CSI ASSESSMENT AND CERTIFICATION MANUAL

Applicants Manual
6th Edition, 2025

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INTRODUCTION

Throughout this manual, "CSI" refers to Crime Scene Investigator, Crime Scene Technician, or Crime Scene Field Technician.

The field of Crime Scene Investigation is a dynamic, professional, and continually evolving discipline that demands highly trained and exceptional individuals. In 2004, the State of Indiana recognized the need to ensure that forensic personnel were adequately prepared to meet the expectations of both the scientific and legal communities, as well as the citizens they serve. In its commitment to professionalizing the discipline, the Indiana Law Enforcement Training Board established a committee responsible for Crime Scene Investigation Certification.

As a result of the committee's shared vision, leadership, and perseverance, the Indiana CSI Assessment and Certification process was implemented—positioning Indiana as a national leader among law enforcement training bodies across the United States.

The standards and procedures outlined in the 6th edition of the Indiana CSI Assessment Manual address recommendations from the National Academy of Sciences report, *Strengthening Forensic Science in the United States: A Path Forward*, and reflect current trends in law enforcement and criminal justice. The Indiana Law Enforcement Training Board and the CSI Certification Committee remain committed to advancing the profession and ensuring excellence in crime scene investigation.

DESIGN

This manual serves as a resource for reviewing CSI's crime scene processing procedures. The goal of the assessment is to evaluate the CSI's capabilities and knowledge in crime scene evaluation and evidence recovery, ensuring that these capabilities are both standardized and up to date.

PROCEDURES

Establishing standard procedures is a prerequisite for CSI certification. Section Three outlines current crime scene processing protocols. To be considered for certification through the Indiana Law Enforcement Training Board CSI Certification Program, candidates must successfully complete approved and effective CSI training. When combined with a quality, forensically sound work product, this training leads to certification.

QUALITY ASSESSMENT

OBJECTIVES

Quality and forensically sound work products are verified through a Quality Assessment process. Proficiency testing is a key component of this process, helping to ensure that crime scene procedures and evaluations performed by CSIs meet the standards set by the scientific and legal communities.

Proficiency testing reveals both strengths and areas for improvement, providing a foundation for maintaining high standards in crime scene processing. Additionally, a written examination covering a broad range of disciplines and techniques commonly encountered at crime scenes is essential to confirm CSI's competency.

PROCESS

The Indiana Law Enforcement Training Board CSI Certification Committee shall ensure that qualified applicants are given the opportunity to become certified CSIs in accordance with Section 1 of this manual.

REFERENCES

- Indiana State Police (ISP) Rules, Regulations, and Standard Operating Procedures
- Indiana State Police Laboratory Division Policies
- Indiana State Police CSI Procedures Manual
- Indiana State Police Laboratory Division Physical Evidence Bulletins
- Indiana State Police Laboratory Quality Assurance Manual
- International Academy of Sciences
- International Association of Chiefs of Police

SECTION 1. CERTIFICATION OF CSI

1.1. CSI Certification Committee

1.2. Committee's Address and Contact Information

1.3. General Qualifications

1.4. Certification Process

1.5. Proficiency Testing

1.6. Waiver of Training

1.7. Recertification

1.8. Exceptions to Recertification Period

1.9. Revocation of Certification

1.10. Non-Discrimination

1.11. Records Retention

1.1 CSI CERTIFICATION COMMITTEE

A. At the pleasure of the Indiana Law Enforcement Training Board (LETB), the CSI Certification Committee (Committee) is comprised of:

1. **One (1)** Indiana Law Enforcement Academy (ILEA) representative (Chairman)
2. **One (1)** Indiana State Police (ISP) Laboratory representative
3. **One (1)** Prosecutor/Deputy Prosecutor (active or retired)
4. **Three (3)** at-large members
5. **Additional board members may be elected if needed to ensure equal access to all areas of the state with LETB approval.**

B. Qualifications for appointment as a committee member:

1. CSI of 8 years preceding appointment or the supervisor of their agencies CSI(s).
2. Certified as a CSI through ILEA certification program.
3. Be in good standing with appointing agency.

C. Committee Membership Certification: A person appointed to the Committee shall be considered a certified CSI if said member meets the requirements for maintaining membership as a committee member.

D. The committee shall convene as needed to conduct a review of applicants and complete other related business.

1.2 COMMITTEE'S ADDRESS AND POINT OF CONTACT FOR APPLICATION

CSI Certification Committee

ATTN: Lt. Brent Stoelting

Indiana Law Enforcement Academy

5402 South County Road 700 East

Plainfield, IN 46168

bstoelting@ilea.in.gov

Phone: 317-839-5191 Switch Board

317-837-3283 Office

Website: www.ilea.in.gov

1.3 GENERAL QUALIFICATIONS: ELIGIBILITY

A person requesting certification as a CSI in the State of Indiana must meet the following requirements:

A. Be a certified law enforcement officer through the Indiana Law Enforcement Training Board.
B. Be employed by an Indiana law enforcement agency as a civilian whose primary duties include those of a CSI and whose education requirements meet or exceed those of a law enforcement officer seeking certification.

An investigator who performs other duties within the employing agency when not assigned to investigate crime scenes is not excluded from eligibility.

1.4 CERTIFICATION PROCESS

A. Application for Certification

1. The applicant shall submit a completed application with all required attachments to the Committee Chairperson, see 1.2. The application form is available on the Indiana Law Enforcement Academy website or at the end of this manual.

   The application packet must include:

   a. Completed application form
   b. Letter of attestation
   c. List of all completed crime scene training courses with certificates or documentation showing satisfactory completion
   d. Case documentation attached

2. Applications will be reviewed for completeness and submitted to the Certification Committee at its next scheduled meeting.

3. The Committee will evaluate the materials to determine whether the applicant's work meets the standards outlined in this manual. Committee members shall vote to certify, not certify, or recommend that the applicant complete a proficiency test.

   In the event of a tie, the Committee Chairperson shall cast the deciding vote. The applicant will be notified of the Committee's decision or, if applicable, the date and time of the required proficiency test.

B. Letter of Attestation

A letter on agency letterhead must attest that the applicant's primary job function is that of a CSI, responsible for identifying, documenting, collecting, and preserving evidence at crime scenes. The letter must be signed by the agency head or their designee.

C. Education and Training

Within five (5) years prior to the application date, first-time applicants must have successfully completed a minimum of one hundred twenty (120) hours of crime scene training. Topics should include, but are not limited to:

- Impression evidence (footwear and tire)
- Crime scene security and safety
- Crime scene management
- Crime scene documentation (sketching, diagramming)
- Forensic photography*
- Evidence collection and packaging
- Biological evidence (DNA, blood spatter documentation)
- Firearms and tool mark evidence
- Legal aspects of physical evidence
- Latent print development
- Trace evidence
- Autopsy protocol
- Forensic entomology
- Courtroom testimony
- Forensic anthropology
- Other forensic disciplines

D. Proof of Casework as Primary CSI (Initial Certification)

1. The applicant must provide documentation showing they have investigated and processed at least five (5) major crime scenes as the primary or lead CSI. They must have completed most of the final work product. Required documentation includes:

    a. Case reports
    b. Property records and chain of custody forms
    c. Sketches and drawings
    d. Photographs

2. The five (5) cases should include at least one death investigation, one property crime, and one crime against persons, if possible. The remaining two cases may be selected by the applicant.

    Note: If the applicant's agency does not routinely respond to property crimes, an additional death investigation or crime against persons case may be submitted.

3. All documents will be submitted via flash drive to the Committee Chairman at the address listed in Section 1.2.

4. Submitted cases must have been investigated within three (3) years of the application date or after completion of the requisite hours of CSI training.

5. All documentation submitted for review will be returned or destroyed upon request by the applicant or agency following the assessment.

E. Denial of Certification

The Committee may deny an applicant's certification for any of the following deficiencies:

1. Failure to properly complete the required application and attachments
2. Failure to meet minimum education requirements
3. Failure to meet minimum job requirements
4. Failure to pass the proficiency test, if requested
5. Failure to submit required documentation in a timely manner
6. Failure to provide truthful and accurate information throughout the application process.

F. Certification Period

The certification is valid for three (3) years after issuance. A CSI must be recertified every three (3) years. The process for recertification is outlined in Section 1.6.

1.5 PROFICIENCY TESTING

The Committee may determine that an applicant is required to successfully complete proficiency testing, including a mock crime scene and a written test, to be awarded certification or recertification.

A. Procedure

7. After receiving an application for certification or recertification, the Committee will notify the applicant if proficiency testing is required and will schedule the date, time, and location for testing.

8. The applicant will be informed of the equipment and supplies that must be brought to the test.

9. The applicant will demonstrate proficiency in appropriate forensic tasks based on the type of crime represented in the mock scene, in accordance with the procedures outlined in Section 3.

10. The Proficiency Test Proctor will complete a Proficiency Test Evaluation Form, which will be included in the applicant's certification packet, which will be Pass/Fail.

11. During proficiency testing, the applicant will complete a 50-question written test which will cover all topics listed in Section 3 using true/false and multiple-choice questions.

12. To pass the written test, the applicant must score at least 80%.

13. Test failures will be handled in accordance with Indiana Law Enforcement Academy (ILEA) failure procedures.

B. Proficiency Test Success

Upon successful completion of the proficiency test, the CSI Certification Committee will submit the applicant's name to the Indiana Law Enforcement Training Board with a recommendation for certification or recertification.

C. Proficiency Test Failure

An applicant who fails the proficiency test will be granted one additional attempt, scheduled at the discretion of the Proficiency Test Proctor.

A second failure will result in denial of certification or recertification.

An applicant who has met all documented criteria but failed both attempts must wait sixty (60) days before resubmitting an application for certification or recertification.

All documentation submitted by the applicant will be returned or destroyed upon request.

D. Appeal of Proficiency Testing Failure

The failure notification will include a copy of the Proficiency Test Proctor's written evaluation form, including scoring and comments, that will identify those areas successfully completed as well as deficient.

Applicants wishing to appeal the proficiency test results must submit a written request within sixty (60) days of receiving the failure notification, submitted via certified mail to the address listed in Section 1.2 that includes:

1. At least three (3) references, including the title, author, page number, publication year, and source (e.g. book, manual, magazine), substantiating the contested process or procedure.

2. An appeal will not be reviewed if it is solely based on personal experience or the applicant's belief that the test was graded unfairly.

The Committee's decision made after reviewing the submitted appeal will be final.

1.6 WAIVER OF TRAINING

Applicants who have served as a CSI for at least eight (8) years but have not completed one hundred twenty (120) hours of formal, approved CSI training may request a waiver of the training requirement.

To qualify for the waiver, the applicant must:

1. Complete the application form located on the ILEA website.
2. Have a minimum of eight (8) years of CSI experience

3. Provide documentation of education or training in as many of the crime scene disciplines listed in Section 1.4.C as possible
4. Obtain a letter of verification from the agency head or designee
5. Complete the Certification Process detailed in Section 1.4, and
6. Successfully complete proficiency testing

1.7 RECERTIFICATION

A. Timeline for Recertification

Certified CSIs should apply for recertification within ninety (90) days prior to the expiration of their current certification, but no later than thirty (30) days after the expiration date.

