers, paint chips, glass fragments, gunshot residue particles).

Transient evidence: Evidence which by its very nature or the conditions at the scene will lose its evidentiary value if not preserved and protected (e.g., blood in the rain).

Unknown/questioned: *See* comparison samples.

Walk-through: An initial assessment conducted by carefully walking through the scene to evaluate the situation, recognize potential evidence, and determine resources required. Also, a final survey conducted to ensure the scene has been effectively and completely processed.

Appendix B. Reference List

Bevel, T. and R. Gardner. *Bloodstain Pattern Analysis*. Boca Raton, Florida: CRC Press, Inc., 1997.

Bodziak, W.J. *Footwear Impressions Evidence*. New York: Elsevier Science Publishing Co., 1990.

Crime Scene and Evidence Collection Handbook. Washington, D.C.: Bureau of Alcohol, Tobacco and Firearms, 1999.

DeForest, P.R., R.E. Gaensslen, and H.C. Lee. *Forensic Science: An Introduction to Criminalistics*. New York: McGraw-Hill, Inc., 1983.

FBI Handbook of Forensic Science, Collection, Identification and Shipping Index (with modifications). Washington, D.C.: Federal Bureau of Investigation, 1992.

Fisher, B.A.J. *Techniques of Crime Scene Investigation, 5th Edition*. Boca Raton, Florida: CRC Press Inc., 1993.

Fox, Richard H. and Carl L. Cunningham. *Crime Scene Search and Physical Evidence Handbook*. Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1973.

Geberth, Vernon, J. *Practical Homicide Investigation Checklist and Field Guide*. New York: CRC Press, 1996.

Handbook of Physical Evidence. Miami, Florida: Metro-Dade Police Department, 1996.

Kirk, P.L. *Crime Investigation, 2nd Edition*. New York: John Wiley & Sons, 1974.

Physical Evidence Handbook, 5th Edition. Madison, Wisconsin: Wisconsin Department of Justice, 1993.

Rini, Gary A. *Crime Scene Search and Physical Evidence Management: Student Training Manual*. Elkhorn, Nebraska: The American Institute for Police Science, 1998.

Saferstein, R. *Criminalistics: An Introduction to Forensic Science, 6th Edition*. Englewood Cliffs, N.J.: Prentice-Hall, 1998.

Saferstein, R. *Forensic Science Handbook, Volumes I, II, III*. Englewood Cliffs, N.J.: Prentice-Hall, 1982/1988/1993.

Suggested Guidelines for Establishing Evidence Response Teams. Washington, D.C.: Federal Bureau of Investigation Laboratory.

Appendix C. List of Organizations

The following is a list of organizations to which a draft copy of this document was mailed.

Accomack County, Virginia, Sheriff's Office	Dade County, Florida, Medical Examiner's Office
Alaska Crime Laboratory	Davidson County, Iowa, Office of the Attorney General
Alaska State Troopers	Donna, Texas, Police Department
Albuquerque Police Department	Drug Enforcement Administration
American Academy of Forensic Sciences	Edinburg, Texas, Police Department
American Bar Association	Fairbanks, Alaska, Police Department
American Correctional Association	Federal Bureau of Investigation
American Jail Association	Federal Law Enforcement Training Center
American Prosecutors Research Institute	Florida Department of Law Enforcement
American Society of Crime Laboratory Directors	Harlingen, Texas, Police Department
American Society of Law Enforcement Trainers	Hidalgo County, Texas, Sheriff's Office
Arapahoe County, Colorado, Sheriff's Office	Illinois State Police
Armed Forces Institute of Pathology	Indiana State Police Laboratory
Association of Federal Defense Attorneys	Institute for Genomic Research
Baltimore Police Department, Laboratory Division	Institute of Police Technology and Management
Bridgeport Forensic Laboratory	International Association of Bomb Technicians and Investigators
Bristol, Virginia, Police Department	International Association of Chiefs of Police
Brownsville, Texas, Police Department	International Association for Identification
Bureau of Alcohol, Tobacco and Firearms	International City/County Management Association
California Department of Justice, Bureau of Forensic Services	International Homicide Investigators Association
Cameron County, Texas, Sheriff's Office	Iowa County Attorneys Association
Campaign for Effective Crime Policy	Juneau, Alaska, Police Department
Chicago Police Department	Kent County, Michigan, Sheriff's Office
Children's Defense Fund	Laredo, Texas, Police Department
Cleveland State College Basic Police Academy	Law Enforcement Training Institute
Commission of Accreditation for Law Enforcement Agencies	Maine State Police Crime Laboratory
Conference of State Court Administrators	Massachusetts State Police Crime Laboratory
Connecticut State Police Forensic Laboratory	McAllen, Texas, Police Department
Council of State Governments	Metro Nashville Police Department
Crime Scene Academy	Michigan Department of State Police
Criminal Justice Institute	Mission, Texas, Police Department

