# MASTER DOCUMENT LIST

## 1 Overview

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<tr>
<th>Document</th>
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<tbody>
<tr>
<td>CSR-TM-01</td>
<td>Crime Scene Response Training Program Overview</td>
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## 2 Crime Scene Documentation

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<td>Overview of Crime Scene Response and Documentation</td>
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## 3 Crime Scene Photography

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<td>Introduction to Photography Equipment</td>
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<td>Basic Photography</td>
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## 4 Trace Evidence

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<tr>
<td>CSR-TM-03-01</td>
<td>General Trace Collection</td>
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<td>CSR-TM-03-02</td>
<td>Collection of Gunshot Primer Residue Samples</td>
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<td>CSR-TM-03-03</td>
<td>Detection, Recovery, Enhancement of Impression Evidence</td>
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<tr>
<td>CSR-TM-04-01</td>
<td>Biological Evidence Screening and Collection</td>
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## 6 Latent Prints Evidence

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<td>Overview of Latent Prints</td>
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<td>CSR-TM-05-02</td>
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<td>CSR-TM-05-03</td>
<td>Latent Print Development and Preservation Techniques</td>
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7  **Firearms and Toolmarks Evidence**

CSR-TM-06-01  Overview of Firearms and Toolmarks  Reserved

8  **Digital/Multimedia Evidence**

CSR-TM-07-01  Overview of Digital/Multimedia Evidence  Reserved

9  **Questioned Documents Evidence**

CSR-TM-08-01  Collection of Questioned Document Evidence  N

10 **Other Topics**

CSR-TM-09-01  Other Topics Encountered in Crime Scene Response  N

**Forms**

LAB-CSM-TM-01  Training Checklist – Overview and Documentation  N
LAB-CSM-TM-02  Training Checklist – Photography  N
LAB-CSM-TM-03  Training Checklist – Trace Evidence  N
LAB-CSM-TM-04  Training Checklist – Biological Evidence  N
LAB-CSM-TM-05  Training Checklist – Latent Prints  N
LAB-CSM-TM-08  Training Checklist – Questioned Documents  N
LAB-CSM-TM-09  Training Checklist – Other Topics  N
## Revision History

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OVERVIEW OF THE CRIME SCENE RESPONSE TRAINING PROGRAM

1 Introduction

This training program is designed to train Crime Scene Team members with the Texas Department of Public Safety Crime Laboratory. Trainees will learn to properly process, preserve, identify, and collect evidence with the suggested techniques and procedures outlined in this training program.

Upon successful completion of this training program, the Crime Scene Team member will be approved to respond to crime scenes as a generalist. A generalist is a team member who is cross-trained in the disciplines and techniques outlined in this training program.

2 Purpose

The Crime Scene Response Training Manual is designed to provide the trainee with sufficient background, education, competency, and hands-on experience to respond to crime scenes with minimal supervision. Trainees having prior crime scene experience and/or experience in discipline-specific collection and preservation procedures may be evaluated to determine if a modified training plan can be used. The modified training plan will be documented and approved by the trainer.

3 Program Format

The training program is divided into several units, each consisting of a set of modules. The modules consist of discussions and demonstrations with the trainer, practical exercises, practical exam(s), and written exercises. The modules may be dependent or independent of other modules within the unit and the prerequisite modules/units will be noted.

1. Crime Scene Documentation will introduce the trainee to the responsibilities of crime scene team members, legal requirements, general documentation, scene assessment, sketching and measurements, search techniques, evidence collection, and report writing.

2. Photography will introduce the trainee to photographic techniques relevant to general crime scene documentation and evidence specific documentation.

3. Trace Evidence will introduce the trainee to the documentation, collection, and preservation of trace evidence, including impression evidence, encountered at a crime scene.

4. Biological Evidence will introduce the trainee to the documentation, collection, and preservation of biological evidence encountered at a crime scene.

5. Latent Print Evidence will introduce the trainee to the documentation, collection, and preservation of latent print evidence encountered at a crime scene.

6. Firearms and Toolmarks Evidence will introduce the trainee to the documentation, collection, and preservation of firearms and toolmark evidence encountered at a crime scene.
7. **Digital/Multimedia Evidence** will introduce the trainee to the documentation, collection, and preservation of digital/multimedia evidence encountered at a crime scene.

8. **Questioned Document Evidence** will introduce the trainee to the documentation, collection, and preservation of questioned document evidence encountered at a crime scene.

9. **Other Topics in Crime Scene Investigation** will introduce the trainee to other situations/other types of evidence that may be encountered at a crime scene.

Non-team members can attend scenes in an observational capacity only, unless circumstances require a specialized or discipline specific response.

At a minimum, team members must complete the Crime Scene Documentation Unit to attend and document a scene, excluding photography.

Team members must complete the Crime Scene Documentation, Crime Scene Photography, Trace Evidence, Biological Evidence, and Latent Print Evidence Units to respond to a crime scene as a generalist.

In addition, team members must complete the Firearms and Toolmarks Evidence, Digital/Multimedia Evidence, Questioned Document Evidence, and Other Topics Units to respond to a crime scene as a Team Lead.

Major Crime Scene Team members will receive additional in-depth crime scene training in order to lead, direct, and coordinate the training and response activities of the crime scene team members. Training may be internal or external.

4 **Safety**

Safety precautions outlined in the Texas DPS Safety Manual will be followed at all times during the training program. Any specific safety considerations will be designated within the modules.

5 **Assignment of Trainer**

The trainer will be a Major Crime Scene Team member or designee. Meetings between the trainee, the trainer, and/or supervisor should be held periodically in order to evaluate the trainee’s progress, plan future study and practical assignments, and address any deficiencies which may require additional training.

6 **Trainee Responsibilities**

The trainee will be required to keep a training notebook. The trainee will be responsible for completing reading assignments and other tasks in a timely manner according to their trainer’s guidance. The trainee is responsible for informing his/her trainer or supervisor when issues or concerns arise at any time during the training period.

7 **Training Notebook**

During the training program, the trainee is responsible for keeping records in a notebook of his/her training to include written exercises, practical exercises, examinations, and other training module documentation. Completion of modules requirements will be documented, dated, and approved by the trainer on the respective training record.

A. The following is a list of items maintained in the training notebook:
1. Training record (Training Checklist)
2. List of reading literature completed
3. List of in-house training videos viewed and lectures attended
4. Practical exercises
5. Practical examinations
6. Written exercises
7. Competency tests and results
8. Comprehensive written examinations
9. List of crime scene cases and/or Crime Scene Response reports reviewed
10. Courtroom testimony attended and observations/evaluations

8 Module and Unit Assessment

Each unit may consist of several training modules. Each module is assessed upon the completion of the associated readings, practical exercises, practical exams and/or written exercises, as applicable. Once all module requirements in a unit have been satisfactorily completed, the trainee will need to complete a comprehensive written examination.

A comprehensive mock scene will be performed upon the completion of the Crime Scene Documentation, Crime Scene Photography, Trace Evidence, Biological Evidence, and Latent Print Evidence Units.

8.1 Training Units

The Crime Scene Response training requirements will conclude with examiner approval to conduct supervised crime scenes when the following are met:

1. All required reading assignments are completed.
2. All practical exercises are successfully completed, as applicable.
3. All practical examinations are successfully completed, as applicable.
4. All written exercises are successfully completed, as applicable.
5. A written examination at the end of each unit is successfully completed.
6. Successful participation of a mock crime scene after completion of Units 1-5.
7. The training notebook and other training records documenting completion of training requirements are reviewed by the trainer.
8. The trainer(s) recommend that the trainee be approved for supervised crime scenes.

8.2 Evaluation of Training

The trainee will complete an evaluation of the unit content and the trainer. The trainee and trainer will complete a checklist and Certification of Competency (LAB-QA-03).

9 Supervised Crime Scenes

Completion of supervised crime scene requirements will conclude with independent approval.
1. A minimum of 3 supervised crime scenes total must be completed in order for
the examiner to be approved for independent crime scene work as a crime
scene team member. The examiner is approved for independent work in a
unit when he/she is supervised performing work satisfactorily in at least one
crime scene in each of these specific units: Crime Scene Documentation,
Crime Scene Photography, Trace Evidence, Biological Evidence, and Latent
Print Evidence. An examiner can be supervised performing work in more than
one discipline per crime scene.

2. Mock crime scenes may be used to fulfill this requirement when necessary.

3. The trainer/supervisor must initial all relevant pages/results in the crime scene
documentation indicating that they concur with the examination/results.

4. The trainer/supervisor should be consulted at each step of the crime scene
processing prior to the trainee proceeding with that step.

5. The trainee will maintain a record of supervised crime scene work (LAB-QA-
27).

6. The trainer(s) will recommend to the Quality Manager that the examiner be
approved for independent crime scenes as a generalist using the Independent
Casework Authorization (LAB-QA-13).

7. Crime Scene Team members that go on to successfully complete training in
the Firearms and Toolmarks Evidence, Digital/Multimedia Evidence,
Questioned Document Evidence, and Other Topics Units can be qualified to
act as a Team Lead by being supervised as the Team Lead for one crime
scene and then submitting a continued Independent Casework Authorization
(LAB-QA-13).

10 Courtroom Testimony

Courtroom testimony requirements shall be completed prior to independent work
authorization when the trainee has completed the following:

1. The trainee will observe or discuss with a trainer examples of testimony
covering relevant units. The examples of testimony can include past or current
trials. In order to maximize the benefit to the trainee, the testimonies should
include prosecution and defense questioning.

2. The trainee will present one supervised crime scene or mock crime scene in a
mock trial. The case will be chosen by the trainer and should allow for
prosecution and defense questioning.
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OVERVIEW OF CRIME SCENE RESPONSE AND DOCUMENTATION

Duration 3 to 5 days

Purpose The purpose of this module is to introduce the trainee to the tasks and responsibilities of the laboratory while participating in a crime scene response, including documentation and DPS forms.

Prerequisite None

1 Objectives

1.1 Theoretical

An important component of the service offered by the DPS Crime Laboratory is Crime Scene Response. It is important for the crime scene responder to have the skills to process a scene in the most efficient, effective, and professional manner even under extreme circumstances. It is also important for the responder to know about law enforcement’s role in the crime scene so that the two components can work together to accomplish the common goal.

It is important to remember that the goal of this module is to raise the awareness of the team member for all possible sources of evidence. It is expected that they will more readily recognize all evidentiary potential and therefore preserve and protect the evidence for disciplines outside their own specialty.

1.2 Practical

Upon completion of module, the trainee will be able to:

1. Understand the general legal processes involved in a crime scene response.
2. Review safety, evidence management, and agency policies important to a crime scene response.
3. Be familiar with the various responsibilities of the crime scene team and correlate with the job titles detailed in the Crime Scene Response SOPs.
4. Be familiar with the tasks required to process a crime scene, such as sketching, search methods, documentation, evidence collection and preservation, and recognizing evidence.

