



CJIS INFORMATION LETTER

January 2024

Best practices for faster fingerprint submission response times

To reduce fingerprint rejection rates and improve database integrity, it is essential to submit the highest quality fingerprints to the Next Generation Identification (NGI) System. A fully automated fingerprint submission returns a response more quickly than one requiring intervention by a human examiner. The following information is being provided to assist fingerprint contributors with a goal of reducing rejection rates, improving response times, and maintaining database integrity through quality fingerprint collection and submission.

States are permitted to submit fingerprints to NGI with corrections

Contributors may be unaware that they are permitted to submit fingerprints to NGI for processing that include corrections, such as placement swaps and stamp applications.

Some state examiners found fingerprinting issues and corrected them before searching their state databases. However, the examiners submitted fingerprints to the FBI with the original issues based on a misunderstanding that they were not permitted to submit images with placement swaps or stamp applications. This can delay response times to contributors because FBI staff have to replicate the fixes the state had already made.

Common reasons for corrections include placement swaps, which occur when a fingerprint is in the incorrect block (for example, the left little finger is rolled where the right little finger should be), and stamp applications.

A stamp application is appropriate when the characteristic of a fingerprint image may hinder an accurate search in the NGI System. A biometric images examiner may apply a stamp over the fingerprint image to indicate that the image is missing, which directs the NGI System to disregard the image

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CJIS Information Letters are available on the Advisory Process Community on JusticeConnect on the Law Enforcement Enterprise Portal (LEEP) or by clicking on:

- ❖ JusticeConnect
- ❖ My Communities
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Users with questions concerning access to LEEP should contact the LEEP help desk by telephone at 888-334-4536.

In addition, this *CJIS Information Letter* will be sent to CJIS Systems Officers, State Identification Bureaus, and Compact Council members via e-mail.

in its search for candidates. An examiner may also apply a stamp over a fingerprint image to indicate a scar or amputation to assist in database searches of quality fingerprint images. Examiners can place stamps when images have insufficient pattern area to verify proper sequence against the submitted plain impressions, are fingerprinted in duplicate, multiple images are in a single fingerprint block (including an overlaid image in the rolled or plain impressions) or have visible scarring or signs of amputations. Examples of these submissions are provided later in this document.

State-level examiners can and do place stamps prior to searching their state systems, but they do not always transmit the submissions to the FBI with those corrections.

Other reasons for corrections can include multiple images in the same fingerprint block, the same hand is rolled twice in the rolled or plain impressions area, failure to print all fingers, improper device orientation (the fingerprints are upside down), or failure to clean the collection surface, thus capturing residual fingerprint images with a new image.

The NGI System handles approximately 97 percent of all fingerprint submissions; fingerprint examiners manually compare about 3 percent of submissions. The NGI System or examiners reject approximately 2 percent of all fingerprint submissions for failing to meet image quality thresholds or having content deficiencies.

To obtain the highest quality fingerprints and reduce rejection rates:

- ❖ Clean the subject's hands with soap and water.
- ❖ Wipe each finger with rubbing alcohol.
- ❖ If the individual has dry or flaky skin, use a small amount of hand lotion, and wipe off any residue, or use a "ridge builder."
- ❖ Apply a softening agent.

In addition:

- ❖ Capture as much friction ridge detail as possible by rolling from nail to nail during collection.
- ❖ Avoid overlapping rolled images if possible.
- ❖ Avoid printing the same finger more than once.
- ❖ For digital capture, clean the capture plate often to avoid residual fingerprint images from previous subjects, thus limiting getting multiple subjects' images on the submission.
- ❖ Capture plain impressions simultaneously to avoid sequencing errors.
- ❖ Submit fingerprint images at 500 pixels per inch or higher.

If you are having trouble capturing friction ridge detail:

- ❖ Apply slight pressure to the individual's finger to ensure light inking from the inking plate (if using a hard copy fingerprint card).
- ❖ Instruct the subject to stand parallel to the workstation, look away from the inking plate, try not to assist the person taking the fingerprints, and relax.
- ❖ Use a small amount of hand lotion, alcohol, or some form of moisture displacer/degreaser product (for electronic fingerprint capture only).