Nashville, Tennessee, District Attorney's Office	Oneida County, New York, Sheriff's Office
National Association of Attorneys General	Orange County, California, Sheriff's Department-Forensic Science Services
National Association of Black Women Attorneys	Orange County, New York, Community College- Department of Criminal Justice
National Association of Counties	Peace Officer Standards and Training
National Association of Criminal Defense Lawyers	Pharr, Texas, Police Department
National Association of Drug Court Professionals	Police Association
National Association of Police Organizations	Police Executive Research Forum
National Association of State Alcohol and Drug Abuse Directors	Police Foundation
National Association of Women Judges	Rhode Island State Crime Laboratory
National Center for Forensic Science	Rockland County, New York, District Attorneys Office
National Center for State Courts	San Diego, California, Police Department
National Clearinghouse for Child Abuse	The Sentencing Project
National Commission on the Future of DNA Evidence	Sitka, Alaska, Police Department
National Conference of State Legislators	Suffolk County, New York, Crime Laboratory
National Council on Crime and Delinquency	Tennessee Bureau of Investigation
National Crime Prevention Council	Tennessee Law Enforcement Training Academy
National Criminal Justice Association	Texas Rangers Department of Public Safety
National District Attorneys Association	Town of Goshen, New York, Police Department
National Governors' Association	University of Texas-Pan American Police Department
National Law Enforcement Council	U.S. Border Patrol
National League of Cities	U.S. Conference of Mayors
National Legal Aid & Defender Association	U.S. Sentencing Commission
National Organization for Victim Assistance	Vermont State Police
National Sheriffs' Association	Webb County, Texas, Police Department
National Victim Center	Weslaco, Texas, Police Department
New Hampshire State Police Forensic Laboratory	Willacy County, Texas, Sheriff's Office
New Jersey State Police	Wisconsin State Crime Laboratory
New York State Police	

About the National Institute of Justice

The National Institute of Justice (NIJ), a component of the Office of Justice Programs, is the research agency of the U.S. Department of Justice. Created by the Omnibus Crime Control and Safe Streets Act of 1968, as amended, NIJ is authorized to support research, evaluation, and demonstration programs, development of technology, and both national and international information dissemination. Specific mandates of the Act direct NIJ to:

- ◆ Sponsor special projects, and research and development programs, that will improve and strengthen the criminal justice system and reduce or prevent crime.
- ◆ Conduct national demonstration projects that employ innovative or promising approaches for improving criminal justice.
- ◆ Develop new technologies to fight crime and improve criminal justice.
- ◆ Evaluate the effectiveness of criminal justice programs and identify programs that promise to be successful if continued or repeated.
- ◆ Recommend actions that can be taken by Federal, State, and local governments as well as by private organizations to improve criminal justice.
- ◆ Carry out research on criminal behavior.
- ◆ Develop new methods of crime prevention and reduction of crime and delinquency.

In recent years, NIJ has greatly expanded its initiatives, the result of the Violent Crime Control and Law Enforcement Act of 1994 (the Crime Act), partnerships with other Federal agencies and private foundations, advances in technology, and a new international focus. Some examples of these new initiatives:

- ◆ New research and evaluation is exploring key issues in community policing, violence against women, sentencing reforms, and specialized courts such as drug courts.
- ◆ Dual-use technologies are being developed to support national defense and local law enforcement needs.
- ◆ Four regional National Law Enforcement and Corrections Technology Centers and a Border Research and Technology Center have joined the National Center in Rockville, Maryland.
- ◆ The causes, treatment, and prevention of violence against women and violence within the family are being investigated in cooperation with several agencies of the U.S. Department of Health and Human Services.
- ◆ NIJ's links with the international community are being strengthened through membership in the United Nations network of criminological institutes; participation in developing the U.N. Criminal Justice Information Network; initiation of UNOJUST (U.N. Online Justice Clearinghouse), which electronically links the institutes to the U.N. network; and establishment of an NIJ International Center.
- ◆ The NIJ-administered criminal justice information clearinghouse, the world's largest, has improved its online capability.
- ◆ The Institute's Drug Use Forecasting (DUF) program has been expanded and enhanced. Renamed ADAM (Arrestee Drug Abuse Monitoring), the program will increase the number of drug-testing sites, and its role as a "platform" for studying drug-related crime will grow.
- ◆ NIJ's new Crime Mapping Research Center will provide training in computer mapping technology, collect and archive geocoded crime data, and develop analytic software.
- ◆ The Institute's program of intramural research has been expanded and enhanced.

The Institute Director, who is appointed by the President and confirmed by the Senate, establishes the Institute's objectives, guided by the priorities of the Office of Justice Programs, the Department of Justice, and the needs of the criminal justice field. The Institute actively solicits the views of criminal justice professionals and researchers in the continuing search for answers that inform public policymaking in crime and justice.

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