2 Training Outline

2.1 Lesson Plan

A. Critical concepts

1. Legal

a) A scene is under the jurisdiction of a law enforcement agency.

b) Laboratory services are usually requested by the authority having jurisdiction or by the Texas Rangers on the jurisdictional authority’s behalf.

c) With few specific legal exceptions, permission for law enforcement to seize evidence must be granted by a judicial authority (magistrate), through a search warrant.

d) Law enforcement personnel must complete an affidavit articulating probable cause, and descriptions of what will be searched and what will be taken.
e) A search warrant may be issued for drugs, illegal weapons, and other prohibited items.

f) An evidentiary search warrant is requested for something that is not inherently illegal, such as clothing and fingerprints.

g) Evidence from a crime scene must be anticipated in advance and described in the affidavit signed by the judge issuing the warrant. Failure to adhere to the limits of the warrant may cause evidence to be invalidated.

h) Review the Texas Code of Criminal Procedure:
   i. Chapter 1, Art. 1.06: Searches and Seizures
   ii. Chapter 18, Art. 18.01: Search Warrant
   iii. Chapter 18, Art. 18.10: How Return Made

2. Safety
   a) Law enforcement has the responsibility to provide continued security to laboratory personnel.

   b) Law enforcement is responsible to render safe or clear the scene in hazardous material (HAZMAT) situations (presence of explosives, flammable and combustible substances, poisons, and radioactive materials).

   c) Review safety module (GLT-TM-FUN-02 General Safety) and Safety Manual as directed by the trainer.

   d) Review the DPS General Manual (section 08.10.01)

   e) Review venomous snakes, spiders, insect, and plant literature

   f) Review clandestine lab safety

   g) Review heat related injury and prevention literature

3. Ethics
   a) Confidentiality

   b) Removal of anything from scene without permission and documentation is prohibited. The warrant is specific to what can be removed, and the rights of the property owner must be respected.

4. All DPS policies apply
   a) Review standards of conduct: General Manual Chapter 6

   b) Review public statement policies: General Manual Chapter 5, Sections 05.76.00, 05.78.00, and 05.79.00

5. All personnel must read the Laboratory Crime Scene Response Manual
   a) Crime Scene Response SOPs relevant to pending scene
      i. CSR-01-01 Crime Scene Processing
      ii. CSR-01-02 Vehicle Processing

   b) Types of evidence; collection and packaging (see CSR-TM-01-05)
B. Laboratory System Response Overview

1. Request for assistance is made from law enforcement.
2. Personnel must notify appropriate chain of command up to Assistant Laboratory Director as soon as practical. This notification must be documented in case record.
3. Regional Directors and Rangers should be notified if the request for assistance comes from a non-DPS agency. If notification is made, it must be documented in the case record.
4. Before the scene
   a) The Crime Scene Team is assembled.
   b) Information is gathered about the crime committed and details about the scene.
   c) Duty assignments are made.
   d) Logistics plans are made for departure, conveyance, and supplies.
   e) Functionality of supplies and equipment are verified before loading. This includes everything from test reagents to flashlight batteries.
   f) If a warrant is required for the scene, the laboratory investigation must wait to enter the scene until a warrant has been issued. It is most important for the response team to understand what had been articulated in the evidentiary search warrant because the warrant limits what can be seized from the scene.
5. The Crime Scene Team is deployed and arrives at crime scene. The team leader makes contact with the on-site law enforcement leader. The briefing should include review of warrant items, scene hazards, safe walkways, and review of details about the crime. Limitations of laboratory services and law enforcement expectations should be clarified.

C. Crime Scene Documentation

1. Begin with the end in mind. The purpose of the laboratory’s presence is to gather physical evidence relevant to the crime, and to fully document the evidence and the team’s on-site activities for eventual presentation in a court of law. The chain of custody begins upon collection, but information gathering begins with the initial assistance request and continues throughout the entire process. Take notes to be able to complete the crime scene response request (LAB-CSR-01).
2. Scene assessment (see CSR-TM-01-02)
3. Crime scene sketches (see CSR-TM-01-03)
4. Systematic search methods (see CSR-TM-01-04)
5. Evidence collection and documentation (see CSR-TM-01-05)

D. Conclusion of a Crime Scene Response

1. Team leader should confer with on-site law enforcement leader to conclude the laboratory’s investigation.
2. Everything brought to the scene should be removed.
3. Contaminated equipment must be decontaminated, and personal protective equipment (PPE) must be properly decontaminated or disposed per chemical or biological guidelines.

4. All documentation is completed, reviewed for accuracy, and forwarded through the chain of command (LAB-CSR-01).

5. Supplies are restocked.

6. Crime Scene Response Report is written. (see CSR-TM-01-06)

2.2 Required Readings

Texas Code of Criminal Procedures. (Chapter 1, Art. 1.06; Chapter 18, Art. 18.01; Chapter 18, Art. 18.10)

Safety Manual. Texas DPS. (SAF-01-01, SAF-01-02, SAF-01-06, SAF-04-01)

General Manual. Texas DPS. (Chapter 5 Sections 05.76.00, 05.78.00, and 05.79.00, Chapter 6)

Crime Scene Response Standard Operating Procedures. Texas DPS. (CSR-01-01, CSR-01-02, CSR-01-03)


New Zealand Police. Clandestine Drug Laboratories Hazard Identification and Safety Information.


3 Practice

3.1 Practical Exercises

1. Review documentation from specified crime scenes and complete LAB-CSR-01 for each (minimum of three).

2. Review warrant/consent to search forms (minimum of three).

4 Assessment

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and the trainer will complete the Crime Scene Response Overview and Documentation training checklist (LAB-CSR-TM-01).
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SCENE ASSESSMENT

Duration  1 day

Purpose The purpose of this module is to introduce the trainee to information gathering and scene assessment activities, as well as the documentation requirements that go along with those tasks.

Prerequisite CSR-TM-01-01

1 Objectives

1.1 Theoretical

Every crime scene is different. Crime Scene Team members will need to quickly and accurately assess each scene and determine the best course of action for the Crime Scene Team’s response.

1.2 Practical

Upon completion of this module, the trainee will be able to:

1. Assess the crime scene and determine its scope
2. Be familiar with ways to maintain scene integrity and control contamination
3. Assemble a crime scene team and designate duties
4. Create a scene processing plan
5. Be familiar with the necessary elements of investigative notes

2 Training Outline

2.1 Lesson Plan

A. Initial walk-through to determine scene scope

1. Receive briefing from law enforcement contact, to include:
   a) Scene scope and nature
   b) Changes to the scene (EMS, etc.)
   c) Status of involved parties
   d) Scene security

B. Scene integrity and contamination control

1. Perimeter
   a) Is the existing boundary sufficient? Or should the area be expanded?
   b) Are all points of entry and exit secure?
2. Set up a staging area outside the immediate scene
3. Create a walking path that will not affect possible evidence
4. Entry/exit log
   a) Only allow people with a legitimate reason to enter the scene
b) Keep a log of who entered, when, for what reason, and what time they exit (usually maintained by investigating agency)

C. Designate duties (CSR-01-01)

D. Scene processing plan, including search method (CSR-TM-01-04)

E. Notes

1. Notification of crime
   a) Location
   b) Time and date of arrival

2. Scene description
   a) Detailed description
   b) Relationship to surrounding areas (ex. Cross streets, buildings, etc.)

3. Conditions of scene upon arrival including, but not limited to:
   a) Temperature and weather conditions
   b) Time of day
   c) Status of doors and windows (Open? Closed? Broken? Locked?)
   d) Lights on/off
   e) Transient evidence (ex: smells, evidence that could be damaged by rain or wind, etc.)
   f) Rooms in disarray versus apparently undisturbed
   g) Entry and exit points

4. Actions taken
   a) Photography, sketching, etc. (LAB-CSR-02)
   b) Processing techniques used
   c) Positive and negative results
   d) Record the time at which you do something
   e) Evidence collected (LAB-CSR-03)

2.2 Required Readings


3 Practice

Perform a mock briefing with notes.

Use the “Eight-Step Descriptive Set” to describe five (5) items in a mock scenario.
4 Assessment

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and the trainer will complete the Crime Scene Response Overview and Documentation training checklist (LAB-CSR-TM-01).
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SKETCHING AND MEASUREMENT TECHNIQUES

Duration  
3 to 5 days

Purpose  
The purpose of this module is to introduce the trainee to the various sketching and measurement techniques that can be used at crime scenes.

Prerequisite  
CSR-TM-01-01, CSR-TM-01-02; Concurrent with CSR-TM-01-04

1 Objectives

1.1 Theoretical

Crime scenes should be measured, or “mapped,” and sketched. Sketches support photographs and notes and can show the interrelationships of evidence items in the scene. Sketches, particularly final sketches completed using computer software, make excellent demonstrative aids for juries. Measurements are necessary for reconstruction, as they fix evidence items into a scene. Measurements will also allow for accurate computer-generated to-scale sketches.

1.2 Practical

Following the completion of training the trainee will be able to:

1. Name the different sketching and measurement techniques.
2. Discuss the pros and cons of each technique.
3. Determine the optimal techniques for certain scene conditions.

2 Training Outline

2.1 Lesson Plan

A. Sketching

1. Sketches support the photographs and notes for the crime scene. They help to show the interrelationships of the scene and evidence, without including extraneous items that may be seen in photographs. Sketches and mapping also aid in scene reconstruction

2. Rough Sketch Components (see Sketching Form LAB-CSR-02)

a) Diagram area

b) Administrative information

i. Case number

ii. Name of sketcher

iii. Name of person taking measurements, as applicable

iv. Location of scene

v. Date

c) Legend for any annotations (or reference to Evidence Recovery Log numbers)

d) Scale (if applicable; if no scale, write “Not to Scale”)

e) “North” symbol (magnetic or reference)
3. Types of Sketches
   a) Projection / Bird’s Eye View
      i. Usually one viewpoint and depicts objects on the horizontal plane.
      ii. This is the standard, most-used sketch.

   b) Exploded / Cross Projection
      i. Contains more than one viewpoint and can be used in modeling. It can show relationships of items in location, depth, and height.
      ii. The walls are folded down and are on the same plane as the floor.
      iii. Great for bloodstains and bullet defects that may be found on walls.
c) Elevation

i. Used to depict a vertical surface like a wall or door.

ii. Great for mapping bloodstains and bullet defects, as well as extended exterior scenes to show the orientation of buildings.
d) **3D / Perspective**

   i. Contains a vanishing point and depicts objects of evidence as they would appear to the eye with reference to a relative distance and depth.

   ii. **Difficult to draw free-hand, so normally sketched using computer software programs.**

4. **Computer Sketching**

   a) **AutoCad programs are used to turn rough sketches made at the scene into clean sketches that can be used to aid the jury.**

   b) **Computer sketching programs can be done in 2D or 3D renderings.**

   c) **These programs allow for the sketch to be easily drawn to near scale with the measurements taken at the scene.**


B. **Measurements**

   1. Two main factors should be considered when choosing the method of mapping/measurement: the need for precise interrelationships in the scene and the type of scene (outdoor, indoor, lack of landmarks).

