

“Keep Orlando a safe city by reducing crime and maintaining livable neighborhoods.”

ORLANDO POLICE DEPARTMENT POLICY AND PROCEDURE

1136.4, LATENT PRINTS

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1. PURPOSE

The Orlando Police Department is committed to the successful resolution and prosecution of all criminal offenses committed within the City of Orlando.

2. POLICY

This policy has been created to ensure that proper procedures are utilized in the collection, submission, and analysis of latent print evidence.

3. DEFINITIONS

AFIS: The acronym for Automated Fingerprint Identification System, a generic term for a fingerprinting matching, storage, and retrieval system.

Analysis: The first step of the Ace-V method. The assessment of an impression to determine suitability for comparison.

Comparison: The second step of the Ace-V method. The observation of two or more impressions to determine the existence of discrepancies, dissimilarities, or similarities.

Core: The approximate center of a fingerprint pattern.

Conclusion: The determination made during the evaluation phase of Ace-V (identification, inconclusive, or exclusion).

Conflict: A difference of conclusions that becomes apparent during, or at the end of, an examination during the verification or technical review process.

Consultation: A significant interaction between examiners regarding one or more impressions in question.

Delta: The point on a friction ridge at or nearest to the point of divergence of two type lines and located at or directly in front of the point of divergence.

Distortion: Variances in the reproduction of the friction ridge skin caused by factors such as substrate, deposition pressure, movement, and matrix.

Elimination Prints: The prints of an individual, associated with a known or claimed identity, that are deliberately recorded, by ink or by another medium, for the purposes of determining the individual as the source of latent prints.

Erroneous Exclusion: The incorrect conclusion that two friction ridge impressions did not originate from the same source.

Erroneous Identification: The incorrect conclusion that two friction ridge impressions did originate from the same source.

Evaluation: The third step of the ACE-V method wherein an examiner assesses the value of the details observed during the analysis and comparison steps and reaches a conclusion.

Exclusion: The determination that there is sufficient quality and quantity of detail in disagreement to conclude that the two areas of friction ridge impressions did not originate from the same source.

Fingerprint: An impression of the friction ridges of all or any part of the finger.

Friction Ridge: The raised portion of the epidermis on the plantar or palmar skin.

Friction Ridge Detail: An area comprised of the combination of ridge flow, ridge characteristics, and ridge structure.

Furrow: The valley or depression between friction ridges.

IAFIS: The acronym for the Integrated Automated Fingerprint Identification System, the FBI's national AFIS.

Identification: The determination that there is sufficient quality and quantity of detail in agreement to conclude that two friction ridge impressions originated from the source.

Inconclusive: The determination that there is neither sufficient agreement to identify nor sufficient disagreement to exclude or the determination that a final conclusion was not arrived at due to the need for more data (e.g., additional known exemplars).

Incipient Ridge: A friction ridge not fully developed that may appear shorter and thinner than fully developed friction ridges.

Joint (of the finger): The hinged area that separates segments of the finger.

Known Record Prints: The prints of an individual, associated with a known or claimed identity, that are deliberately recorded electronically, by ink, or by another medium (also known as exemplars).

Latent Print: Accidental or unintentional friction ridge impressions, visible or invisible, which have evidentiary value.

Lift: An adhesive or other medium used to transfer a friction ridge impression from a substrate.

Limited Source Identification: The practice in which all possible latent prints in a case are not examined. Additional examinations may be completed upon request.

Major Case Prints: A systematic recording of the friction ridge detail appearing on the palmar sides of the hands. This includes the extreme sides of the palms, joints, tips, and sides of fingers.

Matrix: The substance that is deposited or removed by the friction ridge skin when making an impression.

Minutiae: Events along a ridge path, including bifurcations, ending ridges, and dots (also known as Galton details, features, or friction ridge characteristics).

NGI: The acronym for Next Generation Identification, the updated version of IAFIS.

No Value: The determination that there is insufficient quality and/or quantity of friction ridge detail for comparison purposes.

Of Value for Comparison: The determination that there is sufficient quality and quantity of friction ridge detail for comparison purposes.

Palm Print: An impression of the friction ridges of all or any part of the palmar surface of the hand.

Patent Print: A print that is left when a substance covers the friction ridges and is then transferred to a surface, leaving a visible impression of the friction ridges.

Pattern Type: Fundamental pattern of the friction ridge flow: arch, loop, whorl.

Quality: The clarity of information contained within a friction ridge impression.

Quantity: The amount of information contained within a friction ridge impression.

Reverse Search: Later returned search results from latent prints previously entered into an AFIS database.

Source: An area of friction ridge skin from an individual from which an impression originated.

Substrate: The surface upon which a friction ridge impression is deposited.

Sufficiency/Sufficient: The determination that there is enough quality and quantity of information to reach an of-value decision during the analysis phase or to reach a conclusion during the evaluation phase.