B. Extension of Certification Period

If an applicant is required to complete a proficiency test, the previous certification will be extended until the proficiency test is completed, provided that the applicant applied within the proper timeframe specified above.

However, failure to attend the scheduled proficiency test without prior approval from the Committee will result in loss of certification.

C. Training Hours

Applicants must provide proof of twenty-four (24) hours of in-service training or crime scene-related coursework completed after the date of their last certification.

Note: Up to six (6) hours of instruction in CSI-related topics may be credited toward the 24-hour requirement.

D. Case Files

Applicants must submit documentation for three (3) cases, including:

a. Brief case description
b. Evidence collected and/or processed (Property Record and Chain of Custody form)
c. Transcript of court testimony or deposition, and
d. Supporting materials (e.g., sketches and crime scene photographs demonstrating proficiency)

E. Recertification After Expiration

If a CSI did not apply for recertification within the timeframe described in Subsection A above, the CSI may still apply for recertification by submitting a Letter of Attestation from the agency head or designee, in addition to the documentation required above. The Letter must include:

a. Reason for the late submission for recertification,
b. Verification that the applicant's primary job responsibility is as a CSI, and
c. Confirmation that the applicant is meeting the current standards as outlined in this manual.

At the discretion of the Committee, applicants may be required to:

a. Complete a written test, and/or
b. Successfully complete a proficiency test

The Committee will also consider any other CSI certifications maintained during the lapse in the Indiana Law Enforcement Academy (ILEA) certification.

1.8 EXCEPTIONS TO RECERTIFICATION PERIOD

An applicant who missed the filing deadline for recertification or whose certification has lapsed for more than three (3) years due to military service, workplace injury, extended illness, or work responsibility reassignment, may apply for recertification by submitting the following:

A. Letter of Attestation from the agency head or designee attesting to:
    1. Dates of injury, illness, or service, and
    2. The date of return or the date of reassignment to regular CSI duties.

B. All documentation required under Section 1.7.

The Committee has discretion to accept the late application and evaluate the request.

1.9 REVOCATION OF CERTIFICATION

The LETB, through the Committee, reserves the right to deny, suspend, or revoke certification or recertification for the following reasons:

1. Conviction of any felony,
2. Falsification, omission, misstatement, or providing misleading information as to material facts related to an investigation, or
3. Providing false or misleading information on an application for certification, recertification, or proficiency testing.

1.10 NON-DISCRIMINATION

The Committee and all individuals involved in the certification and recertification processes shall not discriminate against any applicant based on agency affiliation, rank, political membership, age, race, gender, or sexual orientation. Certification decisions will be based solely on the applicant's qualifications and skill level.

1.11 RECORDS RETENTION

The ILEA Records Section will maintain, for three (3) years, all records and documentation from proficiency tests, including photographs, sketches, written reports, property records, chain of custody forms, crime scene logs, and other relevant materials.

Mock evidence and evidence packaging generated during proficiency testing shall be retained until the appeals process is exhausted or the applicant successfully completes the proficiency test.

SECTION 2. CRIME CATEGORIES, PRINCIPLES & STANDARDS

The review will assess crime scenes that fall into three (3) categories of criminal investigations:

I. CATEGORY ONE: **DEATH INVESTIGATIONS**

II. CATEGORY TWO: **CRIMES AGAINST PERSON**

III. CATEGORY THREE: **CRIMES AGAINST PROPERTY**

CATEGORY ONE	**CATEGORY TWO**	**CATEGORY THREE**
Murder	Battery	Burglary
Suicide	Robbery	Fire/Arson
Accidental	Sexual Assault	Bombing
Death Investigation (other)	Kidnapping	Vehicle Theft
	Child Abuse	Criminal Mischief
		Criminal Recklessness
		Theft
		Drug Investigation

TABLE "A"

During crime scene processing, the following procedures are **essential** to the specific Crime Category, as noted by the asterisk:

	Category 1	Category 2	Category 3
The CSI will ensure that the crime scene is secured, if the scene was not secured before the arrival of the CSI	*	*	*
The CSI will address any safety, health, and/or hazard issues present at the crime scene.	*	*	*
The crime scene will be photographed.	*	*	*
The crime scene will be videotaped.	*		
The crime scene will be sketched.	*	*	
Recovery of postmortem fingerprints (Autopsy).	*		
Recovery of decedent(s) hair samples (Autopsy).	*		
Recovery of decedent(s) serological samples (Autopsy).	*		
Ensure recovery of decedent(s) toxicological samples (Autopsy).	*		
Recovery of all pertinent evidence	*	*	*

TABLE “B”

During crime scene processing, completion of the following items are **essential** to the specific Crime Category, as noted by the asterisk:

	Category 1	Category 2	Category 3
CSI written report.	*	*	*
Police Property Record and Receipt if evidence is recovered.	*	*	*
Crime scene sign-in/sign-out log: If not started before the arrival of the CSI, the CSI will ensure that one is established.	*	*	*
Local request for laboratory examination, or Indiana State Police Request for Laboratory Examination, State Form #3890R2, Stock #629, if evidence is submitted for laboratory examination.	*	*	*

TABLE “C”

During crime scene processing, it is **essential** that collected evidence be handled in the following manner, specific to each Crime Category, as noted by the asterisk:

	Category 1	Category 2	Category 3
All evidence will be properly recovered.	*	*	*
All recovered evidence will be properly packaged.	*	*	*
All evidence will be properly sealed when applicable.	*	*	*
All recovered evidence, containers, or tags will be properly marked with case and item numbers	*	*	*
All recovered evidence will be properly stored in a secure area.	*	*	*
All recovered evidence will be listed on Police Property Receipt with the chain-of-custody properly annotated.	*	*	*
All evidence to be examined by the laboratory will be submitted, with standards if needed, to the laboratory in an expeditious manner.	*	*	*

TABLE “D”

“Evaluate” is defined as giving thought to the relevancy of applying or completing the task, test, examination, or collection method.

Although the following crime scene processing tasks may not be noted as essential in previous tables, they **should be considered in all crime categories**:

Evaluate for latent impression evidence.
Evaluate for biological evidence, including sexual assault kits.
Evaluate for firearms evidence.
Evaluate for trace evidence.
Evaluate for tool mark evidence.
Evaluate for footwear and tire impressions.
Evaluate for document evidence.
Evaluate for arson evidence.
Evaluate for drug evidence.
Evaluate for skeletal remains.
Evaluate for entomology evidence.
Evaluate for necessity of rolled fingerprint impressions, including major case prints.
Evaluate for using electrostatic dust print lifter.
Evaluate for using metal detector.
Evaluate for using alternate light source(s).
Evaluate for using chemical reagents for detecting the presence of blood, i.e. Luminol, Leuco-malachite, and Phenolphthalein.
Evaluate for using bloodstain pattern interpretation.
Evaluate for any other evidence associated with the crime being investigated.
Collection of decedent(s) clothing (Autopsies).
Collection of decedent(s) fingernail scrapings (Autopsies).
Consider Sketching the Scene
Consider Establishing a Crime Scene Sign-in/Sign-out Log

2.1 CRIME CATEGORY ONE

Of all major crimes, death scene processing may be the most demanding for the CSI. The investigator must ensure the scene is secured, and both the scene and the autopsy are thoroughly documented and processed using the Systematic Crime Scene Protocol:

1. Establish the dimensions and identify potential safety and health hazards
2. Establish security
3. Plan and communicate
4. Evaluate the probative value of potential crime scene processing activities (Conduct Primary Survey)
5. Document and process the scene(s) and/or item(s)
6. Conduct a final detailed examination of the scene (Conduct Secondary Survey)
7. Recover and preserve the evidence

Refer to Table "A" for essential tasks and Table "D" for non-essential tasks that should be considered.

Death scenes often yield a wide variety of evidence. Therefore, the scene must be processed in the most systematic and accurate manner to ensure the integrity of the investigation.

2.1.1 SCENE SECURITY AND DOCUMENTATION

The scene must be properly secured, and a sign-in log must be established. The scene will be thoroughly recorded and documented using the procedures outlined in this manual.

2.1.2 SCENE EXAMINATION AND EVIDENCE SEARCH

The scene will be thoroughly examined and searched for potential evidence. Each task must be evaluated to determine whether recoverable evidence is present.

Crime scene evaluation includes:

1. Determining the probative value of each task as it relates to the investigation
2. Processing the scene and/or items to identify potential evidence
3. Examining the scene and/or items to locate and recover evidence

Before, during, and after each step of the evaluation process, the CSI must assess whether to proceed to the next phase. This decision is guided by the CSI's training and experience.

2.1.3 AUTOPSY ATTENDANCE

If applicable under agency policy, a CSI should attend the autopsy. The CSI will inform the attending pathologist of relevant crime scene details and any known circumstances surrounding the death.

2.1.4 EVIDENCE HANDLING AND PRESERVATION

All collected evidence must be handled with the utmost care to prevent contamination, protect its integrity, and maintain a clear chain of custody. The CSI will ensure that the following methods of evidence handling will be observed:

1. Wear biohazard suits when applicable
2. Use forceps when appropriate
3. Wear gloves when handling evidence

The CSI must ensure that all items of evidence are properly preserved and that contamination is prevented. The CSI will ensure that evidence will be properly preserved in the following manner:

1. Packaged
2. Sealed
3. Stored
4. Submitted to the laboratory when relevant

Any issues regarding the examination of collected evidence will be discussed with the investigating officer-in-charge and, if necessary, the laboratory analyst.

Refer to Table "C" for essential evidence procedures.

2.2 CRIME CATEGORY TWO

Not only death investigations, but any crime committed against a person requires the utmost attention. Crimes classified under Crime Category Two are varied and complex, demanding that the CSI apply their knowledge and training to evaluate and execute appropriate processing procedures for each unique investigation.

2.2.1 SCENE SECURITY AND DOCUMENTATION

The crime scene must be properly secured, and a sign-in/sign-out log must be established. The scene will be thoroughly documented using the procedures outlined in this manual.

Refer to Tables "A" and "B" for essential tasks and required reports.
Refer to Table "D" for non-essential tasks that should be considered.

2.2.2 SCENE EVALUATION AND EVIDENCE IDENTIFICATION

The scene will be thoroughly evaluated for potential items of evidence. Each task must be assessed to determine whether recoverable evidence is present. Evaluation includes:

1. Determining the probative value of each task in relation to the investigation
2. Screening the scene and/or items to identify potential evidence

3. Processing the scene and/or items to locate evidence
4. Recovering evidence when present

Before, during, and after each step of the evaluation process, the CSI must assess whether to proceed to the next phase. This decision is guided by the CSI's experience and training.

Refer to Table "D" for non-essential tasks that should be considered.

2.2.3 EVIDENCE HANDLING AND PRESERVATION

All collected evidence must be handled with the utmost care to prevent contamination, protect its integrity, and maintain a clear chain of custody. The CSI will ensure that the following methods of evidence handling will be observed:

1. Wear biohazard suits when applicable
2. Use forceps when appropriate
3. Wear gloves when handling evidence

The CSI must ensure that all items of evidence are properly preserved and that contamination is prevented. The CSI will ensure that evidence will be properly preserved in the following manner:

1. Packaged
2. Sealed
3. Stored
4. Submitted to the laboratory when relevant

Any issues regarding the examination of collected evidence will be discussed with the investigating officer-in-charge and, if necessary, the laboratory analyst.