   2. Measuring objects can be intrusive, and can lead to the movement of those objects. Photographs should be taken before any measurements are made. Measure the evidence locations before any furniture or other static items.

   3. **Types of Measurements**

      a) **Rectangular Coordinate**

         i. **Used when measuring the distance to an object from two perpendicular objects (like walls).**

         ii. Great for measuring indoor scenes with clear, specific boundaries.

         iii. This method is fast and effective, but less precise. Evidence items are usually measured to center mass with rectangular coordination, so the items are not completely “fixed” in the scene.
b) Triangulated Coordinate / Triangulation

i. Uses two fixed permanent objects within the crime scene. The measurements are taken from each fixed point to each evidence item. The fixed objects are referred to as reference points.

ii. For indoor scenes, use two adjacent corners of the room for reference points.

iii. It is important to use permanent objects for reconstruction purposes. Choose items like telephone poles, light poles, the corners of rooms, etc. Items like trees and bushes may be too transient (for reconstruction that may come years later). If this is not possible, or if the initial reference points are too far from the evidence to make an accurate measurement, additional reference points can be created. For example, sticky notes can be posted along a wall and labeled as reference points. These can be measured back to fixed points, like corners.

iv. You can use a stake as a reference point in a large outdoor scene. Obtain the GPS coordinates of the stake, so it can be placed back in the location at a later date.

v. Do not make triangulation measurements from an item that itself has been triangulated.
c) **Baseline Coordinate**
   
i. A tape measure is placed so that it crosses an entire room/area, extending from a datum point (can set by triangulating to nearby landmark). The tape measure is laid out along a cardinal direction from the datum point, and it MUST be a straight line.

ii. Perpendicular distance measured from a single baseline out to evidence. Record the distance between the baseline and the evidence, as well as the distance between the datum point and the perpendicular tape measure. This fixes the evidence or item in relation to the datum point and baseline.

iii. Useful in outdoor and/or large scenes, especially those without landmarks to use.

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**d) Polar Coordinates**

i. Set up a datum/reference point by using GPS, triangulation to landmarks, or by physical location by pipe/rebar (if this last method is
used, drive the pipe/rebar into the ground so it can be located with a metal detector if the scene needs to be revisited). Choose a location at which most evidence/items have a direct line of sight to the sighting device. Multiple datum points can be used when line of sight is obstructed.

ii. Center a sighting device over the datum point.

iii. Take three measurements to the item being measured:

- Horizontal angle (measured in degrees, this is the rotation of the sighting device from North)
- Horizontal distance (datum point to evidence/item)
- Difference in elevation between datum point and evidence/item (not always done)

iv. Can be converted to Northing (y) and Easting (x)

v. Good for large, outdoor scenes where evidence is scattered over a significant area (ex. airplane crashes, scattered remains, bombing scenes).

vi. Not great in dense, outdoor scenes like forests because of interference between the sighting device and the item of interest.

![Image of a measurement sketch prepared using the polar coordinate method.](image.png)


e) Grid Coordinate

i. Perpendicular distance measured from each axis of a coordinate plane relative to the origin (rectangular coordinates for smaller scenes; triangular coordinates for larger scenes).

ii. X,Y axes. The datum point is typically selected so that the grid is only in the positive quadrant (positive x and y). If evidence is later discovered outside of the quadrant, the grid can easily expand into the other quadrants.
iii. Origin/datum point should be fixed point so one could return to the scene and repeat measurements.

iv. Excellent for outdoor scenes, large scale scenes with multiple mapping teams, scenes with no significant landmarks, or small scale scenes like gravesites.

![Image of grid and coordinates]

Figure 7.30 Grid squares require setting a datum point and establishing, at a minimum, positive X and Y values. The datum point is set in the lower left corner of the grid (point 0,0). Whenever the size of the grid, the upper right quadrant should encompass the lower half of evidence. If any new evidence was later found outside of this area, the grid could be expanded using original Cartesian coordinates to include any new found evidence relative to the original grid.


f) Total Station

i. Device that will plot points and print out a diagram.

ii. Great for outdoor scenes like accident reconstruction.

g) GPS

i. Gives coordinates, but is only accurate within feet

ii. Good for location only in desolate outdoor scenes.

iii. Not good for actual marking of evidence items because of the inaccuracies in small distances.

4. Measuring to Evidence Items

a) Raw measurement

i. Get coordinate measurement to one corner/edge of object and then take dimensional measurements of that object

b) With bodies, measure to head and feet, unless contorted (then use three points).

c) If it’s a small item, you can measure to the center of it.

d) If it’s a larger item, measure both ends.

2.2 Required Readings


3 Practice

3.1 Practical Exercises

Measure and sketch a mock scene using baseline and triangulation coordinates using bird’s eye and elevation views.

4 Assessment

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and the trainer will complete the Crime Scene Response Overview and Documentation training checklist (LAB-CSR-TM-01).
Revision History

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SEARCH TECHNIQUES

Duration 1 day

Purpose The purpose of this module is to introduce the trainee to the various search techniques used in crime scene response.

Prerequisite CSR-TM-01-01, CSR-TM-01-02; Concurrent with CSR-TM-01-03

1 Objectives

1.1 Theoretical

A crime scene search must be methodical and systematic. It is up to the crime scene team to determine which search technique is best for the scene being worked. By using documented search techniques, the crime scene team can be assured that the search is detailed and complete.

1.2 Practical

Following the completion of training the trainee will be able to:

1. Name the different documented search techniques seen in literature.
2. Discuss the pros and cons of each technique.
3. Determine the optimal technique for certain scene conditions.

2 Training Outline

2.1 Lesson Plan

A. Factors that affect search swath (area viewed by searcher)
   1. Nature of the ground being searched
   2. Lighting conditions
   3. Environmental conditions
   4. Size of specific items the searcher is attempting to locate

B. Common search methodologies
   1. Circle / Spiral Search
      a) Great for interior scenes
      b) Begin on outside of room and spiral in, or start in the center and spiral out

---

Figure 5.15 The spiral or circle search. A searcher moves through the scene using a spiraling pattern.
2. Strip and Line Searches
   a) Strip
      i. Great for exterior scenes or large areas
      ii. Designate swath size, then subdivide area into equal strips (can physically designate with tape or string)
      iii. Searcher walks in parallel lanes, alternating direction at the end of the lane

   b) Line
      i. Great for searching rough terrain
      ii. Variation of strip search
      iii. Large group of searchers move down designated strips together, all moving in one direction
3. Grid Search
   a) Thorough variation of strip search
   b) Area divided into two sets of strips/lanes that run perpendicular
   c) Search in one direction, then start perpendicular. Repeat until entire area is covered.

![Grid Search Image](image-source)


4. Zone Search
   a) Variation #1
      i. Effective in small, confined spaces that are not conducive to other patterned searches
      ii. Search each zone individually, allowing for overlap
      iii. Ex. vehicle search

![Zone Search Image](image-source)

b) Variation #2

i. Great for large exterior scenes with many pieces of evidence, scattered remains, aircraft crashes, etc.

   - Subdivide a larger scene into smaller, more manageable pieces

ii. Can use another patterned search in the smaller zone

iii. Can physically divide zones with tape, rope, or staked intersections (assign letters/numbers to grid intersections)

iv. Labeled intersections also help with small scale measurements

v. Great for large exterior scenes with many pieces of evidence, scattered remains, aircraft crashes, etc.

---

5. **Point-to-Point Search**
   
a) *Not used often in the US*

b) *Searching evidence item to evidence item*

C. **Fire scenes**

1. Law enforcement investigation routinely proceeds from areas of least damage to areas of most damage. This may be a useful practice for the laboratory investigation at a fire crime scene as well.

D. Remember that scenes are three-dimensional. Do not limit the search to the floor, but practice methodical searches of walls, ceilings, and furniture, as well as the floor.

2.2 **Required Readings**


3 **Practice**

3.1 **Written Exercises**

What search pattern is best utilized in the following scenarios:

1. Vehicle
2. Wooded area
3. House with multiple rooms
4. Open field

4 **Assessment**

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and the trainer will complete the Crime Scene Response Overview and Documentation training checklist (LAB-CSR-TM-01).
## Revision History

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EVIDENCE COLLECTION

Duration  1 day

Purpose  The purpose of this module is to familiarize the trainee with the concepts and practices of evidence integrity, security, proper seals, thorough documentation, and chain of custody from the crime scene through submission to Evidence Coordination.

Prerequisite  CSR-TM-01-01, CSR-TM-01-02, GLT-TM-FUN-04

1 Objectives
1.1 Theoretical
Evidence integrity and an intact chain of custody are crucial factors for the admissibility of evidence in a court of law. Comprehensive record keeping and documentation of evidence tracking at the crime scene and within the laboratory are essential to good forensic laboratory practices. The precautions taken to prevent contamination, loss, and deleterious change to evidence are of utmost importance during collection, storage, and examinations. It is critical for all laboratory personnel who come in contact with evidence in any capacity, whether at a crime scene or in the laboratory, to recognize and preserve its potential evidentiary value for all disciplines.

1.2 Practical
Following the completion of training the trainee will be able to:
1. Recognize potential evidence, regardless of discipline
2. Collect and package evidence properly
3. Document collection on an Evidence Recovery Log (LAB-CSR-03)
4. Submit evidence to Evidence Coordination in an organized and timely manner

2 Training Outline
2.1 Lesson Plan
A. General evidence collection
1. Any examiner in the role of the crime scene responder should recognize all evidentiary potential and therefore is responsible to preserve and protect the evidence for other disciplines outside his/her own specialty.
2. Evidence collected will be documented on an Evidence Recovery Log (LAB-CSR-03).

B. Discipline-specific evidence collection
1. Digital evidence, DNA, firearms, latent prints, questioned documents, and trace evidence collection will be covered in other modules.
2. Bloodstain patterns
   a) **DPS does not interpret or report blood pattern interpretations. Bloodstain patterns are included for awareness, to assist a crime scene responder to recognize how patterns may have been created and to give some insight into the events of the crime. Consideration should be given to documenting**
bloodstain patterns prior to collection. No interpretive opinions shall be rendered by DPS crime scene personnel.

C. Evidence packaging
1. Packaging for evidence items should include the following information:
   a) Case number
   b) Item number
   c) Person collecting
   d) Date collected
   e) Item description (optional)

2. Proper seals
   a) All evidence should be properly sealed before leaving the crime scene. This may not always be possible in cases of large/irregular items.

D. Inventory
1. Before leaving the crime scene, an inventory of all collected evidence should be made. Reference the Evidence Recovery Log to ensure that all collected evidence has been documented and is being returned to the laboratory.
2. If custody of any collected evidence items is turned over to another agency, this should be documented in notes and/or on the Evidence Recovery Log.
3. Conduct a final check of documentation on packaging and the presence of proper seals.
4. When possible, a copy of the Evidence Recovery Log should be left with investigating agency.