Tolerance: The amount of variation in the appearance of friction ridge features to be allowed during a comparison.

Verification: The independent application of the ACE process as utilized by a subsequent examiner to either support or refute the conclusions of the original examiner; this may be conducted as blind or non-blind verification. Verification may be followed by some level of review as specified by agency policy.

4. PROCEDURES

4.1 COLLECTION OF LATENT PRINTS

Employees should be cognizant of the presence of potential latent prints at all crime scenes. The following procedures should be utilized to maximize all evidentiary possibilities for the obtaining of latent print evidence.

4.1.1 EXAMINING THE CRIME SCENE FOR LATENT PRINTS

Examine the crime scene to determine what items and/or surfaces the suspect may have handled or touched.

Once it is established that there are surfaces conducive to latent print processing, the officer or CSO will wear a new pair of latex gloves and attempt to obtain latent prints utilizing black print powder. Should specialized processing be required that exceeds the officer's or CSO's capability, a CSI will be notified to process the scene. (35.01c, 35.03a)

Should a patent print (visible print) exist, it should be photographed with a scale *before* any attempts to enhance it are made.

4.1.2 GUIDELINES FOR PROCESSING WITH POWDERS

When using powder to process an item for the presence of latent prints, the following guidelines must be adhered to:

- a. The surface area must be dry. A new pair of latex gloves shall be worn to avoid cross-contamination.
- b. A slight amount of black powder should be placed upon the print brush.
- c. Lightly apply the print brush containing the powder to the side of the actual area to be dusted, working inward in a twirling motion. An excessive amount of powder applied directly to latent print can obliterate the details of the latent print. Should this occur, simply shake off the remaining powder from the brush and lightly brush over the area again.
- d. Apply the adhesive side of the print tape directly onto the entire area of the developed latent.
- e. Apply a slight amount of pressure to the smooth side of the print tape to remove any folds, bubbles, etc.
- f. Carefully remove the print tape from the processed area.
- g. Apply the print tape which now contains the latent print to the back (blank area) of the latent print lift card.
- h. Repeat these steps, if necessary, to obtain maximum clarity. If a second or third lift is made of the same print, label the print card as follows: 1st lift, 2nd lift, etc. (This rule also applies if you apply too much print powder.) A separate lift card shall be used for each lift.
- i. After transferring lift tape to the latent print lift card, initial and date above and below the print tape. This will ensure the integrity of the lift.

- j. Should the submitting employee somehow transfer his or her own prints to the lift tape while placing it onto the lift card, those prints should be crossed out **and initialed** prior to submission.
- k. Once the latent print has been secured on the latent print lift card, the reverse side of card must be completely **and legibly** filled out, to include all pertinent information.

4.2 SUBMISSION OF LATENT PRINTS

4.2.1 GUIDELINES FOR SUBMITTING THE LATENT LIFT CARD

When submitting latent prints, the following guidelines **MUST** be followed:

- a. ALL latent print submissions require an Incident Report which must include at least a brief case narrative. This includes those instances where normally only a misdemeanor arrest affidavit, narrative supplement, or Florida Crash Report (hit and run with latent prints) would be necessary. All employees are reminded to ensure they are using the correct, original case number (most often the initial property theft/burglary/stolen vehicle case) rather than the incident number assigned to a recovery or follow-up investigation.
- b. The case number on the incident report must exactly match the case number on the submitted latent print cards.
- c. The Latent Print Work Request Form (Attachment D) is now printed on an envelope to secure the latent prints cards for submission.
- d. All latent print submissions are considered evidence and all items submitted to the Property and Evidence Section shall be documented on a Quick Property Receipt, which is generated by entering the items into LERMS. See P&P 1123, section 4.3.
- e. Insert the latent lift cards into a Latent Print Work Request Envelope (Attachment D) and legibly handprint all fields on the Work Request Envelope, including vehicle license tag/VIN information, suspect information (if available), special handling, and remarks. Blank Work Request Envelopes may be found in Property and Evidence or at any substation. Secure the Latent Print Work Request Envelope with evidence tape on the top opening, initial, and date half on/half off the tape. Submit the completed and sealed Latent Print Envelope containing the latent lift card(s) into Property and Evidence or in the locket at any of the substations. See P&P 1123, section 4.

4.2.2 GUIDELINES FOR SUBMITTING PHOTOGRAPHED LATENTS

Photographed latent print evidence will be submitted to the Latent Print Examiner as follows:

- a. Developed latent print(s) that require photographing will be submitted to the Forensic Imaging Lab along with a processing request form.
- b. The Forensic Imaging Lab will upload and/or scan the photographs into the Foray Digital Management Evidence System and notify the Technical Lead/Senior Latent Print Examiner through email with an attached processing request form.