Refer to Table "C" for essential evidence procedures.

2.3 CRIME CATEGORY THREE

Crimes against property are among the most frequently encountered offenses and can consume a significant portion of a CSI's time. These crimes often result in substantial monetary loss and inconvenience for victims. Property crime scenes frequently yield a large volume of evidence, and the potential to prevent future crimes through evidence recovery is notably high.

2.3.1 SCENE SECURITY AND DOCUMENTATION

The scene must be properly secured. A thorough and complete recording and documentation of the scene will be conducted using the procedures outlined in this manual.

Refer to Tables "A" and "B" for essential tasks and required reports.

Refer to Table "D" for non-essential tasks that should be considered.

2.3.2 SCENE EVALUATION AND EVIDENCE IDENTIFICATION

The scene will be thoroughly evaluated for potential items of evidence. Each task must be assessed to determine whether recoverable evidence is present. Evaluation includes:

1. Determining the probative value of each task in relation to the investigation
2. Screening the scene and/or items to identify potential evidence
3. Processing the scene and/or items to locate evidence
4. Recovering evidence when present

2.3.3 EVALUATION CONTINUITY

Before, during, and after each step of the evaluation process, the CSI must assess whether to proceed to the next phase. This decision is guided by the CSI's training and experience.

Refer to Table "D" for non-essential tasks that should be considered.

2.3.4 EVIDENCE HANDLING AND PRESERVATION

All collected evidence must be handled with the utmost care to prevent contamination, protect its integrity, and maintain a clear chain of custody. The CSI will ensure that the following methods of evidence handling will be observed:

4. Wear biohazard suits when applicable
5. Use forceps when appropriate
6. Wear gloves when handling evidence

The CSI must ensure that all items of evidence are properly preserved and that contamination is prevented. The CSI will ensure that evidence will be properly preserved in the following manner:

5. Packaged
6. Sealed
7. Stored
8. Submitted to the laboratory when relevant

Any issues regarding the examination of collected evidence will be discussed with the investigating officer-in-charge and, if necessary, the laboratory analyst.

Refer to Table "C" for essential evidence procedures.

SECTION 3. PROCEDURES

3.1 Crime Scene Security and Safety

3.2 Photography

3.3 Sketching and Diagramming

3.4 Videography

3.5 Latent Impressions

3.6 Rolled Fingerprint Impressions (including major case prints)

3.7 Biological Evidence (including sexual assault kits)

3.8 Alternate Light Source

3.9 Firearms and Associated Evidence (bullets, casings, weapon, clothing)

3.10 Trace Evidence

3.11 Toolmarks

3.12 Footwear and Tire Impressions (cast)

3.13 Electrostatic Dust Print Lifter

3.14 Documents

3.15 Metal Detector

3.16 Arson

3.17 Drug and Clandestine Laboratories

3.18 Bloodstain Pattern Documentation

3.19 Blood Enhancement Reagents (VERBAL TEST ONLY)

3.20 Skeletal Remains (VERBAL TEST ONLY)

3.21 Entomology

3.22 Autopsy (VERBAL TEST ONLY)

3.23 Evidence

3.1 CRIME SCENE SECURITY AND SAFETY

Once the legitimacy of being at a scene is determined, the crime scene must be protected and preserved. An entry control point, a physical barrier (e.g., crime scene tape or similar device), and a record of all individuals entering the scene (Crime Scene Log) shall be routinely established.

Crime scene safety, particularly regarding biological hazards, must be addressed. A variety of harmful microorganisms can be transmitted through bodily fluids, including the hepatitis B virus and human immunodeficiency virus (HIV). Both viruses are transmitted through contact with broken skin or mucous membranes, not through casual contact. Personal protective equipment (PPE) shall be routinely considered and worn when applicable.

3.1.1
Prior to entering the crime scene, the legality of the search shall be confirmed with the investigator and/or prosecutor of jurisdiction.

3.1.2
If the crime scene contains potentially biohazardous material, refer to points 3.1.3 through 3.1.10. If no biohazardous material is present, skip to point 3.1.11.

3.1.3
The agency must comply with 29 CFR §1910.1030 (Bloodborne Pathogens) for officers with occupational exposure risk.

3.1.4
PPE and germicidal agents should be readily available when processing potentially hazardous scenes.

3.1.5
Double disposable gloves should be routinely worn when handling infectious materials or containers.

3.1.6
Full coverage garments shall be worn when there is potential for splashing of contaminated materials or bodily fluids (e.g., large amounts of blood, tissue, or fluids). Full coverage includes disposable suits, hood, surgical mask, eye protection, shoe covers, and gloves.

3.1.7
PPE must be removed before leaving the immediate crime scene for any reason. Hands must be thoroughly washed with germicidal soap. Fresh PPE must be put on before re-entering the scene if biohazards remain.

3.1.8
Presume all blood, body fluids, tissue, sexual assault kits, used medical supplies, biological waste, and drug paraphernalia to be infectious. Biohazard labels shall be affixed to all containers holding potentially infectious materials.

3.1.9
If anyone becomes contaminated by a splash or cut (excluding eye contamination), the affected area should be immediately cleaned with antiseptic (e.g., hydrogen peroxide), followed by washing with germicidal soap.

3.1.10
When the scene is released, ensure the recipient is informed that potentially biohazardous material may still be present.

3.1.11
Once the dimensions of the crime scene are established, the area shall be secured with appropriate barriers (e.g., crime scene tape) and, if necessary, security personnel. The secured area should exceed the expected immediate crime scene boundaries.

3.1.12
Only one designated control point for entry and exit shall be established. All access to and from the scene must occur through this single point.

3.1.13
A scene security officer shall be assigned to the control point and shall permit entry only to authorized personnel. The officer must maintain a crime scene log documenting all individuals who enter and exit the scene, including times and reasons for entry.

3.1.14
The crime scene entry log shall be preserved in the same manner as all other investigative documentation.

3.1.15
If the scene must be vacated before processing is complete, or if further processing (e.g., chemical reagent testing for blood) might be required, a scene security plan shall be implemented. All windows and doors must be secured to prevent unauthorized entry. If padlocks are used, the CSI or lead investigator shall retain all keys. A security officer must be stationed at the scene if it cannot be otherwise secured.

3.1.16
Upon completion of the investigation, all crime scene tape and disposable materials shall be removed from the scene.

3.1.17
The scene shall be released to the appropriate authority, property owner, or property manager to ensure the location is not left unattended.

CRIME SCENE MANAGEMENT:
SYSTEMATIC CRIME SCENE PROTOCOL

A. Establish the Dimensions
    1. Ensure the perimeter has been established and is not too narrowly defined.
    2. Identify potential safety and health hazards at the scene and take appropriate action.

B. Establish Security
    1. Secure the scene using personnel, crime scene tape, rope, barriers, or other appropriate means.
    2. Maintain a single point of entry and a single point of exit.
    3. Keep a log of all individuals permitted to enter the scene, including their name, time of entry/exit, and role.
    4. Do not allow anyone to enter the crime scene without authorization from the Incident Commander (IC) or lead detective.

C. Plan and Communicate
    1. The first responding officer or investigative team shall identify tasks to be accomplished and determine if additional personnel or equipment are needed.
    2. The IC shall assign responsibilities and authorize access to the crime scene area.
    3. Cursory searches for suspects, victims, or to protect evidence may be conducted with proper justification, however, an extended search for evidence may only be conducted with:
        a. A valid search warrant, or
        b. Consent from a person with actual authority over the location, such as an owner, occupant, lease, remembering that an objection to the search by one with equal authority must prevail.
    4. Re-evaluate Steps 1 and 2.
    5. Evaluate the Probative Value of Potential Crime Scene Processing Activities (Primary Survey)
    6. Conduct a walk-through to identify crime scene elements. All members of the investigative team should participate.
        a. Consider:
            - Approach
            - Entry
            - Offense
            - Exit
            - Escape
        b. Locate obvious items of physical evidence.
        c. Reconstruct the modus operandi and develop alternative hypotheses based on physical evidence.
        d. Re-evaluate Step 3.

D. Document and Process the Scene(s) and/or Item(s)
    1. Document the overall scene prior to processing using photography, notes, and sketches as necessary.

2. Process the scene and/or items to locate potential evidence.
3. Re-evaluate Step 4.

E. Final Detailed Examination of the Scene(s) (Secondary Survey)
    1. Conduct a detailed examination of the scene and/or items for additional evidence.
    2. Protect evidence as necessary.
    3. Re-evaluate Step 5.

F. Recover and Preserve Evidence
    1. Record the precise location of evidence using:
        a. Photographs
        b. Notes
        c. Sketches
    2. Recover potential evidence and:
        a. Mark for identification
        b. Package to prevent alteration or contamination
        c. Properly label all packaging
    3. Establish a chain of custody for all recovered items.
    4. Collect known materials or substances for laboratory comparison with recovered evidence.
    5. Re-evaluate Step 6.

3.2 PHOTOGRAPHY

Photography is a primary method of crime scene documentation. All crime scenes shall be photographed, with few exceptions. Documentation may include both photography and videography (see Section 3.4 for video documentation).

3.2.1
The entire crime scene shall be photographed prior to disturbing the position of any items, except under exigent circumstances. This ensures the scene is documented as it existed before any CSI intervention.

3.2.2
Photography shall include overall, mid-range, close-up, and examination-quality (technical) photographs. These should be taken with and without evidence markers, and with and without a scale, as appropriate. Mid-range photographs must accompany close-up and examination-quality photographs, as they depict each item of evidence in relation to other elements of the scene.

3.2.3
Overall photography shall incorporate overlapping, progressive, and four-corners methods.

3.2.3.1 Overlapping Method
A series of photographs taken in a circular, clockwise or counterclockwise direction to achieve 360-degree coverage. The chosen direction must remain consistent throughout the scene. Each photograph should overlap with items or areas visible in the preceding image. Floors and ceilings must be included.

3.2.3.2 Progressive Method
Focus on a specific item and its relationship to other items in the scene. A series of overall, mid-range, and close-up photographs should be taken from the same angle and line. Macro photographs, with and without scale, may be used to capture greater detail.

3.2.3.3 Four-Corners Method
Photographs taken from each of the four corners of the room or area, panning across the scene. Each image must overlap by approximately 25% with the preceding photograph.

3.2.4
Crime scene processing equipment should not appear in photographs.

3.2.5
Police and other personnel should not routinely appear in photographs unless the specific purpose is to document their presence at the scene.

3.2.6
Aerial drone photography or videography may be used at major crime scenes and should be completed as soon as possible to capture the scene as it appeared during initial documentation.

3.2.7
Mid-range photographs shall be taken of all areas of interest and all items of evidence to be collected. These photographs focus on specific items or areas and show their relationship to other elements within the scene.

3.2.8
Close-up photographs shall be taken when details are not clearly visible in mid-range images. These photographs should be taken with and without evidence cones or markers and must show the original condition and position of the evidence.

3.2.9
Additional close-up photographs of specific items or areas shall be taken after overall photography is completed. Photographs of injuries or defects must be taken with and without a scale. The scale should run parallel to and the full length of the area being photographed, without covering any portion of the area of interest.

3.2.10
Examination-quality photographs shall be taken for evidence items such as fingerprints, tire impressions, and footwear impressions.