E. At the Laboratory
1. Evidence should be secured upon return to the laboratory, even if it may not be submitted to Evidence Coordination until the next business day.
2. Wet evidence should be placed in a drying cabinet and a proper seal shall be placed on the door.
3. The Team Lead will separate evidence for different disciplines and package into larger outer containers as necessary.
4. A Laboratory Submission Form (LAB-06) will be filled out by the Team Lead. The evidence may be listed on the Submission Form, or the Evidence Recovery Log can be attached.
5. The evidence collected at the crime scene should be submitted to Evidence Coordination within the next business day.

2.2 Required Readings
Laboratory Operations Guide. Texas DPS. (LOG-05-01)
Physical Evidence Handbook. Texas DPS. (PEH-02-01, PEH-03-02)
3 Practice

None

4 Assessment

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and the trainer will complete the Crime Scene Response Overview and Documentation training checklist (LAB-CSR-TM-01).
## Revision History

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Effective Date: 11/27/2017
Issued by: QA Coordinator
REPORT WRITING

Duration 1 to 3 days

Purpose The purpose of this module is to introduce the trainee to the specific requirements of Crime Scene Response Reports.

Prerequisite CSR-TM-01-01, CSR-TM-01-02

1 Objectives

1.1 Theoretical

Crime Scene Response Reports are used to inform the customer what was examined and processed by the Laboratory during a crime scene investigation. Reports should be objective, outlining what was done, what was found, what was collected, and what actions are required/suggested moving forward. Reports should not include subjective feeling or any bias.

1.2 Practical

Following the completion of training the trainee will be able to:

1. Write a Crime Scene Response Report

2 Training Outline

2.1 Lesson Plan

A. Headers and content unique to CSR Reports

1. Response Information

   a) Date/Time of Initial Contact
   b) Requestor
   c) Scene Location
   d) Team Information

      i. Include all team members and designate Team Lead

2. Synopsis

   a) Provide a brief synopsis including scene type (vehicle, house, etc.), reason/request for Crime Scene Team response

3. Scene Information

   a) Team arrival information (time and date)
   b) Additional information provided by officer and/or agency representative as applicable
   c) Initial observations and general characteristics and conditions of scene
   d) Areas searched
   e) Evidence items collected
   f) Items/areas examined and processed and results
   g) Team departure information (time and date)
4. Investigative Leads and Requirements for Further Analysis
   a) Request any known standards required, based on examinations performed on scene and evidence collected for analysis at the Laboratory
   b) Include a statement regarding availability of crime scene photographs and Evidence Recovery Log

5. Disposition
   a) Include a statement regarding the retention of evidence pending analyses

2.2 Required Readings


Texas DPS Justice Trax User Guide. Creating a Crime Scene Response Report

Laboratory Operations Guide. Texas DPS. (LOG-04-02, section 3.5)

3 Practice

3.1 Practical Exercises

1. Review specified Crime Scene Response Reports (minimum of three).

2. Review documentation for specified crime scenes and write a Crime Scene Response Report for each. A minimum of two reports shall be written (at least one vehicle). A variety of scene types should be considered.

4 Assessment

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and the trainer will complete the Crime Scene Response Overview and Documentation training checklist (LAB-CSR-TM-01).
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Effective Date: 11/27/2017
Issued by: QA Coordinator
INTRODUCTION TO PHOTOGRAPHY EQUIPMENT

Duration 1 to 2 days

Purpose The purpose of this module is to familiarize the trainee with relevant photographic equipment.

Prerequisite None

1 Objectives

1.1 Theoretical

Many components are required to successfully document the subject matter photographically. Before one can attempt photography, it is important to become familiar with those components and their functions.

1.2 Practical

Upon completion of this module the trainee will:

1. Be able to properly identify different photographic equipment
2. Understand the intended function of photographic equipment items

2 Training Outline

2.1 Lesson Plan

A. Camera body and operation

1. White balance
2. Resolution
3. File types
4. Manual vs. automatic
5. Metadata

B. Lenses and proper utilization

1. Wide angle
2. Telephoto
3. Macro
4. Fast lens
5. Care and cleaning

C. Flash operation

D. Peripherals

1. Tripod
2. Cables
   a) Flash sync
   b) Shutter release
   c) Other relevant cables
3. Memory cards
4. Batteries
5. Scales
   a) Sticky scales
   b) Small L scale
   c) Large L scale
   d) Other types of scales
6. Filters
7. Reflector
8. Operating manuals

2.2 Required Readings


Nikon Digital Camera User’s Manual for crime scene response camera. (Sections involving introduction to the camera and basic operation)

Nikon Speedlight User’s Manual for crime scene response flash unit. (Sections: Preparation, Operation)

3 Practice

3.1 Written Exercises

The trainee will complete the following exercises:

A. Compile a checklist of everything included in a crime scene response camera kit

B. Answer the following questions:
   1. What lens would be appropriate to use for overall photographs?
   2. What lens would be appropriate to use for close-up photographs?
   3. What setting controls the color of the image?
   4. In what situation would you use a fast lens?
   5. What file type would you use for comparison-quality photographs?

4 Assessment

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Photography training checklist (LAB-CSR-TM-02).
Revision History

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Effective Date: 11/27/2017
Issued by: QA Coordinator
BASIC PHOTOGRAPHY

Duration 3 to 5 days

Purpose The purpose of this module is to familiarize the trainee with utilizing different items of photography equipment to capture properly exposed photographs in a number of different settings.

Prerequisite CSR-TM-02-01

1 Objectives

1.1 Theoretical
Photography is comprised of a balance between the physics of optics and the mental acuity to correctly compose and expose a photograph. Carefully composed photographs will provide a true and accurate representation of the subject as it appears in reality. Additionally, understanding the elements of exposure will ensure the subject matter is correctly depicted.

1.2 Practical
Upon completion of this module the trainee will be able to:
   1. Properly compose photographs
   2. Properly expose photographs in varying light situations
   3. Properly expose photographs with varying depths of field
   4. Properly expose photographs with varying shutter speeds
   5. Understand the photographic concepts of reciprocity and bracketing

2 Training Outline

2.1 Lesson Plan
A. Composition
B. Focus
   1. Manual vs. Automatic
   2. Focus Points
C. Metering
   1. Modes
      a) Center-weighted
      b) Spot
      c) Matrix
   2. Histogram
D. Exposure
   1. ISO
   2. Shutter Speed
   3. Aperture
4. Reciprocity

E. Bracketing

F. Flash

2.2 Required Readings


Robinson, Edward M. *Crime Scene Photography*. 2nd ed. Amsterdam: Academic/Elsevier, 2010. (Chapters 2, 3, 4, and 5 [only Pg. 251-303])

Nikon Digital Camera User’s Manual for crime scene response camera. (Sections involving exposure, ISO, white balance, camera modes, focus, image recording options)

3 Practice

3.1 Practical Exercises

The trainee will complete the following exercises:

1. Take ten (10) varying properly exposed photographs outdoors
2. Take ten (10) varying properly exposed photographs indoors without flash
3. Take three (3) varying photographs with a shallow depth of field
4. Take three (3) varying photographs with a great depth of field
5. Take three (3) varying photographs of a moving object with a fast shutter speed
6. Take three (3) varying photographs of a moving object with a slow shutter speed
7. Take ten (10) varying properly exposed photographs indoors with flash
8. Take ten (10) varying properly exposed photographs outdoors with fill flash
9. Take three (3) varying photographs of three (3) different subjects with equivalent exposures using the concept of reciprocity
10. Take three (3) varying photographs of three (3) different subjects with varying exposures using the concept of bracketing
11. Take three (3) varying wide angle photographs
12. Take three (3) varying macro photographs
13. Take three (3) varying photographs using the fast lens in a low light situation
14. Take ten (10) varying photographs in low light with long exposure
15. Take ten (10) varying photographs in low light and paint with light

4 Assessment of Training

The trainee will complete all assignments. Successful completion of this module will be determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Photography training checklist (LAB-CSR-TM-02).
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FORENSIC PHOTOGRAPHY

Duration 10 to 14 days

Purpose The purpose of this module is to familiarize the trainee with the application of basic photography concepts to forensic applications.

Prerequisite CSR-TM-02-01, CSR-TM-02-02

1 Objectives

1.1 Theoretical

The purpose of crime scene photography is to provide a true and accurate visual record of evidence, crime scene, and related areas. Examples of various types of photographed crime scenes may include: death scenes, sexual assault, residential and commercial burglaries, hit and run, narcotics search, and autopsy. In many situations evidence cannot be removed from a scene. In these situations the photograph becomes the only representation of the evidence available for analysis. It is imperative the evidence be captured accurately to assist in the investigation.

1.2 Practical

Upon completion of this module the trainee will be able to:

1. Properly compose overall photographs
2. Identify and properly photographically document items of interest
3. Understand what necessary photographs must be taken
4. Troubleshoot difficult situations and establish a functional solution
5. Apply photographic concepts to discipline specific applications

2 Training Outline

2.1 Lesson Plan

A. Scene overall photographs before anything else
B. Overall, orientation, macro
C. Vehicle-specific photographs (VIN, license plates, etc.)
D. Scene abnormalities, inconsistencies, or items of interest
E. Bodies and wounds
F. General lighting techniques
   1. Oblique
   2. Bounce
   3. Other
G. Discipline-specific applications
   1. Trace evidence
   2. Biological evidence
   3. Latent prints
4. Firearms and toolmarks
5. Digital/multimedia evidence and computer forensics
6. Questioned documents

H. Special photography situations
1. Accident
2. Aerial
3. Low light
4. Other

I. Image storage and management
1. ADAMS Digital Workplace (Foray)
2. Acquiring images
3. Contact sheets
4. Hard copy archives

2.2 Required Readings


Robinson, Edward M. Crime Scene Photography. 2nd ed. Amsterdam: Academic/Elsevier, 2010. (Chapters 6, 7, 9, and Chapter 10 [only pg. 518-525])

Storage of Evidentiary Images in DIMS. LIMS Manual. Texas DPS. (LIMS-GEN-18)

3 Practice
3.1 Practical Exercises
A. Examination Quality Photographs
   1. Take examination quality photographs of three small, three medium, and three large objects

B. Vehicle
   1. Take overall photographs
   2. Photograph vehicle-specific identifiers
   3. Take coordinating orientation and macro photographs of potential items of interest
   4. Take macro photographs, perpendicular to the subject, with a scale
   5. Take macro photographs with a scale of any abnormalities, inconsistencies, identifiable characteristics, and features of interest

C. Indoor scene
   1. Take overall photographs
2. Take coordinating orientation and macro photographs of potential items of interest
3. Take macro photographs, perpendicular to the subject, with a scale
4. Take macro photographs with a scale of any abnormalities, inconsistencies, identifiable characteristics, and features of interest

D. Outdoor scene
   1. Take overall photographs
   2. Take coordinating orientation and macro photographs of potential items of interest
   3. Take macro photographs, perpendicular to the subject, with a scale
   4. Take macro photographs with a scale of any abnormalities, inconsistencies, identifiable characteristics, and features of interest

4 Assessment

The trainee will complete all module assignments. A comprehensive written examination will be completed for the unit. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Photography training checklist (LAB-CSR-TM-02).
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Effective Date: 11/27/2017
Issued by: QA Coordinator
GENERAL TRACE COLLECTION

Duration 7 to 14 days

Purpose The purpose of this module is to familiarize the trainee with various techniques used to collect and preserve transfer evidence such as hair, fibers, paint, and glass.