4.3 LATENT PRINT STORAGE

The Latent Print Unit is an authorized evidence storage location. All evidence stored within the lab will be checked out of the Property and Evidence section indicating the reason why it is out of the Latent Print Unit. The Property and Evidence Section or authorized Latent Print Examiner will enter and maintain the chain of custody log and indicate that the item(s) are being temporarily stored in the Latent Print Unit. When withdrawing evidence temporarily, for either

court use or investigative purposes, the employee must sign the LERMS signature pad. See P&P 1123, Property and Evidence, section 4.7.

- a. Once the Latent Print Unit verifies the latent print cards have been acquired, labeled, and scanned into the Foray Digital Management Evidence System, the Property and Evidence Section or authorized Latent Print Examiner shall check the latent lift cards back into LERMS and indicate that the item(s) are being stored in the Latent Print Evidence Storage location for long term storage.
- b. Items temporarily stored within the Latent Print Unit will be kept separate from other items to ensure the integrity of each case and its evidence.
- c. After the examination is completed, the digital latent print evidence file will be archived in the Foray Digital Management Evidence System within the Latent Print Unit. The archived data will be maintained per current evidence disposal policy.

4.4 ACE-V METHODOLOGY

Friction ridge examinations are conducted using the Analysis, Comparison, Evaluation, and Verification (ACE-V) methodology. This process is a quantitative and qualitative examination of ridge detail present in friction ridge impressions, resulting in a conclusion of identification, inconclusive, or exclusion. ACE is generally applied as a strictly linear process but may include a return to any previous phase. Steps C and E (Comparison and Evaluation) apply only to those prints which have been determined to be of value for comparison.

Analysis

The assessment of a friction ridge impression to determine suitability (of value) for comparison, considering several factors such as:

- No value - The determination that there is insufficient quality and/or quantity of friction ridge detail for identification purposes.
- Of value for comparison - The determination that there is sufficient quality and quantity of friction ridge detail for comparison purposes.
- Anatomical source of the impression (finger, palm, foot, toe)
- Quality (clarity) and quantity of detail present in the impression, including level one, two, and three detail.
- Factors influencing quality may be:
 - Residue/matrix – the material of which the impression is made (perspiration, oil, blood, ink)
 - Deposition – how the impression is made and the movement and pressure of the source.
 - Surface/substrate – the material on which the impression is deposited (glass, metal, wood, paper, plastic)
 - Environment to which the surface has been exposed (temperature, humidity, light, weather)
 - Development medium – method used to develop or visualize the impression.
 - Preservation method (photography, lifting, ink)
 - Condition of the friction ridge skin that deposited the impression.

If the friction ridge impression is determined to be of value for comparison, the examiner should continue to the next phase (Comparison). If the friction ridge impression is determined to be of no value, the examination process ends.

Comparison

The direct or side-by-side observation of friction ridge impressions to determine whether the detail in two impressions are in agreement based on relative location, sequence, and spatial relationship.

Evaluation

The formulation of a conclusion based upon analysis and comparison of friction ridge impressions. Three conclusions are possible:

- **Identification** – the result of a comparison of two friction ridge impressions containing sufficient quality (clarity) and quantity of friction ridge detail in agreement. The determination that there is sufficient quality and quantity of detail in agreement to conclude that two friction ridge impressions originated from the same source.
- **Exclusion** – the result of a comparison of two friction ridge impressions containing sufficient quality (clarity) and quantity of friction ridge detail which is not in agreement. A determination that two friction ridge impressions originated from different sources.
- **Inconclusive** – the inability to identify or exclude as the source of an impression. An inconclusive evaluation must not be construed as a statement of probability. Such a statement is outside the acceptable limits of friction ridge examination. A lack of clear and complete exemplars (palms, tips, and sides of fingers) for comparison may result in the inability to reach either identification or an exclusion decision. Latent prints that contain sufficient ridge detail (both quality and quantity) may result in the inability to reach either identification or an exclusion decision.

Verification

An independent examination by another qualified examiner, using the ACE method, to ensure that the verifying examiner came to the same identification conclusion as the primary examiner. All identifications shall be verified by a second examiner who is trained to competency. Verifications shall be completed prior to communicating the results, either verbally or in writing. All other conclusions (e.g., of value decisions, exclusions, inconclusive) should be reviewed during the technical review process.

Verifications can be non-blind or blind. In a non-blind verification, the results of the primary examiner are known to the verifying examiner. In a blind verification, the results of the primary examiner are not known to the verifying examiner. The blind verification process may be utilized at the discretion of the technical lead/senior latent print examiner, lab supervisor, or quality manager.

5. FORMS AND APPENDICES

ATTACHMENT A-Latent Lift Card (Fingerprint)

ATTACHMENT B-Latent Lift Card (Palm Print)

ATTACHMENT C-Latent Lift Card (Shoe/Foot Print)

ATTACHMENT D-Latent Print Work Request