3.2.11
A tripod shall be used when photographing latent or patent prints, footwear impressions, or tire impressions.

3.2.12
When photographing items for comparison, the camera must be perpendicular to the item, and the film plane or digital sensor must be parallel to the surface. File formatting should be set to RAW, RAW + JPG, or TIFF to avoid image compression.

3.2.13
Oblique lighting techniques using a detachable flash or flashlight may be used to enhance detail in footwear, tire, or latent impressions. Shadows can accentuate ridge detail and reveal impressions not visible under direct lighting. Adjusting the angle and height of the light source can illuminate different features. Oblique lighting is especially effective on hard, flat surfaces such as ledges, tabletops, and floors. Direct lighting may be used to eliminate unwanted shadows and highlight specific details, though it is generally less effective than oblique lighting.

3.2.14
All types of photography shall be completed in sufficient quantity to ensure comprehensive documentation of the crime scene.

3.2.15
CSIs shall continuously review their photographs to ensure proper exposure, composition, and depth of field. If a photograph is underexposed, overexposed, or otherwise inadequate, it must be retaken. Images shall not be deleted.

3.2.16
Departmental archival processes shall be used for the permanent storage of digital photographs.

3.3 SKETCHING AND DIAGRAMMING

Crime scene sketches add an essential dimension to scene documentation. They complement photographs, clarify the appearance of the scene, and depict spatial relationships between objects.

3.3.1
Graph paper simplifies scale drawings and provides guidelines for line measurements, although blank paper may also be used. Computer-generated drawings are also acceptable.

3.3.2
Measurements should be recorded, at minimum, to the nearest half inch when possible. Closer increments may be necessary for documenting bullet hole locations, bloodstain patterns, or bite marks. The Triangulation Method is useful in outdoor scenes lacking fixed reference points. The Rectangular Method and Baseline Method are also viable options.

3.3.3
Regardless of the method used, reference points must be documented in the CSI's report with identifying information. Reference points should be permanent landmarks, preferably GPS-located by another agency. Examples include fire hydrants, manhole covers, or power poles. Trees and houses should not be used as reference points.

3.3.4
Measuring devices may include rulers, retractable tapes, 100-foot tapes, surveyor's wheels, and electronic devices such as LIDAR. Regardless of the tool used, inaccurate measurements can cast doubt on the integrity of the entire crime scene investigation.

3.3.5
One or more of the following sketch types should be used: floor plan, elevation (vertical), exploded view, or three-dimensional.

3.3.5.1
The floor plan (top-down or bird's-eye view) is often the easiest for laypersons and jurors to understand.

3.3.5.2
The elevation or vertical view is used when vertical relationships or features are of interest.

3.3.5.3
The exploded view depicts walls and ceilings folded down into the same plane as the floor plan.

3.3.5.4

A properly executed three-dimensional drawing can provide exceptional clarity.

3.3.6
The CSI is not limited to a single sketch. Multiple sketches may be necessary. For example, one sketch may focus on the room containing the victim and critical evidence, while additional sketches may depict the layout of the rest of the home, including points of entry or other significant areas.

3.3.7
The rough sketch should include measurements, notations describing conditions, major evidence items, and critical features of the scene. Item locations must be indicated by measurements from at least two fixed points. A final sketch or diagram should be completed upon request by the investigator or prosecutor for courtroom presentation.

3.3.8
A proper crime scene sketch must include, at minimum, the following identifying information: case number, victim name, type of crime, date, location, scale (if applicable), or a notation that the sketch is not to scale, name of the person creating the sketch, and compass direction. When the rough sketch is drawn on the CSI's written report, only information not recorded elsewhere on the form must be included on the sketch.

3.3.9
A copy of the sketch—whether rough or final—should be attached to or included in the CSI's written report and made part of the final case documentation. If the sketch or diagram is created using computer-aided design (CAD) software, departmental archival processes shall be used for permanent digital storage.

3.4 VIDEOGRAPHY

Crime scene videography may be used as an additional investigative or demonstrative tool. It can augment still photography by providing a dynamic portrayal of the scene, offering jurors a sense of presence. Videography helps establish context and perspective, illustrating spatial relationships between evidentiary items and physical landmarks. However, it shall not replace or take precedence over still photography. When utilized, videography must depict the scene in a logical, sequential, and detailed manner.

When using crime scene videography, the procedures listed in Section 3.4 shall be followed.

3.4.1
Each video should begin with a placard or handwritten card displaying the case number, date, location, time, and CSI name. A brief audio recording of this information is also acceptable.

3.4.2
Unless circumstances dictate otherwise, audio should not be recorded during documentation. If audio is required, it must be monitored to ensure proper recording.

3.4.3
Narrated walk-through “tours” of the crime scene shall not be conducted. All camera movements, including pans, tilts, and zooms, must be slow, smooth, and deliberate. When panning for an overall shot, movement should proceed from left to right with the lens zoomed to a wide angle. Video documentation shall not be conducted while walking.

3.4.4
Recordings may be paused and restarted. When possible, use consistent landmarks or items as reference points between segments.

3.4.5
Begin documentation with a slow pan of the exterior and surrounding area from a fixed position. This should capture landmarks, lighting conditions, exterior evidence, and other relevant investigative factors.

3.4.6
Record video throughout the scene to show the location and proximity of key evidence items in relation to one another. Begin at the main point of entry, capturing general images, followed by medium-range views, and concluding with close-ups.

3.4.7
Although video length will vary based on scene complexity, efforts should be made to remain concise.

3.4.8
Upon completion of the scene investigation, departmental archival processes shall be used for permanent storage of digital video files.

3.5 LATENT IMPRESSIONS

The CSI must conduct a thorough evaluation of all surfaces in and around the crime scene that may retain latent impressions.

3.5.1
Special attention should be given to points of entry and exit, as well as areas of obvious activity by the perpetrator.

3.5.1.1
Less obvious locations should also be examined, including the undersides of toilet seats, flushing handles, tabletops, chair backs, light switches, and drawer handles.

3.5.1.2
At the discretion of the lead detective, a person familiar with the scene layout may participate in the preliminary walkthrough to identify items that appear out of place or objects potentially introduced by the suspect.

3.5.2
The CSI must wear disposable gloves to prevent depositing additional impressions on items or surfaces.

3.5.3
Visible impressions in substances such as blood, ink, paint, grease, dirt, or putty must be photographed in situ prior to recovery. The surface bearing the impression should then be collected and packaged to preserve it for examination-quality photography and analysis.

3.5.3.1
Nonabsorbent, hard, or smooth surfaces should be processed using powders that contrast with the fingerprint backer used during lifting. For nonmetallic surfaces, such as Styrofoam, soft plastics, coated magazine pages, or organic materials, magnetic powder and a magnetic brush may be used. Typically, camel hair or fiberglass brushes with nonmagnetic powder are used for hard, nonabsorbent surfaces.

3.5.3.2
Process the entire area using light, even strokes until ridge detail appears or the CSI determines that no detail is present. Once developed, excess powder should be gently brushed or mechanically blown away. Overapplication may obscure ridge detail and hinder identification.

3.5.3.3
To lift the impression, press the lifting tab or tape over the print, carefully removing air bubbles. Using a smooth, continuous motion, lift the impression and place it on a black or white backer, whichever provides better contrast.

3.5.3.3.1
If removing the lifting tape or tab would damage the surface, it may be left in place and the entire object submitted.

3.5.3.3.2
Always consider whether examination-quality photographs should be taken prior to recovery.

3.5.3.4
Superglue fuming should be considered for nonabsorbent surfaces such as glass, plastic, metal, plastic bags, foil, vinyl, rubber, leather, and lacquered wood. Fuming is less destructive than brush methods and stabilizes the impression by bonding cyanoacrylate to moisture in the print.

3.5.4
Laser or alternate light sources (ALS) should be considered to enhance impressions prior to development. ALS and fluorescent powders may be used. See Section 3.8.

3.5.5
Absorbent, porous surfaces—such as paper, cardboard, or wood—should be collected and properly packaged. These items are best processed under laboratory conditions.

3.5.6
Objects submitted for latent examination must be packaged to prevent movement, which could destroy impressions. Avoid using plastic bags, as they may cling to the object and damage latent prints.

3.5.7
Avoid excessive handling that could destroy impressions.

3.5.8
Upon lifting a latent impression, the reverse side of the lifting tab or print card must be labeled with the case number, lift location, initials, date of recovery, and CSI's name. A sketch indicating the print's location and orientation (using a directional arrow) should also be completed.

3.5.9
If the CSI inadvertently leaves their own impression on a lift tab, it must be crossed out and initialed.

3.5.9.1
Lifting tabs or print cards containing impressions recovered from different objects should be packaged separately according to their location at the scene (e.g., exterior vs. interior of a vehicle, bedroom vs. living room).

3.5.9.2
Developed impressions should be photographed for orientation purposes. Examination-quality photography (e.g., oblique lighting, tripod, scale) for comparison purposes is not required unless the CSI determines the impression cannot or will not be recovered.

3.5.9.3
If the CSI is reasonably confident that the developed impression can be recovered without damage or alteration to ridge detail, comparison photography is optional.

3.5.10
Latent impressions should be submitted for Automated Fingerprint Identification System (AFIS) search when suspect standards are unavailable. This is typically the responsibility of the lead investigator.

3.5.11
Latent impression evidence must be properly packaged and documented in both the chain of custody and the agency's evidence management system.

3.6 ROLLED FINGERPRINT IMPRESSIONS (including major case prints)

The ridge detail of fingerprints, including, but not limited to, ridge endings, bifurcations, and their spatial relationships, forms the basis for fingerprint identification. The specific number of points required for identification is determined at the discretion of the individual examiner. However, similarities may be found in any area where friction ridges occur.

Major case prints are used to compare with latent impressions. These consist of recordings of all friction ridge detail present on the palmar surfaces of the hands and the inner surfaces of the fingers. This includes the extreme sides of the palms and the extreme tips, sides, and lower joints of the fingers.

3.6.1 Completing a Fingerprint Card

3.6.1.1 Have the subject sign the fingerprint card.

3.6.1.2 The officer shall sign and date the same card.

3.6.1.3 Have the subject wash their hands.

3.6.1.4 Roll black printer's ink over all ridged surfaces of the fingers. An ink pad may also be used.

3.6.1.5 Consider the use of a live scan fingerprint station.

3.6.1.6 Instruct the subject to relax their arm and hand muscles.

3.6.1.7 Grasp the subject's hand, hold the four fingers back, and ink the thumb by rolling it toward the body. Immediately roll the inked thumb in the designated space on the card. Repeat this process for each finger, rolling them away from the body.

3.6.1.8 For simultaneous impressions, do not roll the prints. Instead, extend and join the forefingers, ink them, and press straight down. Repeat this process for the thumbs.

3.6.1.9 Fingerprint cards shall be stored in accordance with agency policy.

3.6.2 Completing Major Case Prints

3.6.2.1 Use standard 8½ × 11-inch white paper. Use as many sheets as necessary to obtain satisfactory impressions. At least two sheets will be needed—one for each hand.

3.6.2.2 Have the subject sign the paper. The officer shall also sign and date the same sheet.

3.6.2.3 Have the subject wash their hands, if not already done.

3.6.2.4 Roll black printer's ink over all ridged surfaces of the hands.

3.6.2.5 Secure the paper to the edge of the table to prevent movement.

3.6.2.6 Record each entire finger by rolling from fingernail edge to fingernail edge.

3.6.2.7 Above or next to each rolled finger impression, place a corresponding fingertip impression. Ensure full coverage from edge to edge.