Prerequisite Crime Scene Documentation Unit, Photography Unit

1 Objectives

1.1 Theoretical

The Locard Exchange Principle states that whenever two objects come into contact, a transfer of material will take place. This transferred material can be used to associate objects, people and/or locations. Material transferred during the commission of a crime must be collected and preserved to allow for its analysis, assessment of its significance and admission into court as evidence.

1.2 Practical

Upon completion of this module, the trainee will be able to:

1. Properly document the original condition of an item of evidence,
2. Evaluate an item to determine the appropriate techniques needed to collect and preserve the various types of trace evidence that may be present, and
3. Apply these techniques while maintaining the integrity of the evidence and prevent any loss or contamination.

2 Training Outline

2.1 Lesson Plan

A. Trace Evidence Overview – The trainer will discuss with the trainee the various different types of transfer evidence to include general characteristics, persistence, and special considerations

1. Hair Evidence
2. Fiber Evidence
3. Paint Evidence
4. Glass Evidence

B. Item documentation

1. Written
   a) Physical condition including any damage or stains
   b) Any identifying information, such as tag information on a garment
   c) Drawing a sketch

2. Photographic
   a) Overall condition
   b) Areas of interest, such as stains or smears
C. Locating transfer evidence
   1. Visual inspection
   2. Oblique lighting
   3. Alternate Light Source
   4. Hand loupe/magnification techniques

D. Introduction to recovery techniques including demonstration and case record documentation - each technique will be demonstrated by an experienced examiner
   1. Techniques
      a) Picking
      b) Tape lifting
      c) Scraping
      d) Combing
      e) Clipping
      f) Vacuum sweeping
   2. Discussion of recovery techniques
      a) When to use each technique
      b) How to prevent loss and/or contamination for each technique
      c) Advantages and disadvantages of each technique
      d) Proper documentation

E. The trainer and trainee will discuss collection of standards (for various types of evidence including but not limited to: fiber standards, hair standards, paint, and glass standards)
   1. When to collect a standard
   2. How to collect a standard
   3. Proper documentation

F. Automotive Filament Recovery – The trainer will discuss the various types of automotive lamps and factors to consider when collecting automotive lamps
   1. Documentation
   2. Bulb recovery
   3. Packaging

2.2 Required Readings:
   Trace Evidence Standard Operating Procedures. Texas DPS (TE-02-01 through TE-02-06)


3 Practice

3.1 Practical Exercises

1. The trainee will practice the individual recovery techniques on different items of evidence. The trainee must demonstrate proper documentation, application of technique, and proper attention to loss and contamination potential.

2. The trainee will practice recovery of standards on different items of evidence. The trainee must demonstrate proper documentation, application of technique, and proper attention to loss and contamination potential.

3. The trainee will demonstrate the proper documentation and packaging of different types of automotive filaments.

3.2 Practical Examination

The trainer will provide the trainee with at least 5 mock items of evidence. The trainee will determine the best way to document each item, determine what technique of evidence recovery and preservation should be used, apply that technique, recover standards if appropriate, and prevent any loss and/or contamination.

3.3 Written Exercises

The trainee will provide a written response to the following questions:
1. What is the most efficient recovery technique used for trace evidence?
2. What is the least efficient recovery technique used for trace evidence?
3. What is the proper way to collect a fiber standard for comparison?
4. What potential trace evidence could exist on clothing from a hit and run victim?
5. Name at least two things you can do to prevent loss and/or contamination.
6. How would you process wet evidence?
7. Why is it important to mark the orientation of an automotive lamp before removing it?

4 Assessment

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Trace Evidence training checklist (LAB-CSR-TM-03).
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COLLECTION OF GUNSHOT PRIMER RESIDUE SAMPLES

Duration 7 days

Purpose The purpose of this module is to familiarize the trainee with the collection of gunshot primer residue samples from clothing and other inanimate surfaces.

Prerequisite Crime Scene Documentation Unit, Photography Unit

1 Objectives

1.1 Theoretical

Gunshot primer residue is formed by the firing of a weapon. The residue is expelled from the barrel and other openings of the weapon. The residue, primarily as a gaseous cloud, expands and may deposit gunshot primer residue particles on nearby objects. The detection of gunshot primer residue particles may indicate an association between an inanimate surface and the firing of a weapon.

1.2 Practical

Upon completion of this module, the trainee will be able to:

1. Understand GSR formation and deposition
2. Collect and preserve possible gunshot primer residue particles from clothing and other inanimate surfaces.

2 Training Outline

2.1 Lesson Plan

A. Introduction to gunshot primer residue
   1. Particle morphology and composition
   2. Formation and deposition of particles
   3. Items suitable for gunshot primer residue collection
   4. Significance and limitations of analysis procedure
   5. Other gunshot residue deposits

B. Preparations for collection
   1. SEM stubs
   2. Site preparation

C. Sample collection
   1. Control sample
   2. Clothing
   3. Other inanimate objects
   4. Hands

D. Documentation of samples
2.2 Required Readings


3 Practice

3.1 Practical Exercises

The trainee will practice collecting gunshot primer residue from a vehicle, hands, and other inanimate objects.

3.2 Practical Examination

The trainee will explain and demonstrate the collection of gunshot primer residue by stubbing at least two inanimate objects.

3.3 Written Exercises

The trainee will provide a written response to the following questions:

1. What types of objects are not appropriate for the collection of GSR samples?
2. Why is it important to collect a control sample?
3. What are the considerations/limitations for sample collection?
4. How are gunshot primer residue particles formed and deposited?

4 Assessment

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Trace Evidence training checklist (LAB-CSR-TM-03).
### Revision History

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Effective Date: 11/27/2017
Issued by: QA Coordinator
DETECTION, RECOVERY, AND ENHANCEMENT OF IMPRESSION EVIDENCE

Duration 14 days

Purpose The purpose of this module is to familiarize the trainee with the techniques used to detect, recover, preserve, and chemically enhance footwear and tire track impression evidence.

Prerequisite Crime Scene Documentation Unit, Photography Unit

1 Objectives

1.1 Theoretical

Impression evidence is left anytime two objects come into contact and there is a transfer of pattern. These impressions can be left in a variety of substrates such as dust, mud, or bodily fluid. This makes impression evidence likely at a crime scene but possibly difficult to detect. Different lighting and photographic techniques are available to help detect impressions in both dry and wet substances. It is also possible to detect some wet impressions using chemical techniques which will be addressed during chemical enhancement training.

The next step is to recover and preserve the impression for analysis and comparison. Recovery can be challenging depending on whether the impression is wet or dry, on a collectable item such as tile or on a permanent object such as a driveway, two dimensional or three dimensional. Photography is critical to all recovery and preservation efforts followed by casting and or lifting techniques.

Some impressions may be obvious to the unaided eye while others may be very faint or not seen at all. Detection and enhancement of these faint impressions with chemical treatments may cause them to become of sufficient quality to allow comparison to suspected footwear or tires. The chemical techniques discussed here are most often used to detect and enhance bloody impression evidence.

1.2 Practical

Upon completion of this module, the trainee will be able to:

1. Detect and recover wet, dry, two- and three-dimensional impression evidence using photography, lifting and casting techniques.
2. Detect and enhance faint impressions on a variety of substrates.

2 Training Outline

2.1 Lesson Plan

A. Introduction to detection of impressions (shoe, tire, fabric impressions)
   1. Oblique lighting
   2. Alternate light source

B. Specific discussion and demonstration of impression recovery techniques
   1. Photography (documentation vs. examination quality photos)
   2. Physical removal
   3. Dusting
4. Techniques used for casting of impressions
5. Electrostatic lifting
6. Gel lifts

C. Evaluation of recovery techniques
   1. Advantages
   2. Disadvantages

D. Chemical enhancement techniques
   1. Amido black
   2. Leucocrystal violet
   3. Luminol/Blue star

E. Evaluation of techniques
   1. Advantages
   2. Disadvantages

F. Documentation and quality control

G. Effects of other testing before and after chemical treatments

H. Collection of known standards
   1. Footwear
   2. Tires

2.2 Required Readings:

Trace Evidence Standard Operating Procedures. Texas DPS. (TE-09-02, TE-09-05, TE-09-06, TE-09-08, TE-09-10, TE-09-13, TE-09-14, TE-09-15)


Bodziak, WJ. Tire Tread and Tire Track Evidence. CRC Press, 2008. Chapter 3


Safety Data Sheets for: 5-sulfosalicylic acid; 3,3-Diaminobenzidine tetrahydrochloride, Amido black, glacial acetic acid, methanol, citric acid, luminol, sodium carbonate, sodium perborate, sodium acetate, Leucocrystal violet dye.

3 Practice
3.1 Practical Exercises

1. The trainee will photograph impressions (footwear/tire) in different substrates and environments in order to obtain both documentation and examination quality photos.

2. The trainee will recover impressions (footwear/tire) using the discussed techniques. The trainer will provide impressions that are suitable for the particular technique being used. The amount of samples for each technique
will be determined by the trainer depending on the performance of the trainee.

a) Castings
b) Electrostatic lifting
c) Gel lifts
d) Adhesive lifting

3. The trainer will provide the trainee with several bloody impressions on different substrates to chemically enhance. There should be enough impressions for multiple enhancements with each technique covered.

4. The trainee will demonstrate proper documentation before and after enhancement so an evaluation by the trainer can be completed.

5. The trainee will demonstrate proper documentation and quality control of the following:
   a) Amido black
   b) Luminol
   c) Leucocrystal violet

6. The trainee will demonstrate proper documentation and collection of known tire standards.

### 3.2 Practical Examination

1. The trainee will be provided multiple impressions to detect, document, and preserve. At least one example for each recovery technique should be provided by the trainer.

2. The trainee will be provided bloody impressions to chemically enhance.
   a) Proper selection and documentation of the enhancement solution and technique(s) used should be completed by the trainee.
   b) Proper documentation of the bloody impression before and after enhancement should be completed by the trainee

### 3.3 Written Exercises

The trainee will provide a written response to the following questions:

1. What is oblique lighting and what is its purpose?
2. What is the difference between an examination quality photograph and general photograph? Give examples of each as it applies at a crime scene.
3. What general options should a camera being used for examination photos have? Please describe the proper procedure to take an examination quality photograph of an impression?
4. What does a casting of an impression capture that a photograph does not? Why is this important?
5. When is an electrostatic lifter typically used? Describe the general procedure and some of the safe guards that need to be taken while processing and during storage of the evidence?