3.6.2.8 Next to the little finger impression, place an impression of the palm edge adjacent to the little finger.

3.6.2.9 Hold the thumb horizontally at a 45° angle and press the outer edge onto the paper, ensuring contact between the joints. Lift the thumb from palm to nail.

3.6.2.10 Place the center portion of the thumb next to the previously recorded outer edge impression. Press firmly and lift from palm to nail.

3.6.2.11 Place the inner edge of the thumb at a 45° angle next to the center impression. Apply firm pressure and lift from palm to nail.

3.6.2.12 Place the outer edge of the thumb tip at a 45° angle and roll completely from one side to the other, ending at a 45° angle on the inner edge of the tip.

3.6.2.13 Label the right thumb series of prints as "#1." Repeat this labeling process for the remaining fingers in the same order as on the fingerprint card.

3.6.2.14 Place the paper—or an additional sheet—on a cylindrical object three or more inches in diameter and 8 to 10 inches in length. If you use an additional sheet, ensure both the subject and officer sign and date it. Affix the paper to the cylinder using a rubber band at the edge.

3.6.2.15 Place the heel of the palm on the upper edge of the paper with the fingers together and pointed straight ahead. The person taking the prints should place their hand over the subject's hand, applying just enough pressure to ensure firm contact with the paper.

3.6.2.16 Roll the cylinder backward toward the subject until the fingertips are recorded. Keep the hand horizontal to ensure full palm and finger coverage. The hand will naturally lift from the paper.

3.6.2.17 Major case prints shall be properly sealed and initialed by the crime scene investigator. Packaging should be a large envelope or similar container that prevents folding. The container must be sealed and labeled with, at minimum, the case number, item number, agency or

district number, and the CSI's initials. The item shall be recorded on the appropriate chain of custody form and stored in the evidence system.

3.7 BIOLOGICAL EVIDENCE (including sexual assault kits)

Biological evidence can be found in many forms and conditions. Due to its susceptibility to degradation, potential for contamination, and associated biological hazards, it is essential that the recovery, handling, packaging, and storage of biological evidence be conducted properly.

3.7.1
The CSI must exercise universal precautions when handling blood, semen, or other biological materials. Disposable gloves must be worn. Biohazard suits, shoe covers, and face shields should be considered at scenes where there is a risk of transfer or splatter.

3.7.2
All areas containing bloodstains, semen, or other biological materials should be documented during the preliminary examination of the crime scene using photographs, sketches, and videography when applicable.

3.7.3
Presumptive field test kits may be used to evaluate questionable stains for the presence of blood.

3.7.4
Alternate light sources should always be considered when evaluating for biological stains.

3.7.5
Wet garments must be completely air-dried, then wrapped in butcher paper and rolled or folded to prevent stain transfer to unstained areas. Each article should be packaged separately in paper bags. (An exception may be made if multiple articles are received from a third party as a single item.)

3.7.6
Any item containing biological fluids must be air-dried and packaged in breathable materials such as paper or cardboard, appropriate to the item being submitted.

3.7.7
For large objects that cannot be removed from the scene and are stained with body fluids, allow the stain to air dry before using one of the following collection methods:

1. Place a fingerprint lifter over the stain, press and lift, then replace the backing and package in paper.
2. Scrape the stain onto clean paper using a sterile scalpel, fold into a bindle, and package in paper.
3. If lifting or scraping is not possible, moisten a piece of clean white cotton cloth (approximately one-third the size of the stain) or a sterile Q-tip with distilled water, swab the stain, air dry, and package in paper.

4. For pooled liquids, absorb with clean white cotton cloth or a sterile Q-tip, air dry, and package in paper.

Items to be analyzed for saliva—such as cigarette butts, envelopes, or stamps—must be collected using clean or disposable tweezers or gloves and packaged in paper. Do not use plastic packaging.

3.7.8
Before removing stained bed sheets, blankets, or pillows, the CSI should mark each item to indicate its position on the bed (e.g., "head," "foot," "side"). Fold the bedding inward toward the center to prevent loss of trace evidence and package in paper.

3.7.9
The CSI may cut out stains absorbed into surfaces such as carpet, paper, cardboard, vinyl, or wood. A control sample should be taken from an unstained area of the same material. Consult the prosecutor before cutting surfaces of value.

3.7.10
To prevent cross-contamination, the CSI must change gloves or use disposable tweezers (or clean reusable tweezers) between handling each new item of stained evidence.

3.7.11
Sexual assault evidence kits must be collected by qualified medical personnel. The CSI should ensure the kit is fully completed according to the enclosed instructions, including compliance with the Indiana-mandated Sexual Assault Kit (SAK) tracking system.

3.7.12
Store all dried biological fluid stain evidence in low humidity and as cool a temperature as possible to minimize degradation. Refrigeration or freezing is preferred; however, room temperature is acceptable depending on the item's size, material, available space, and impact on subsequent examinations.

3.7.13
All biological evidence must be properly packaged, sealed, marked as biohazard, documented on the appropriate chain-of-custody form, and stored in the agency's evidence system.

3.8 ALTERNATE LIGHT SOURCE (ALS)

An Alternate Light Source (ALS) is a device that emits specific wavelengths of light and requires the use of filters for observation and photography. ALS should be considered when evaluating biological evidence, trace evidence, and latent impressions.

3.8.1
A rechargeable LED flashlight may be used as an ALS when paired with appropriate filters. The light should be as bright as possible for optimal results.

3.8.2
A single ALS unit may be used in place of a flashlight-filter combination.

3.8.3
It is imperative to select the proper viewing shield or glasses and to always observe through them to filter out unwanted wavelengths. Individuals should avoid looking directly into the light source.

3.8.4
ALS should be used in the darkest environment possible. Ambient light can diminish results.

3.8.5
Scan the room or suspected area with ALS. Light intensity depends on the strength of the source and fades with distance. Keeping the light two (2) to twelve (12) inches from the surface provides the best opportunity for detection.

3.8.6
The beam pattern should be as narrow as possible to concentrate light and improve scanning effectiveness.

3.8.7
ALS may be used in any type of investigation and on any surface, indoors or outdoors, including on deceased or living individuals. When using ultraviolet light, the CSI should use near-UV wavelengths and limit exposure time to the evidence.

3.8.8
Treated latent impressions with fluorescent powders fluoresce more brightly than body fluid stains. Generally, semen fluoresces the brightest, followed by urine and then saliva. Blood does not fluoresce under ALS; instead, it absorbs the light and appears as a dark spot.

3.8.9
Using fluorescent fingerprint powders with ALS produces better contrast across most backgrounds, making latent impressions easier to locate and identify. Most standard fingerprint powders do not fluoresce under ALS.

3.8.10
Any fluorescent area—biological or powder—must be photographed prior to recovery. Fluorescent areas should be photographed through the viewing shield or a camera lens filter. The CSI should evaluate the item or area for appropriate f-stop settings to achieve the necessary depth of field. The camera exposure should be set to “B” for bulb mode. Illuminate the impression or stain with ALS and photograph through the shield or filter using varied exposure times (e.g., 15, 30, 60, 90 seconds). A tripod is essential to maintain camera stability during long exposures.

3.8.11
ALS may also be used to locate trace evidence, as many fibers fluoresce under specific wavelengths.

3.8.12
The CSI should consider requesting a fingerprint analyst when examining major crime scenes for latent impressions. The analyst may enhance prints using dyes and/or stains.

3.8.13
ALS lenses must be kept clean and treated with the same care as camera lenses. Dirty or scratched lenses will diminish results.

3.9 FIREARMS AND ASSOCIATED EVIDENCE (BULLETS, CASINGS, WEAPON, CLOTHING)

Firearms evidence is not limited to a single crime category and may be associated with nearly any type of criminal activity. It may include the weapon itself, gunpowder residue, cartridge components, or damage caused by the discharge of a firearm. Recovery of firearms evidence often requires specialized handling techniques due to the presence of biological, trace, and latent impression evidence, as well as the environment in which the evidence is located.

3.9.1
The CSI must carefully document the location of all weapons, shell casings, bullet holes, bullets and fragments, and gunshot patterns using photography and sketching. Both technical and orientation photographs must be taken.

3.9.2
Weapons must be handled in a manner that preserves any biological, trace, or latent impression evidence. Special care must be taken when walking through the scene to avoid stepping on or disturbing casings or bullets.

3.9.3
If a deceased individual is holding a weapon, the exact grip and position of the weapon in the hand must be thoroughly documented prior to recovery.

3.9.4
Always render a weapon safe before examination or packaging but do so cautiously to preserve any secondary evidence.

3.9.5
The weapon should be packaged in a heavy corrugated container—unless recovered from a liquid environment—and secured to prevent shifting. Record the firearm's make, model, and serial number. Also document the type of ammunition, the total number of cartridges, whether they are spent or unfired, and their sequence relative to the chambered round.

3.9.6
If a firearm is found in water, mud, or similar environments, it should be submitted in the same condition. Do not clean, rinse, or wipe the weapon prior to submission.

3.9.7

Bullets and casings must be handled with extreme care to avoid damaging microscopic striations. Each item should be individually wrapped in tissue or soft material and sealed in a pillbox. The CSI should not mark the bullet itself to avoid compromising evidence.

3.9.8
Plastic or glass airtight containers must not be used for bullets or casings, as moisture may cause corrosion and degrade identifiable markings.

3.9.9
Cartridges found in a removable magazine should remain in the magazine and be submitted as a single item.

3.9.10
Do not attempt to extract projectiles embedded in wood, plaster, or similar materials. Instead, remove the surrounding material to preserve the projectile.

3.9.11
X-rays should be used to locate projectiles within the body. Projectiles should be removed using rubber-tipped forceps or fingers to prevent damage. Rinse projectiles with running water only—do not scrub.

3.9.12
Unfired or live ammunition, if limited in quantity, should be packaged in the same manner as projectiles and casings. Larger quantities may be grouped by recovery location and listed as a single item.

3.9.13
The CSI must attempt to locate shot shell components. These should be recovered and handled in the same manner as projectiles and casings.

3.9.14
Clothing recovered for distance determination must be air-dried prior to packaging. Clean paper should be placed over each surface, and items must be packaged individually in paper bags. Plastic bags must not be used.

3.9.15
Recover all unfired ammunition associated with the case to serve as potential standards for distance determination.

3.9.16
Gunshot residue recovery may be attempted in cases with special circumstances.

3.9.17
All firearms evidence must be properly packaged, sealed, documented on the appropriate chain-of-custody form, and stored in the agency's evidence system.

3.10 TRACE EVIDENCE

Trace evidence may be any substance that is visible or invisible to the unaided eye. It is transferred from one person, place, or object to another due to contact or close proximity, in accordance with Locard's Exchange Principle. Because of its microscopic size, trace evidence may be easily overlooked. The CSI should observe for common types such as paint, glass, hairs, fibers, and safe insulation. However, any substance should be considered potential trace evidence, including powders, gels, adhesives, soils, minerals, plasterboard dust, wood splinters, plastic, rubber, metals, vegetation, and lamp fragments.

3.10.1
The CSI should evaluate the scene for the presence of trace evidence.

3.10.2
The CSI shall document the locations where trace evidence and standards are recovered using photography and sketching.

3.10.3
The CSI shall remain aware of the possibility of secondary or tertiary transfer of trace evidence.

3.10.4
Trace evidence standards shall be recovered from the crime scene for comparison purposes.

3.10.5
Standard samples of known substances should be obtained from areas near—but not in contact with—the suspected trace evidence.

3.10.6
Methods of collecting trace evidence include by hand, with tweezers, using adhesive notes, lifting tape, scraping, cutting, or vacuum sweeping.

3.10.7
When possible, the CSI shall collect and properly package all visible trace evidence by hand or with tweezers before employing other collection methods.

3.10.8
Vacuum sweeping shall be used only as a last resort and only when all other collection methods have failed.

3.10.9
When practical, collect and submit the entire item (e.g., floor mats or truck liners) for laboratory examination of trace evidence.

3.10.10
When packaging, the container size should correspond to the size of the object. Paper bindles should be considered for very small particles. If bindles are used, they must be placed inside a

larger package. Tape all edges of the container (e.g., envelope flaps and pillbox seams) to prevent loss.

3.10.11
Never package damp evidence in plastic bags.

3.10.12
Suspect clothing may contain trace evidence. Clothing and shoes should be recovered as soon as possible. Other potential sources include automobile seats and interiors, pry tools, and fingernail scrapings.

3.10.13
The CSI must remain aware of the potential for cross-contamination during packaging. Question samples and standards must be kept separate during collection, examination, and packaging.

3.11 TOOLMARKS

Toolmark evidence may indicate the type of tool or object used by a perpetrator. If sufficient individual characteristics are transferred from the object to the surface, a positive identification may be possible. Preservation of potential trace and latent impression evidence is essential during the recovery of toolmark evidence.

3.11.1
The CSI should evaluate for toolmarks at points of entry or attempted entry to buildings, interior rooms, areas, or items of interest. Any broken, forced, or cut locks, latches, bolts, and cut wire in the area should be recovered.

3.11.2
Toolmarks must be properly photographed prior to casting or removal. Both orientation and technical photographs are required.

3.11.3
Toolmarks must be documented before removal or casting. Sketches must accurately reflect the position of all toolmarks relative to a fixed reference point, including height from the floor or ground.

3.11.4
Toolmarks and tools should be carefully examined for trace evidence—such as paint transfers, hairs, or fibers—prior to latent impression processing. These materials may be collected and packaged separately or avoided during fingerprint powder application.

3.11.5
When possible, the entire object bearing the toolmark should be removed and submitted to the laboratory for comparison. If removal is not feasible, cast impressions should be obtained. Relevant objects may include doorknobs, locks, latches, wire, chains, windowsills, doorsills, striker plates, and cash drawers. The CSI should mark “top,” “bottom,” “front,” or “back” on removable items and cast impressions to indicate orientation.

3.11.6
Objects bearing toolmarks must be handled and packaged to prevent contact between the mark and any hard surface, thereby avoiding loss of trace evidence or damage to microscopic striations.

3.11.7
If the item bearing the toolmark is too large for laboratory submission, it may be possible to remove or cut out the area containing the mark. A sufficiently large section should be removed to prevent damage.

3.11.8
If the actual item cannot be submitted, a cast of the toolmark should be made. Samples of paint or metal from the original item should be collected and submitted as reference standards, as trace evidence may adhere to the suspect tool.

3.11.9
When a suspected tool is recovered, it must never be fitted into the impression to test for a match. The tool must be packaged to protect the end being examined and preserve any trace evidence. Tools must not be cleaned, as they may contain latent impressions.

3.11.10
All toolmark evidence must be properly packaged, sealed, documented on the appropriate chain-of-custody form, and stored in the agency's evidence system.

3.12 FOOTWEAR AND TIRE IMPRESSIONS

Footwear and tire impressions may be found on a variety of surfaces and can be documented using oblique lighting. Visible impressions in soft mediums can be cast using various techniques.

3.12.1
Prints in dust become more visible under oblique lighting. These prints can be lifted from flooring, glass, carpet, walls, doors, and paper using an Electrostatic Dustprint Lifter (see Section 3.13).

3.12.2
All impressions must be photographed prior to any attempt to lift or cast them. Orientation and technical photographs are required.

3.12.3
Impressions must be photographed from directly overhead so the camera is perpendicular to and on the same plane as the impression. A tripod is recommended. Use appropriate oblique lighting from all sides. Black and white still photography should be used.

3.12.4
If the impression is a continuous tire print, place a tape measure parallel to it and take overlapping photographs covering at least eight feet in length.

3.12.5
Do not remove debris that has been pressed into the impression. Use tweezers carefully to remove debris that has fallen onto the impression after it was made.

3.12.6
Set a form around the impression at least one inch from the edges. Mix the appropriate casting material (e.g., dental stone, dry rock) with water until it reaches the consistency of pancake batter. Slowly pour the mixture into the impression, deflecting the stream with a flat object. The casting material should be poured to a thickness of at least one inch.

3.12.7
For impressions in soil, pre-treat the area by spraying aerosol lacquer or shellac from a distance, allowing the spray to "fall" onto the impression. Allow it to dry and repeat until the top layer of particles is coated.

3.12.8
Prints in snow must first be coated with Snow Print Wax. Then, spoon the appropriate casting material (e.g., dental stone, dry rock) onto the wax. The casting powder and water should be chilled as much as possible before mixing and application.

3.12.9
Impressions under water can be cast. If the water cannot be drained sift dry casting material slowly into the water above the impression. As the material sinks, it will accumulate and form a cast.

3.12.10
Mark the non-impression side of the cast for identification when it is nearly set. Once the casting material is hard to the touch, it may be removed. Do not remove any adhering soil. Package the cast in paper or cardboard—never in plastic.

3.12.11
Footwear and tire impression evidence must be properly packaged, sealed, documented on the appropriate chain-of-custody form, and stored in the agency's evidence system.

3.13 ELECTROSTATIC DUSTPRINT LIFTER

The electrostatic dust print lifter operates on the principle of static electricity acting on dust particles. The device creates an electrically charged environment on Mylar paper, attracting particles to its surface. Dust prints are often not visible to the unaided eye and typically require oblique lighting for detection.

3.13.1
Although high voltages are used in the recovery of dust print evidence, the amperage is very low, therefore, inadvertent shock from the device is not dangerous.

3.13.2
Crime scenes shall be routinely evaluated for dust print impressions:

3.13.2.1
The CSI shall evaluate all surface areas in and around the scene that have the potential to retain dust print impressions.

3.13.2.2
These areas include entry points or attempted points of entry, as well as possible access or attempted access to interior rooms.

3.13.2.3
Doors that may have been kicked or areas where the suspect likely stepped should be routinely evaluated for dust prints.

3.13.3
Oblique lighting shall be used when evaluating for dust prints.

3.13.4
Orientation photographs should be taken.

3.13.5
Dust prints shall be technically photographed with and without scale using oblique lighting prior to lifting.

3.13.6
Electrostatic dust print lifter procedure:

3.13.6.1
Place the black side of the Mylar paper onto the print, ensuring full coverage.

3.13.6.2
Position the metal plate approximately three inches from the paper.

3.13.6.3
Attach the two device nodes to the edge of the Mylar paper and the single node to the metal plate.

3.13.6.4
Turn on the device until the Mylar paper begins to adhere to the print.

3.13.6.5
Use a roller to eliminate air bubbles and creases in the Mylar paper.

3.13.6.6
Turn off the device.

3.13.6.7
Carefully lift a corner of the Mylar paper.

3.13.6.8

Dust prints shall be properly packaged and sealed to prevent the impression from being wiped away or diminished. For example, tape the lift inside a pizza-style box with the impression side facing up, ensuring nothing touches the surface.

3.14 DOCUMENTS

Written and typed documents appear in many facets of modern society. Handwritten materials may be found on paper, such as letters and notes, or on desks, tabletops, walls, floors, doors, and even on human bodies. Typed documents may be machine-reproduced, computer-generated, or produced using a typewriter.

Examples of documents that should be preserved include, but are not limited to:

- Robbery or demand notes
- Threatening letters
- Suicide notes
- Checks
- Credit card receipts
- Counterfeit documents
- Currency
- Torn or cut paper
- Altered and/or obliterated documents
- Photocopies
- Forged signatures
- Forged documents
- Blank notepads or unused documents

When investigating crimes involving documents, proper handling and preservation of the evidence is essential.

Excessive handling may damage the document, smudge or obscure critical writing characteristics, and potentially eliminate latent impressions, thereby precluding identification. Improper handling may also compromise indented writing.

Successful examination of documents of questionable origin or authenticity begins with the acquisition of appropriate handwriting exemplars.

These exemplars should be obtained from suspects or known standards and must be comparable to the questioned writing. The conditions under which the questioned writing was produced should be approximated. For instance, if a suspect wrote with chalk on a ceiling rafter, exemplars written on paper would likely be insufficient for comparison. Additionally, the known specimens must be adequate in quantity and quality to allow for the examination of normal handwriting variations.

One of the most frequently raised objections to the use of handwriting standards for comparison is the claim that it violates the privilege against self-incrimination. This argument is not applicable, as

the purpose of handwriting standards is identification not communication. Case law consistently supports the position that written words used as handwriting samples, when not evaluated for their semantic content, do not convey knowledge of a crime. Therefore, such words may be used as physical evidence, independent of their communicative meaning.

3.14.1
Questioned documents are often fragile and must be handled with care.

3.14.2
Each questioned document shall be packaged separately.

3.14.3
Label the evidence packaging prior to placing the document inside.

3.14.4
Clearly mark the packaging with “Do Not Fold/Bend.”

3.14.5
Never fold, staple, or bend questioned documents.

3.14.6
Standard writings must be collected for comparison to the questioned document.

3.14.7
If the questioned document is written in cursive, the known standard shall also be written in cursive. Likewise, if the questioned document is printed, the known standard shall be printed.

3.14.8
If the goal is to connect multiple crimes and known standards are not available, consult with the Forensic Document Unit.

3.14.9
Known standards may come from a variety of sources, including but not limited to: personal checks, credit card statements, forensic document forms, account books, affidavits, job applications, assignments, autographs, and other sources as identified by the Forensic Document Unit.

3.14.10
Known standards must be sufficient in quantity. Two or three sentences are unlikely to be adequate for comparison with several pages of questioned material.

3.14.11
Use exemplar forms to collect known writing, following the instructions outlined in Indiana State Police Physical Evidence Bulletin (PEB) 16: Documents.

3.14.12
Original documents are preferred whenever possible. Photocopies may be used, but the quality must be suitable for comparison.

3.14.13
If the questioned document requires evaluation for latent impressions or other types of evidence, care must be taken to preserve it for those examinations.

3.14.14
Indented writing standards shall be collected when possible (e.g., notebook pages or sheets beneath the questioned document).

3.14.15
Charred documents must be protected using a sturdy container to prevent further damage.

3.14.16
When collecting envelopes, be aware that biological evidence may also be present.

3.15 FORENSIC METAL DETECTING

In addition to visual examination, a metal detector may be used to assist in locating metallic items of evidence, including weapons, bullets, casings, cartridges, and cartridge components.