6. What is the purpose of chemically enhancing a bloody impression and how do you decide which method to use?

7. Please describe what needs to be done before enhancing a bloody impression with the impression itself and the solutions being used?

8. Where would you get the safety information for the reagents used to make the enhancement solutions? Please provide an example copy(s) of the relevant paperwork along with a brief explanation.

4 Assessment

The trainee must complete all assignments. A comprehensive written examination will be completed for the unit. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Trace Evidence training checklist (LAB-CSR-TM-03).
# Revision History

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Effective Date: 11/27/2017
Issued by: QA Coordinator
BIOLOGICAL EVIDENCE SCREENING AND COLLECTION

Duration 3 to 5 days

Purpose The purpose of this module is to familiarize the trainee with various techniques used to identify, collect, and preserve biological evidence.

Prerequisite Crime Scene Documentation Unit, Photography Unit

1 Objectives

1.1 Theoretical

The recognition and identification of biological evidence such as blood, semen, or other sources of DNA can be of importance in crime scene investigations. It is imperative that crime scene personnel be able to identify possible body fluids, properly perform presumptive testing, and collect and preserve any evidence identified at a crime scene while ensuring the integrity of the biological evidence at all times.

1.2 Practical

Upon completion of this module, the trainee will be able to:

1. Handle biological evidence in a manner that maintains the integrity of the evidence and reduces the risks of contamination.

2. Recognize potential stains and understand their evidentiary value by utilizing available presumptive testing techniques to determine their need for collection and further testing.

3. Properly document and collect biological evidence at a crime scene.

2 Training Outline

2.1 Lesson Plan

A. Chemicals and environmental insults promoting the degradation and loss of DNA

1. Bleach and other cleaners and detergents

2. Heat and humidity

3. Ultraviolet light (sunlight)

4. Bacteria and other microorganisms

B. Actions taken to preserve DNA

1. Proper collection of biological material

2. Proper storage of evidence

C. Possible sources of contamination at a crime scene

1. People

2. Equipment

3. Other items of evidence

D. Necessary precautions taken to prevent contamination at a crime scene

1. Proper personal protective equipment
2. Limit personnel in a scene
3. Limit interactions with the evidence
4. Proper cleaning of tools, utensils, and workspaces

E. Item documentation
1. Written
   a) Location
   b) General characteristics and description
   c) Sketch if necessary
2. Photography
   a) Before testing
   b) After testing

F. Collection techniques
1. Swabbing
2. Cutting
3. Other

G. Tape lifting

H. Alternate Light Source (ALS)
1. Appearance
2. Limitations

I. Blood screening
1. Composition of blood and blood components
   a) Hemoglobin
   b) Red and white blood cells
2. Visual examination
   a) Use of different light sources
   b) Basic bloodstain pattern interpretation
3. Presumptive testing
   a) Tests – use, chemical basis, sensitivity, stability, and specificity
   b) Quality control
      i. False positives
      ii. Reagent controls – use and interpretation
4. Luminol
   a) Chemical basis
   b) Appearance
c) Limitations
d) Photography

5. Species determination
   a) Hematrace
   b) Limitations

J. Semen screening
   1. Composition of semen and seminal components
      a) Acid phosphatase
      b) P30 / Prostate Specific Antigen (PSA)
      c) Spermatozoa
   2. Locating semen stains
      a) ALS
      b) Appearance
      c) Limitations
   3. Presumptive testing
      a) Tests – use, chemical basis, sensitivity, stability, and specificity
      b) Quality control
         i. False positives
         ii. Reagent controls – use and interpretation

K. Selection of stains/samples for collection

L. Touch Samples
   1. Possible sources
   2. Proper collection
   3. Limitations

2.2 Required Readings


Physical Evidence Handbook. Texas DPS. (PEH-02-04)

Crime Scene Response Standard Operating Procedure. Texas DPS. (CSR-04-01)

Safety Manual. Texas DPS. (SAF-01-02 and SAF-04-01)


3 Practice

3.1 Safety

1. Gloves must be worn during reagent preparation and testing. Clothing may protect unbroken skin; broken skin should be covered. Eye protection is recommended during reagent preparation and handling of liquid body fluids. Chemicals used may be carcinogenic or caustic. Blood may contain infectious agents. Use universal precautions during evidence handling.

2. Always wear appropriate eye protection while using the alternate light source and avoid looking directly into the light. Follow safety and use directions provided with the instrument.

3. α-Naphthyl acid phosphate and o-dianisidine are suspected carcinogens. Application of the AP spot test reagent using a spray bottle must be performed in a chemical fume hood.

4. Luminol is an irritant. Sodium perborate and sodium carbonate are toxic and irritating. Avoid breathing dust; do not get in eyes, on skin, or on clothing. Avoid breathing sprayed solution. Spray will deposit a light white film on surfaces. Appropriate personal protective equipment must be worn during preparation and use.

3.2 Practical Exercises

1. Demonstrate and practice proper procedures for cleaning tools and utensils.

2. Demonstrate proper recognition and documentation of at least 5 different stains/samples.

3. Demonstrate proper presumptive testing of at least 5 different stains/samples (blood and semen).

4. Demonstrate proper evidence collection of at least 5 different stains/samples.

3.3 Practical Examination
The trainer will provide the trainee with at least 10 different mock items of evidence. The trainee will determine the appropriate testing to be performed on each item as well as proper documentation and collection of each item.

### 3.4 Written Exercises

The trainee will provide a written response to the following questions:

1. List at least 3 environmental factors that can cause the degradation of DNA.
2. List at least three possible sources of contamination.
3. What component in blood does the presumptive tests react to?
4. What component of semen does the AP test react to?
5. When do you tape lift an item?

### 4 Assessment

The trainee must complete all assignments. A comprehensive written examination will be completed for the unit. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response DNA training checklist (LAB-CSR-TM-04).
# Revision History

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Effective Date: 11/27/2017
Issued by: QA Coordinator
OVERVIEW OF LATENT PRINTS

Duration 2 to 3 days

Purpose The purpose of this module is to familiarize the trainee with basic latent print concepts and terminology.

Prerequisite Crime Scene Documentation Unit, Photography Unit

1 Objectives

1.1 Theoretical

Skin, the heaviest organ on the human body, functions to protect the inner contents of the body, allows for body temperature regulation, and provides a means for a sense of touch. On the palmar and plantar surfaces of the body, the skin is corrugated with ridges and furrows, and is known as friction ridge skin. This unique arrangement of friction ridge skin is formed in utero and remains unchanged except for size until after death, barring illness or injury. The trainee will gain a broad understanding of the terminology and anatomy for the human hands and feet. The trainee will also develop an understanding of the human sweat glands and the components of natural latent print residue.

The trainee will encounter three general categories of friction ridge impressions on evidence: latent, patent and plastic prints. Latent prints are generally comprised of perspiration or sebaceous material. They are typically not visible to the naked eye and require some type of development technique to be visualized. Patent prints are visible and are made in material other than perspiration, such as blood or paint, and may or may not require additional development. Plastic prints are also visible, but are three-dimensional prints that do not require further development.

The perspiration which makes up latent print residue is exuded from minute sweat pores that run along the ridges of friction ridge skin. When friction ridge skin comes into contact with an object, this material may be transferred to that surface, leaving a latent print. This latent print residue is comprised of approximately 98.5% water. The remaining material includes various organic and inorganic compounds. Different latent print development techniques will react with specific components of latent print residue. Some development techniques may be utilized in sequence to maximize latent print development. Several techniques require fluorescent examination with a LASER or alternate light source. The trainee must always be cognizant of which latent print development techniques will interfere with examination by other forensic disciplines.

The trainee will gain a broad understanding of the factors involved in latent print recovery and how the components of latent print residue guide the selection and sequence of latent print development techniques.

1.2 Practical

Upon completion of this module, the trainee will:

1. Have a basic understanding of the anatomy of the hands and feet as applicable to latent print identification.
2. Understand that friction ridge skin is formed during fetal development and the friction ridge skin arrangement is persistent throughout time barring injury or disease.

3. Understand that the friction ridge skin arrangement is unique to an individual.

4. Have a basic understanding of human sweat glands and latent print residue components.

5. Recognize the presence or absence of friction ridge detail.

6. Understand when to preserve ridge detail.

2 Training Outline

2.1 Lesson Plan

A. Friction ridge skin basics

1. Physiology
   a) Friction ridges
   b) Chemical composition of human sweat and latent print residue
   c) Sweat glands

2. Ridge events/minutia
   a) Specific ridge path
   b) Galton details
      i. Bifurcation
      ii. Ending ridge
      iii. Dot

B. Types of prints

1. Latent
2. Patent
3. Plastic

C. Searching for latent prints

1. Normal handling of objects/surfaces
   a) Porous
   b) Non porous
   c) Semi-porous

2. Oblique lighting

D. Determining whether or not to preserve (digitally and/or lifting)

1. Ridge detail versus other impressions
   a) Fabric impressions
   b) Non friction ridge skin
2. Friction ridge detail versus smudges

2.2 Required Readings

Physical Evidence Handbook. Texas DPS. (PEH-02-06)


DOJ. National Institute of Justice. The Fingerprint Sourcebook, 2011. (Sections 7.1 and 7.2—7.2.5).

3 Practice

3.1 Practical Exercises

Document if ridge detail is present or absent on the handout provided by the trainer.

3.2 Written Exercises

The trainee will provide a written response to the following questions:

1. Describe the three different types of prints.

2. List components of residue for each type of print.

4 Assessment

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Latent Prints training checklist (LAB-CSR-TM-05).
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COLLECTION OF FRICTION RIDGE EXEMPLARS

Duration    1 day
Purpose     The purpose of this module is to educate the trainee on types of friction ridge skin exemplars utilized for comparison purposes and the proper methods to record exemplars.

Prerequisite Crime Scene Documentation Unit, Photography Unit

1 Objectives
1.1 Theoretical
Exemplars may be compared to suitable latent prints or other exemplars. Exemplars recorded of an individual’s friction ridge skin may include finger, palm, toe, and sole prints. Good quality, completely rolled exemplars are important to obtain because latent prints are generally fragmentary. The trainee will gain a broad understanding of the methods for and purpose of recording friction ridge detail.

1.2 Practical
Following the completion of training, the trainee will:

1. Properly record and document friction ridge skin exemplars
2. Discuss the proper method for recording friction ridge detail

2 Training Outline
2.1 Lesson Plan
A. Collection of exemplars – living subjects
   1. Standard fingerprint exemplars
      a) Fingerprint card information
      b) Obtaining fully rolled fingerprint exemplars (Recording sequence, rolled nail-to-nail, simultaneous impressions)
   2. Palm print exemplars
      a) Cardboard roller
      b) Obtaining fully rolled palm print exemplars (hypothenar, thenar, interdigital, and joints)
   3. Major case prints
   4. Footprint exemplars
B. Collection of exemplars – deceased subjects
   1. Unique challenges
   2. Breaking rigor
      a) Laws governing the removal of fingers, hands, and feet
   3. Decomposed, macerated, desiccated, rehydrated, and charred friction ridge skin
      a) Photography
b) Powdering

c) Lifting

d) Casting

2.2 Required Readings

DOJ. National Institute of Justice. The Fingerprint Sourcebook, 2011. (Chapter 4)

Latent Prints Standard Operating Procedures. Texas DPS. (LP-03-03 and LP-03-04)

3 Practice

3.1 Safety

Wear appropriate personal protective equipment. This includes but is not limited to gloves, lab coat, and eye protection. The extent of protection is proportional to the amount of perceived risk involved, and some activities will require more extensive protection.