3.15.1
A metal detector should be routinely used in crime scene searches where metallic evidence is likely to be present. This typically applies to outdoor scenes where evidence may be below the surface or difficult to see.

3.15.2
The CSI must be properly trained on the specific metal detector being used and understand forensic metal detecting principles.

3.15.3
Refer to the user manual for operating instructions. A copy of the manual should be kept in the CSI's vehicle or stored on a network drive accessible at the scene.

3.15.4
The CSI should test the metal detector by placing a metallic object on the ground and sweeping the device over it before using it on the scene.

An audible "beep" indicates the device is functioning properly. The CSI should document in their notes that the metal detector was function-tested and operational.

If the metal detector does not produce the audible "beep" or otherwise fails to perform properly, it should not be used until repaired.

3.15.5
Search patterns will vary depending on the topography of the scene. The area should be divided into manageable grid sections and searched using either the **Strip** or **Spiral Method**.

3.15.5.1
When using the Strip Method, divide the area into one-yard-wide strips. Sequentially search each strip, then adjust the pattern by ninety degrees and repeat. Each new strip should overlap the previous one.

3.15.5.2
When using the Spiral Method, begin at the center of the area and walk in a circle of continuously increasing diameter until the entire area has been covered.

3.15.6
Operate the metal detector coil approximately one inch above the ground surface.

3.15.7
While walking slowly forward, the CSI should swing the metal detector back and forth across the ground, keeping the coil parallel to the surface. Each full swing should last one to two seconds and overlap the previous swing area.

3.15.8
The CSI should consider customizing the detector's settings for a more targeted search based on the type of metal of interest (e.g., brass, copper, lead, steel). If possible, avoid using the "all-metal" mode.

3.15.9
After each use, the metal detector must be cleaned and dried. Batteries should be removed to prevent corrosion.

3.15.10
If metallic objects may be found in a body of water, the CSI should consider contacting a forensic dive team for assistance.

3.16 ARSON EVIDENCE

Both police and fire services may legitimately claim authority in arson cases. Contact with the Indiana State Fire Marshal's Office must be considered during arson investigations.

3.16.1
The CSI shall ensure that the scene is thoroughly documented using photography and, optionally, videography.

3.16.2
Scene documentation shall include, but is not limited to: burn patterns, point(s) of origin, accelerant residue, valuables (including heirlooms) or the locations where such items were

reportedly located prior to the fire or explosion, specific appliances, fire-setting mechanisms, layering, tool marks, trace evidence, any deceased individuals found in the debris, and spectators.

3.16.3
Photographs taken while the fire was in progress should be considered potential evidence.

3.16.4
The CSI should consider using an alternate light source during the investigation. Accelerants, both consumed and unconsumed, may fluoresce under various wavelengths.

3.16.5
Potential accelerant materials shall be collected in unused arson collection cans.

3.16.6
Each item of evidence recovered by the CSI shall be properly packaged and sealed, documented on the appropriate chain-of-custody form, and stored in the agency's evidence system.

3.17 DRUG EVIDENCE

Drugs are frequently encountered as physical evidence in a wide variety of criminal cases. Controlled substances appear in various forms, including liquids, tablets, capsules, powders, plant material, and even invisible deposits on paper. These substances may be illegal (e.g., LSD) or legal (e.g., Vicodin) and may be classified as controlled or non-controlled.

Crime scenes shall be routinely evaluated for drug-related evidence, which may include paraphernalia and indicators of drug distribution.

Clandestine laboratories and illegally manufactured controlled substances typically lack any form of quality control. The manufacturing process may involve flammable liquids, explosive compounds, and carcinogenic substances. Additionally, clandestine labs may be booby-trapped with mechanical and/or chemical devices, posing significant risks to investigators. Chemical waste generated during production presents environmental hazards, and biohazards associated with intravenous drug use may also be present.

Clandestine laboratories may employ various manufacturing procedures. Methamphetamine production is the most encountered, though laboratories may also produce cocaine base, PCP (phencyclidine), LSD (lysergic acid diethylamide), or explosives. Common chemicals found at methamphetamine labs include pseudoephedrine, muriatic acid, anhydrous ammonia, and sodium dichromate.

Clandestine laboratories pose serious safety threats to crime scene investigators. Proper disposal of waste products is required to comply with federal and state environmental regulations. Failure to adhere to these requirements may result in severe penalties for the investigating agency.

3.17.1
When searching a dwelling, the investigation should be conducted systematically. In addition to hidden contraband, the CSI should be alert for intelligence information such as telephone numbers, address books, ledgers, notes, currency, cellular phones, and possible stolen property.

3.17.2
Drug paraphernalia may take various forms, such as pipes, tubes, razors, straws, and syringes. If it is necessary to collect syringes or syringes with needles, a puncture-proof container shall be used, such as a specially designed syringe tube with protective Styrofoam ends.

3.17.3
Water should be removed from water pipes prior to packaging.

3.17.4
Orientation photographs shall be taken of drug evidence prior to recovery.

3.17.5
Never sniff or taste suspected drug evidence. Suspected drug evidence must not be handled without appropriate PPE.

3.17.6
Live marijuana plants shall be photographed. Leaves should be stripped from the plants and allowed to dry. The dried plant material shall be packaged in paper bags or cardboard boxes.

3.17.7
Drug evidence shall be packaged separately to prevent cross-contamination. For specific instructions, refer to Indiana State Police Physical Evidence Bulletin PEB-01 or PEB-019.

When safe to do so, CSIs should consider packaging drug material separately from the container in which it was found, allowing the container to be submitted for latent print or DNA analysis.

3.17.8
Investigators should be alert for booby traps, carbon dioxide tanks, fertilizers, timers, lighting equipment, irrigation systems, and instructional publications.

3.17.9
Drug field test kits allow CSIs to perform presumptive tests on suspected substances.

3.17.9.1
Field testing of unknown powder substances should be avoided unless necessary to establish immediate probable cause.

3.17.9.2
When a presumptive field test is performed, the results shall be included in the CSI Case Report.

3.17.9.3
Submit the substance from which the field-tested sample originated to a Regional Laboratory for confirmation.

3.17.9.4
Field test results should be photographed.

3.17.10
If a possible clandestine laboratory is identified, all personnel shall immediately exit the area. A Clandestine Laboratory Enforcement Team shall be contacted for all suspected clandestine laboratory investigations.

3.17.11
The CSI shall enter the scene only when authorized by the Clan Lab Team leader.

3.17.12
Once entry is approved, the CSI shall document the scene with photography. Sketching and video recording may also be used.

3.18 BLOODSTAIN PATTERN DOCUMENTATION

When bloodstain evidence is present, analysis of the patterns may yield information about the physical origins and mechanisms by which the stains were created. If a CSI is not adequately trained in bloodstain pattern interpretation, a well-documented scene may still provide sufficient data for later analysis.

3.18.1
Blood is a fluid that adheres to physical laws. Therefore, the creation of bloodstain patterns is broadly predictable and reproducible under similar conditions.

3.18.2
A CSI should have a reasonable understanding of bloodstain pattern principles, including:

3.18.2.1 Pattern Diversity Principle

Variations in the combination of blood volumes and the forces acting upon them lead to recognizable classes of patterns.

3.18.2.2 Correlation of Stain Shape and Vector Principle
The shape of a bloodstain provides indicators of the direction of deposition and the spatial origin of the blood.

3.18.2.3 Physically Altered Bloodstain Principle

Exposed blood reacts to environmental conditions such as airflow, temperature, humidity, and surface variations in a predictable manner.

3.18.3
In referencing these principles, a CSI should recognize the distinct taxonomic characteristics of bloodstain patterns and their variations.

3.18.4
Bloodstain evidence shall be documented in the same manner as other forms of forensic evidence and crime scenes.

Documentation should include photography and sketching. Additional methods may include 3D scanning and videography.

Orientation and technical photographs shall be taken of bloodstain evidence as it appears on all surfaces.

3.18.5
Photography techniques shall include overall scene photos, midrange photos, close-up photos, and, when appropriate, macro photography.

3.18.6
All photographs should be taken with and without scale and at a ninety-degree (90°) angle to the surface where blood is observed.

3.18.7
The CSI shall ensure that photographs are in focus, correctly exposed, and display good depth of field.

3.18.8
The CSI should document bloodstains using a technique commonly referred to as “road mapping.” The "road mapping" technique was developed by Toby L. Wolson of the Miami-Dade Police Department's Crime Laboratory.

The procedure involves capturing overall, midrange, and close-up photographs of bloodstains, combined with labels and scales.

Separate pattern groups are identified and labeled; important stains within each group are further identified and labeled accordingly. The labels and scales act as "road signs" in the photographs, guiding viewers through the analysis.

This technique allows other analysts to interpret the photographs without being present at the crime scene.

3.18.9
Sketching provides a visual representation for others to observe and understand the spatial dynamics of the bloodstain evidence and its relationship to other evidence.

3.18.10
A CSI shall sketch bloodstain evidence with specificity regarding the size, shape, location, distribution, and volume of blood within the crime scene.

3.18.12
The CSI shall ensure that the sketch is legible, accurate, and meets all standards related to sketching the crime scene and evidence.

3.19 BLOODSTAIN ENHANCEMENT REAGENTS

Several types of blood identification reagents (presumptive tests) are available to the CSI, which presumptively confirm the presence of blood. These reagents react to hemoglobin present in red blood cells.

3.19.1
The CSI should thoroughly process the scene prior to using a blood reagent. Visible suspected bloodstains should be collected for laboratory analysis.

3.19.2
Crime scene testing should only be performed when additional bloodstains are available beyond those collected for analysis.

3.19.3
In all cases involving reagents, a “Positive Control” should be used. A small, known sample of material containing human blood should be tested first, and the results documented.

3.19.4
A “Negative Control” should also be performed using a clean, sterile swab.

3.19.5
Reagents such as Luminol or Bluestar enhance the CSI’s ability to detect traces of blood not visible to the unaided eye.

3.19.6
Bluestar does not interfere with DNA testing. However, excessive spraying may dilute the stain and reduce the reliability of DNA analysis.

3.19.7
A spray bottle is used to apply the reagent to the surfaces in question. The resulting glow or chemiluminescence may be faint; therefore, the surroundings must be as dark as possible to observe the reaction.

3.19.8
In some instances, outlines of footwear and marks caused by mopping or wiping may be clearly visible with the use of reagents.

3.19.9
The CSI must understand that reagents may produce false positives. They can react with vegetable matter and phosphates found in detergents, bleach, and other common household chemicals. Reagents do not distinguish between human and animal blood.

3.19.10
Proper safeguards must be observed when working with reagents. Disposable protective clothing and respiratory protection are required when spraying in any location. While the chemicals are not known to be carcinogenic, they may cause irritation.

3.19.11
Before using reagents in a case, the CSI should test the reagent using known blood.

3.19.12
When a chemiluminescence reaction occurs, it must be documented and photographed. Multiple methods may be used:

3.19.12.1
One method involves photographing the chemiluminescence in a single exposure, then circling the area with a Sharpie marker and photographing the surrounding area in a second exposure to indicate location.

3.19.12.2
Alternatively, the CSI may record both the luminescence and its location in a single exposure using a rear curtain or rear bracket flash during a long exposure. The flash should be pointed away from the evidence to avoid overpowering the luminescence while illuminating the surrounding area.