3.2 Practical Exercises

The trainee will complete the following exercises:

1. Obtain a complete set of major case prints from one (1) subject.
2. Obtain a complete set of inked footprints from one (1) subject.
3. Obtain a complete set of finger and palm print exemplars from a “deceased” subject (both ink and powder methods).
4. Obtain a cast of one (1) finger.

4 Assessment

The trainee must complete all assignments. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Latent Prints training checklist (LAB-CSR-TM-05).
## Revision History

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LATENT PRINT DEVELOPMENT AND PRESERVATION TECHNIQUES

Duration 3 days

Purpose The purpose of this module is to familiarize the trainee with appropriate latent print processing and preservation techniques for crime scenes.

Prerequisite Crime Scene Documentation Unit, Photography Unit

1 Objectives

1.1 Theoretical
The trainee will gain a broad understanding of the factors involved in latent print recovery and how the components of latent print residue guide the selection and sequence of latent print development techniques.

Latent prints developed with processing techniques that are evaluated as suitable for preservation must be collected and preserved for analysis and possible comparison.

1.2 Practical
Following the completion of training, the trainee will be able to:

1. Search for latent print evidence, and apply appropriate latent print development techniques in proper sequence in order to maximize latent print development on an extensive range of surfaces.

2. Make the determination on what should be processed in the field and what should be collected for laboratory processing.

3. Preserve friction ridge evidence through various lifting and photography techniques.


2 Training Outline

2.1 Lesson Plan
A. Visual examination
B. Powder development techniques
   1. Black/bichromatic/fluorescent powders
   2. Magnetic powders
C. Blood development technique: Amido black
D. Photography
E. Lifting with tapes
   1. Clear/frosted/poly tape
   2. 2”, 4” tapes

2.2 Required Readings
DOJ. National Institute of Justice. The Fingerprint Sourcebook, 2011. (Sections 7.3, 7.12, 8.5, 8.6, 10.2.1, 10.2.2, 10.2.3, 11.1, and 11.2)
Latent Prints Standard Operating Procedures. Texas DPS. (LP-02-02, LP-02-03, LP-02-14, and LP-02-15)

Safety Data Sheets for powders and Amido Black

3  Practice

3.1  Practical Exercises

The trainee will complete the following exercises:

1. Photograph visible latent, patent, and plastic prints. Use various lighting techniques on samples to compare results. Samples provided by trainer.

2. Process various substrates with various powders and Amido Black for latent prints.

3. Make ten (10) lifts (total) utilizing clear, frosted, and polyethylene tape.

4. Process a vehicle with various powders and make lifts (minimum of 5). At least one lift shall be a palm print or simultaneous impression utilizing overlapping tape.

4  Assessment

The trainee must complete all assignments. A comprehensive written examination will be completed for the unit. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Latent Prints training checklist (LAB-CSR-TM-05).
## Revision History

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COLLECTION OF QUESTIONED DOCUMENT EVIDENCE

Duration 1 day

Purpose The purpose of this module is to familiarize the trainee with the collection and preservation of questioned document evidence.

Prerequisite Crime Scene Documentation Unit, Photography Unit

1 Objectives

1.1 Theoretical

The Questioned Document discipline offers the laboratory service of forensic document examination. The forensic document examiner (FDE) may: identify or eliminate a subject as the writer of a particular document(s) by the comparison of questioned and known handwriting, identify the source of a document, identify the machine(s) that produced a document, or ascertain any information related to how a document was created or altered which may be of value in a criminal investigation.

1.2 Practical

Upon completion of this module, the trainee will be able to:

Recognize, preserve, and collect questioned document evidence

2 Training Outline

2.1 Lesson Plan

A. Types of examinations available
B. Saturated/Charred documents
C. Protection of indented writing
D. Writing instruments and writing surfaces
E. Photography
F. Collection and preservation of documents
G. Collection of standards

2.2 Required Readings


3 Practice

3.1 Written Exercises

The trainee will provide a written response to the following questions:

1. Name 3 things a crime scene investigator should not do to a questioned document found at a crime scene.

2. You find a deceased person with a gunshot wound to the head inside a vehicle. There is a folded piece of paper that is saturated with apparent blood in the subject’s pocket. How do you collect and store this evidence?
3. You walk into a residence where there is handwriting on the walls and floors. How do you properly photograph the handwriting?

4 Assessment

The trainee must complete all assignments. A comprehensive written examination will be completed for the unit. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Questioned Document training checklist (LAB-CSM-TM-08).
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OTHER TOPICS ENCOUNTERED IN CRIME SCENE RESPONSES

Duration 7 days

Purpose The purpose of this module is to familiarize and introduce the trainee to other situations/types of evidence they may encounter at a crime scene.

Prerequisite Crime Scene Documentation Unit, Photography Unit

1 Objectives

1.1 Theoretical

Crime scenes are unpredictable in nature and require examiners to be placed into situations which are new and unfamiliar. The examiner must be able to assess the scene and determine the best approach. There are many types of evidence at a scene that may be probative to the case that are not analyzed within the DPS Laboratory System or may be atypical for most crime scenes. The knowledge and understanding of this evidence is critical and must be evaluated for all scenes.

1.2 Practical

Upon completion of this module, the trainee will be familiar with:

1. Fire/explosive scenes and how they are handled
2. Landfill recoveries
3. Recovery of skeletal/buried/scattered remains
4. Collection of entomological samples
5. Collection of soil samples
6. Awareness of bloodstain pattern analysis
7. Collection of drug evidence

2 Training Outline

2.1 Required Readings

A. Fire/Explosive Scenes


B. Landfill Recoveries

C. Buried/Scattered Remains


D. Entomological Information


E. Soil Information

F. Bloodstain Pattern Information

Bevel T., Gardner R.M. Bloodstain Pattern Analysis, Third Edition, 2008 (Chapters 2, 3, 10, 13)


G. Drug Evidence

Physical Evidence Handbook. Texas DPS. (PEH-02-02)

3 Practice

3.1 Written Exercises

The trainee will provide a written response to the following questions:

1. What are some safety considerations that need to be considered when at a fire scene?
2. What is the definition of arson?
3. What should an item that is suspected of having an ignitable fluid on it be packaged in?
4. What are some methods utilized to detonate an improvised explosive device?
5. Describe the methodology for landfill searches/recoveries.
6. What are two things used to determine human vs. non-human bones?
7. Describe the strategy and methodology for burial investigations in regards to identification of a burial site and excavation.
8. What is the most common use for entomological evidence?
9. How do you collect and package entomological evidence?
10. What can dry soil samples be packaged in? wet samples?
11. What are the four steps a blood drop goes through as it contacts a surface?
12. Explain the difference between a transfer pattern, swipe, and wipe.
13. How do you determine what direction a blood drop was traveling by examining the stain?
14. How are fresh drug substances collected?

4 Assessment

The trainee must complete all assignments. A comprehensive written examination will be completed for the unit. Successful completion of this module is determined by the trainer.

The trainee and trainer will complete the Crime Scene Response Other Topics training checklist (LAB-CSR-TM-09).
### Crime Scene Overview and Documentation Training Checklist

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#### CSR-TM-01-01 Crime Scene Response Overview and Documentation

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- [ ] Texas Code of Criminal Procedures. (Chapter 1, Art. 1.06; Chapter 18, Art. 18.01; Chapter 18, Art. 18.10)
- [ ] Safety Manual. Texas DPS. (SAF-01-01, SAF-01-02, SAF-01-06, SAF-04-01)
- [ ] General Manual. Texas DPS. (Chapter 5 Sections 05.76.00, 05.78.00, and 05.79.00, Chapter 6)
- [ ] Crime Scene Response Standard Operating Procedures. Texas DPS. (CSR-01-01, CSR-01-02, CSR-01-03)
  - [ ] Venomous Texas Snakes
  - [ ] Insects
  - [ ] Spiders and Their Kin
  - [ ] Plants
- [ ] New Zealand Police. Cladestine Drug Laboratory Hazard Identification and Safety Information.

#### Practical Exercises

- [ ] Review documentation from specified crime scenes and complete LAB-CSR-01 for each
- [ ] Review warrant/consent to search forms

#### CSR-TM-01-02 Scene Assessment

<table>
<thead>
<tr>
<th>Required Reading</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Practical Exercises</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Perform a mock briefing with notes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Use the “Eight-Step Descriptive Set” to describe five (5) items in a mock scenario</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CSR-TM-01-03 Sketching and Measurement Techniques**

**Required Reading**


**Practical Exercises**

- ☐ Measure and sketch a mock scene using baseline and triangulation coordinates using bird’s eye and elevation views

**CSR-TM-01-04 Search Techniques**

**Required Reading**


**Written Exercises**

- ☐ Provide answers to the written question

**CSR-TM-01-05 Evidence Collection**

**Required Reading**

- ☐ Laboratory Operations Guide. Texas DPS. (LOG-05-01)
- ☐ Physical Evidence Handbook. Texas DPS. (PEH-02-01, PEH-03-02)
<table>
<thead>
<tr>
<th>CSR-TM-01-06 Report Writing</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Texas DPS Justice Trax User Guide. Creating a Crime Scene Response Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Laboratory Operations Guide. Texas DPS. (LOG-04-02, section 3.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practical Exercises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Review specified Crime Scene Response Reports (minimum of three)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Review documentation from specified crime scenes and write a report for each (minimum of two reports with at least one vehicle)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSR-TM-01-06 Report Writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Final comprehensive mock crime scene</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Assessment**

□ Mock trial exercise
Trainee Name ___________________________ Date Training Began ________________

<table>
<thead>
<tr>
<th>CSR-TM-02-01 Introduction to Photography Equipment</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Reading</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Nikon Digital Camera User's Manual for crime scene response camera. (Sections involving introduction to the camera and basic operation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Nikon Speedlight User's Manual for crime scene response flash unit. (Sections: Preparation, Operation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Written Exercises</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Compile a checklist of everything included in a crime scene response camera kit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Provide answers to the written questions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CSR-TM-02-02 Basic Photography</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Reading</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Robinson, Edward M. <em>Crime Scene Photography</em>. 2nd ed. Amsterdam: Academic/Elsevier, 2010. (Chapters 2, 3, 4, and 5 [only Pg. 251-303])</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Nikon Digital Camera User's Manual for crime scene response camera. (Sections involving exposure, ISO, white balance, camera modes, focus, image recording options)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Practical Exercises</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Take ten (10) varying properly exposed photographs outdoors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Take ten (10) varying properly exposed photographs indoors without flash</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Take three (3) varying photographs with a shallow depth of field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Take three (3) varying photographs with a great depth of field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Take three (3) varying photographs of a moving object with a fast shutter speed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Take three (3) varying photographs of a moving object with a slow shutter speed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Take ten (10) varying properly exposed photographs indoors with flash</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Take ten (10) varying properly exposed photographs outdoors with fill flash</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Take three (3) varying photographs of three (3) different subjects with equivalent exposures using the concept of reciprocity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Take three (3) varying photographs of three (3) different subjects with varying exposures using the concept of bracketing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Crime Scene Response Photography Training Checklist

<table>
<thead>
<tr>
<th>CSR-TM-02-03 Forensic Photography</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Take three (3) varying wide angle photographs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Take three (3) varying macro photographs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Take three (3) varying photographs using the fast lens in a low light situation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Take ten (10) varying photographs in low light with long exposure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Take ten (10) varying photographs in low light and paint with light</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Required Reading

- □ Robinson, Edward M. *Crime Scene Photography*. 2nd ed. Amsterdam: Academic/Elsevier, 2010. (Chapters 5 [only Pg. 258-300], 6, 7, 9, and 10 [only Pg. 518-525])
- □ Storage of Evidentiary Images in DIMS. LIMS Manual. Texas DPS. (LIMS-GEN-18)

### Practical Exercises

- □ Take examination quality photographs of three (3) small, three (3) medium, three (3) large objects
- □ Vehicle
- □ Indoor scene
- □ Outdoor scene

### Comprehensive Written Examination
# Crime Scene Response Trace Evidence Training Checklist

**Texas Department of Public Safety**
**Crime Laboratory**

**Crime Scene Response Trace Evidence Training Checklist**

**LAB-CSR-TM-03 Rev.00 (11/2017) p.5 Issued by: QAC**

---

**Trainee Name** ____________  **Date Training Began** ____________

<table>
<thead>
<tr>
<th>CSR-TM-03-01 General Trace Collection</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Reading</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- [ ] Trace Evidence Standard Operating Procedures. Texas DPS. (TE-02-01 through TE-02-06)


---

**Practical Exercises**

- [ ] Practice individual recovery techniques on different items of evidence

- [ ] Practice collection of standards on different items of evidence

- [ ] Demonstrate proper documentation and packaging of automotive filaments

---

**Practical Examination**

- [ ] Document, preserve, and recover standards (if appropriate) in 5 mock items of
<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Page 2 of 3</th>
</tr>
</thead>
</table>

### CSR-TM-03-01 General Trace Collection

**evidence**

**Written Exercises**

- [ ] Provide answers to the written questions

---

### CSR-TM-03-02 Collection of Gunshot Primer Residue Samples

**Required Reading**


**Practical Exercises**

- [ ] Practice collecting GSR from a vehicle, hands, and other inanimate objects

**Practical Examination**

- [ ] Explain and demonstrate the collection of GSR by stubbing at least two inanimate objects

**Written Exercises**

- [ ] Provide answers to written questions

---

### CSR-TM-03-03 Detection, Recovery, and Enhancement of Impression Evidence

**Required Reading**

- [ ] Trace Evidence Standard Operating Procedures. Texas DPS, (TE-09-02, TE-09-05, TE-09-06, TE-09-08, TE-09-10, TE-09-13, TE-09-14, TE-09-15)
- [ ] Bodziak, WJ. Tire Tread and Tire Track Evidence. CRC Press, 2008. Chapter 3
- [ ] Safety Data Sheets: 5-sulfosalicylic acid; 3,3-Diaminobenzidine tetrahydrochloride, Amido black, glacial acetic acid, methanol, citric acid, luminol, sodium carbonate, sodium perborate, sodium acetate, Leucocrystal violet dye
## CSR-TM-03-03 Detection, Recovery, and Enhancement of Impression Evidence

### Training Outline

- Document and photograph impressions in different substrates and environments to obtain both documentation and examination quality photos
- Recover impressions using discussed techniques
- Chemically enhance bloody impressions on different substrates
- Demonstrate proper documentation before and after enhancement
- Demonstrate proper documentation and quality control of chemical enhancement techniques
- Demonstrate proper documentation and collection of known tire standards

### Practical Exercises

<table>
<thead>
<tr>
<th>Task</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document and photograph impressions in different substrates and environments to obtain both documentation and examination quality photos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recover impressions using discussed techniques</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemically enhance bloody impressions on different substrates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrate proper documentation before and after enhancement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrate proper documentation and quality control of chemical enhancement techniques</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrate proper documentation and collection of known tire standards</td>
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<td></td>
</tr>
</tbody>
</table>

### Practical Examination

- Detect, document, and preserve multiple impressions (at least one example for each recovery technique)
- Chemically enhance bloody impressions using proper documentation of chemicals and impressions before and after enhancement

### Written Exercises

- Provide answers to the written questions

### Comprehensive Written Examination(s)
Trainee Name ___________________________  Date Training Began ___________________________

<table>
<thead>
<tr>
<th>CSR-TM-04-01 Biological Evidence Screening and Collection</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- DNA Standard Operating Procedures. Texas DPS. (DNA-03-01, DNA-03-02, DNA-04-01, DNA-04-02, DNA-04-03, DNA-04-04, DNA-04-06, DNA-09-02, DNA-09-11, DNA-09-13, DNA-09-22)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Physical Evidence Handbook. Texas DPS. (PEH-02-04)</td>
<td></td>
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<tr>
<td>- Crime Scene Response Standard Operating Procedures. Texas DPS. (CSR-04-01)</td>
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</tr>
<tr>
<td>- Safety Manual. Texas DPS. (SAF-01-02 and SAF-04-01)</td>
<td></td>
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</tr>
<tr>
<td>- Bevel, T and Gardner, RM. Bloodstain Pattern Analysis with an Introduction to Crime Scene Reconstruction, Third Edition. 2008. Chapters 1, 2, 5 and 11 (chapters 3 and 4 recommended but not required)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Safety Data Sheets: Luminol, Sodium Carbonate, Sodium Perborate, Phenolphthalein, 3,3,5,5-Tetramethylbenzidine, Leucomalacite green, 1-Naphthyl Phosphate Calcium Salt Trihydrate (Acid Phosphatase)</td>
<td></td>
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<tr>
<td>Practical Exercises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Demonstrate and practice proper procedures for cleaning tools and utensils</td>
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<tr>
<td>- Demonstrate proper recognition and documentation of at least 5 different stains/samples</td>
<td></td>
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<tr>
<td>- Demonstrate proper presumptive testing of at least 5 different stains/samples (blood and semen)</td>
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<tr>
<td>- Demonstrate proper evidence collection of at least 5 different stains/samples</td>
<td></td>
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<tr>
<td>Practical Examination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Trainee will be provided at least 10 different mock items of evidence. Determine the appropriate testing to be performed as well as proper documentation and collection</td>
<td></td>
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</tr>
<tr>
<td>Written Exercises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Date</td>
<td>Page 2 of 2</td>
</tr>
<tr>
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<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CSR-TM-04-01 Biological Evidence Screening and Collection</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Provide answers to the written questions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comprehensive Written Examination</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### CSR-TM-05-01 Overview of Latent Prints

**Required Reading**
- [ ] Physical Evidence Handbook. Texas DPS. (PEH-02-06)
- [ ] Crime Scene Response Standard Operating Procedures. Texas DPS. (CSR-05-01)
- [ ] DOJ.  National Institute of Justice.  The Fingerprint Sourcebook, 2011.  (Sections 7.1 and 7.2- just through 7.2.5)

**Practical Exercises**
- [ ] Document "ridge detail present" or "no ridge detail present" on handout provided by trainer

**Written Exercises**
- [ ] Provide answers to the written questions

### CSR-TM-05-02 Collection of Friction Ridge Exemplars

**Required Reading**
- [ ] DOJ.  National Institute of Justice.  The Fingerprint Sourcebook, 2011.  (Chapter 4)
- [ ] Latent Prints Standard Operating Procedures. Texas DPS. (LP-03-03; LP-03-04)

**Training Outline**

**Practical Exercises**
- [ ] Obtain a complete set of major case prints from one (1) subject
- [ ] Obtain a complete set of inked footprints from one (1) subject
- [ ] Obtain a complete set of finger and palm prints from a “deceased” subject (both ink and powder methods)
- [ ] Obtain a cast of one (1) finger

### CSR-TM-05-03 Latent Print Development and Preservation Techniques

**Required Reading**
- [ ] DOJ.  National Institute of Justice.  The Fingerprint Sourcebook, 2011.  (Sections 7.3, 7.12, 8.5, 8.6, 10.2.1, 10.2.2, 10.2.3, 11.1, 11.2)
- [ ] Latent Prints Standard Operating Procedures. Texas DPS. (LP-02-02, LP-02-03, LP-02-14, LP-02-15)
- [ ] Safety Data Sheets for powders and Amido Black
### CSR-TM-05-03  Latent Print Development and Preservation Techniques

<table>
<thead>
<tr>
<th>Practical Exercises</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Photograph visible latent, patent, or plastic prints. Use various lighting techniques on samples to compare results. Samples provided by trainer.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Process various substrates with various powders and Amido Black for latent prints</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Make 10 lifts utilizing clear, frosted, and poly tape</td>
<td></td>
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</tr>
<tr>
<td>☐ Process a vehicle with various powders and make lifts (minimum of 5)</td>
<td></td>
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</tr>
<tr>
<td>☐ At least one lift must be a palm print or simultaneous impression lifted using overlapping tape</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comprehensive Written Examination**
Crime Scene Response Questioned Documents Training Checklist

<table>
<thead>
<tr>
<th>Trainee Name</th>
<th>Date Training Began</th>
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</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CSR-TM-08-01: Collection of Questioned Document Evidence</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written Exercises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide answers to the written questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehensive Written Examination</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Crime Scene Response Other Topics Training Checklist

<table>
<thead>
<tr>
<th>CSR-TM-08-01</th>
<th>Date Completed</th>
<th>Trainer Initials/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire/Explosive Scenes</td>
<td></td>
<td></td>
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<tr>
<td>Landfill Recoveries</td>
<td></td>
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<tr>
<td>Buried/Scattered Remains</td>
<td></td>
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<tr>
<td>Entomological Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Date Completed</td>
<td>Trainer Initials/Date</td>
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<tr>
<td>CSR-TM-08-01</td>
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<tr>
<td>Soil Information</td>
<td></td>
<td></td>
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<tr>
<td>Bloodstain Pattern Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bevel T., Gardner R.M. Bloodstain Pattern Analysis, Third Edition, 2008 (Chapters 2, 3, 10, 13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug Evidence</td>
<td></td>
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<tr>
<td>Physical Evidence Handbook. Texas DPS. (PEH-02-02)</td>
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<tr>
<td>Written Exercises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide answers to written questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehensive Written Examination</td>
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</tbody>
</table>