3.19.13
Whether using Luminol or Bluestar, patterns or stains should be measured, sketched, and photographed.

3.19.14
Samples from areas of chemiluminescence must be properly packaged as biological evidence, documented on a Property Record, and stored in the evidence system.

3.20 SKELETAL REMAINS

Skeletal remains may consist of a single bone, an entire body, or any variation in between. The involvement of a skilled Forensic Anthropologist or Archaeologist must be considered when a scene involving skeletal remains is encountered. Such scenes shall be treated as biohazardous and appropriate PPE must be worn during the recovery process.

3.20.1
A Forensic Anthropologist or Archaeologist shall be contacted immediately upon learning of a skeletal remains scene. Specific instructions shall be obtained from this individual.

3.20.2
Skeletal remains shall not be disturbed until an attempt has been made to contact a Forensic Anthropologist or Archaeologist.

3.20.3
The CSI shall establish and maintain a liaison with the coroner of venue to ensure cooperation in the collection of skeletal remains and follow-up examination with forensic pathology and anthropology.

3.20.4
The CSI shall ensure that a record is maintained of all individuals who enter and exit the scene.

3.20.5
Prior to recovery, the CSI shall ensure that the scene is thoroughly documented using photography, videography (if necessary), and sketching.

3.20.6
If documentation is performed by the Forensic Anthropologist or Archaeologist, the CSI shall obtain a copy of the documentation and shall not duplicate the effort.

3.20.7
Entomological activity must be evaluated.

3.20.8
A metal detector shall be used to search the scene after exhumation, including the area directly beneath the remains.

3.20.9
Skeletal remains shall be handled as biohazardous material.

3.20.10
The Forensic Anthropologist or Archaeologist should oversee the exhumation and/or collection of skeletal remains unless they direct the CSI otherwise.

3.20.11
The CSI shall be aware of the need to obtain X-ray, medical, and/or dental records for identification purposes.

3.20.12
Skeletal remains shall be packaged appropriately and documented on a proper chain-of-custody form.

3.21 ENTOMOLOGY

A Forensic Entomologist should be consulted as soon as entomological evidence is identified to provide specific guidance to the CSI, particularly regarding climate data collection. Proper recovery

and documentation of entomological evidence can assist in determining the approximate time and location of death.

Documentation shall include weather conditions at the time of evidence recovery, as well as data from several hours or days prior. Researching climate information, available through the National Weather Service, is essential to entomological investigations. The life cycle and developmental stages of insects are critical to forensic analysis. These biological markers enable the Forensic Entomologist to estimate both the time and potential location of the victim's death.

3.21.1
Entomology crime scenes shall be considered biohazardous. PPE shall be worn.

3.21.2
Entomological activity must be evaluated.

3.21.3
A Forensic Entomologist should be contacted immediately upon identifying entomological evidence. Specific instructions shall be obtained from this individual.

3.21.4
Time, temperature, wind speed and direction, humidity percentage, and weather conditions shall be obtained and recorded.

3.21.5
Skeletal remains shall not be disturbed until an attempt has been made to contact a Forensic Anthropologist or Archaeologist.

3.21.6
Prior to recovery, the CSI shall ensure the scene is thoroughly documented using still photography, videography (without audio), and sketching.

3.21.7
When evaluating entomological evidence, the CSI shall consider all types of entomological species, as this may assist the Forensic Entomologist in establishing the postmortem interval through diverse entomological succession patterns.

3.21.8
In addition to blowflies, the CSI should be prepared to collect and preserve representative samples of all entomological species present at the death scene.

3.21.9
The CSI should be familiar with the blowfly lifecycle to help organize and simplify collection procedures.

3.21.10
When collecting blowfly larvae, the CSI shall collect 30–50 live specimens and 30–50 preserved specimens.

3.21.11
Live specimens that appear similar shall be grouped and handled as one item per group. Each group shall be placed on a moist, protein-rich source (e.g., beef liver) in a Styrofoam cup containing an aluminum pouch. A lid with small air holes shall be placed on each cup. These items shall be maintained at room temperature until transferred to the Forensic Entomologist.

3.21.12
The remaining half of the live specimens shall be grouped and killed by placing them into a bottle or spill-proof container partially filled with an approved chemical killing agent.

3.21.13
Blowfly eggs, commonly found in clumps, shall be collected similarly: half placed in a killing preservative, and half placed on a moist, high-protein source such as beef liver.

3.21.14
Adult blowflies shall be collected using a net and preserved in a chemical killing agent.

3.21.15
If present, puparia and/or pupa casings shall be documented and collected. Puparia shall be separated into live and preserved specimens.

3.21.16
All collection containers, both live and preserved, must have proper labeling attached to the outside and identical information placed inside the container.

3.21.17
Labels shall include Case Number, Date, Time, Sample Number, County, State of collection, and collector's initials. Labels must be completed using a #2 pencil only.

3.21.18
A metal detector should be routinely used in the search of the scene after recovery, including the area directly beneath the remains.

3.21.19
Each item of evidence shall be packaged appropriately and documented on both a chain-of-custody form and an Entomology Collection Data Sheet.

3.22 AUTOPSY

The coroner of venue is the determining authority regarding whether an autopsy will be performed. The CSI must encourage that all questionable deaths be autopsied, preferably by a Forensic Pathologist. The CSI shall ensure that a liaison is established and maintained with the coroner of venue as well as all area Forensic Pathologists.

3.22.1
All autopsy investigations shall be considered biohazardous scenes. PPE must be worn.

3.22.2
The CSI should request that a detective familiar with the investigation, as well as the coroner, be present at the autopsy.

3.22.3
The CSI shall ensure that the Forensic Pathologist is thoroughly briefed on the facts of the case prior to the autopsy. The pathologist shall be provided with digital photographs (if available) and other documentation (e.g., sketches) as required and available.

3.22.4
The CSI shall request X-rays of the body prior to the autopsy.

3.22.5
The CSI shall coordinate with the Forensic Pathologist to obtain the desired evidence from the autopsy.

3.22.6
The CSI shall photograph the body before, during, and after the autopsy. Documentation shall include technical photography of wounds and tattoos.

3.22.7
Autopsies should not be routinely videotaped.

3.22.8
Specific notation shall be made of livor mortis, stomach contents, postmortem impressions, wounds, tattoos, clothing, and valuables.

3.22.9
The CSI shall ensure that an autopsy diagram is completed. The CSI should only complete their own diagram if the pathologist does not provide one.

3.22.10
The CSI should request that samples for toxicological screening be acquired if the pathologist does not collect them.

3.22.11
The CSI shall not request duplicate toxicological screens.

3.22.12
An alternate light source may be used to enhance wound visibility and to evaluate for trace evidence, body fluids, and latent impressions.

3.22.13
The CSI shall obtain a preliminary opinion from the pathologist regarding the cause and manner of death, as well as opinions on the type of weapon used, projectile trajectory, wound types (if applicable), and the approximate time of death.

3.22.14
The CSI shall ensure that the detective receives a copy of all reports.

3.22.15
Items recovered that are of non-evidentiary value (e.g., jewelry, wallet, money) shall be released to the coroner of venue at the autopsy or as soon as practicable.

3.22.16
The CSI shall ensure that, when applicable, postmortem fingerprint impressions, hair samples, and serological materials are recovered. Fingernail scrapings, clothing, and foreign object(s) recovery shall also be evaluated.

3.22.17
Each item of evidence recovered by the CSI shall be properly sealed and packaged, documented on a Property Record, and stored in the evidence system.

3.23 EVIDENCE

Proper packaging, sealing, and storage of evidence is essential. The CSI must anticipate objections that may arise during future court proceedings and guard against any deficiencies in how evidence is handled and maintained. The chain of custody must remain intact and clearly demonstrate who had contact with the evidence, at what time, under what circumstances, and what, if any, changes were made.

3.23.1
Evidence, in addition to its container or packaging, should be marked with identifying information such as initials—provided such markings do not alter or destroy potential evidence.

3.23.2
Evidence must be placed in an approved container. Acceptable packaging includes paper sacks, plastic bags, boxes, manila envelopes, metal cans, and small glass vials. Do not use white letter envelopes or glass jars. If the item cannot be packaged, an evidence tag shall be attached using string or wire, not rubber bands.

3.23.3
Evidence packages must be properly sealed. A proper seal ensures that any access to the contents will visibly disturb the package or seal. Acceptable sealing methods include evidence tape, packaging tape (mylar or reinforced), or heat sealing. Do not use masking tape, scotch tape, staples, or twist ties.

3.23.4
All seals must be identifiable to the person who sealed the item. The seal must be signed or initialed with the signature or initials crossing the border of the seal and the package as follows:

- Paper Bags: Two initials on top and bottom of the tape, or one large initial across both.
- Manila Envelopes: Same as paper bags.
- Boxes: Two initials, one at each end of the tape.
- Cans: Two initials, one at each end of the tape.
- Glass Vials: Two initials, one at each end of the tape, or preferably sealed inside a plastic bag.
- Heat Seals: One initial across the seal on both sides of the bag, not overlapping.

3.23.5
At a minimum, the following information must be included on the evidence:

- Item number
- Case number
- Agency name
- Name of the subject providing the DNA standard (if applicable)

3.23.6
Numeric characters must be used for standard item numbers. Do not duplicate item numbers within the same case. Each item must have a unique identifier. Alpha characters may be used only to subdivide an item, typically by laboratory personnel.

3.23.7
Do not place multiple items in one sealed package (e.g., items #1 and #2 in one plastic bag). For exceptions, refer to Indiana State Police Physical Evidence Bulletins or agency policy. Combining items may cause contamination.

3.23.8
Double packaging should be considered for small items such as hair, fibers, paint samples, or glass fragments. These items should first be folded into a paper bindle, then placed in an envelope or pillbox.

3.23.9
Physical evidence should be handled as little as possible. Excessive handling may obliterate latent impressions, dislodge trace evidence, break brittle items, or cause contamination. Use tweezers, disposable gloves, and specialized containers when appropriate.

3.23.10
Items bearing identifying numbers (e.g., serial numbers) should have those numbers recorded prior to packaging.

3.23.11
Sharp objects (e.g., knives, needles, syringes, razor blades) must be packaged in puncture-resistant containers to ensure handler safety.

3.23.12
Firearms must be unloaded prior to packaging and storage.

3.23.13
Explosives or large quantities of flammable materials shall not be stored in evidence storage facilities.

3.23.14
Money must be counted in the presence of a witness before packaging and storage. Jewelry shall not be described by gemstone type (e.g., diamonds, emeralds, rubies); instead, describe by stone color and mounting.

3.23.15
All evidence mailed to or from ISP laboratories must be sent via certified or registered mail. Overnight express and UPS are also acceptable. Do not use routine U.S. mail or intra-departmental mail. The outer wrapper or container must not indicate the nature of the contents. Biological evidence shall not be sent through the mail.

3.23.16
Evidence must always be stored in a secure storage area. Evidence held in an unsecured area may be inadmissible in court.

3.23.17
Whenever possible, evidence shall be stored in a suitable environment, either in a dry, climate-controlled area or, if perishable, refrigerated or frozen.

SECTION 4. RESOURCES

Indiana State Police Physical Evidence Bulletins

https://ingov.sharepoint.com/sites/ISPPortal/DirMan/Laboratory%20Services/Forms/AllItems.aspx