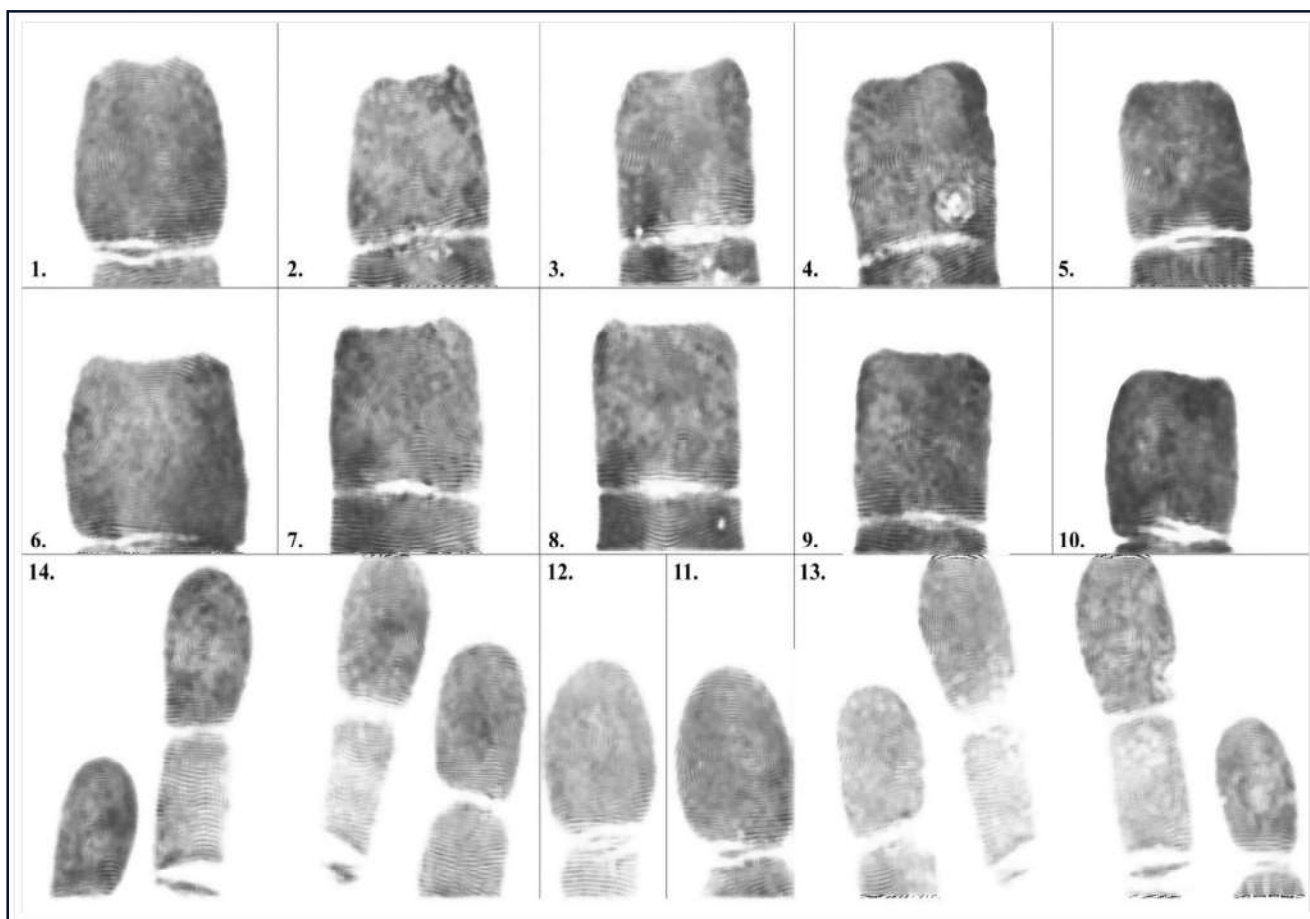
- ❖ Squeeze along the finger to force blood flow into the fingertips to produce visible friction ridge detail.

The CJIS Division offers the following guidance for special circumstances related to fingerprint submissions:

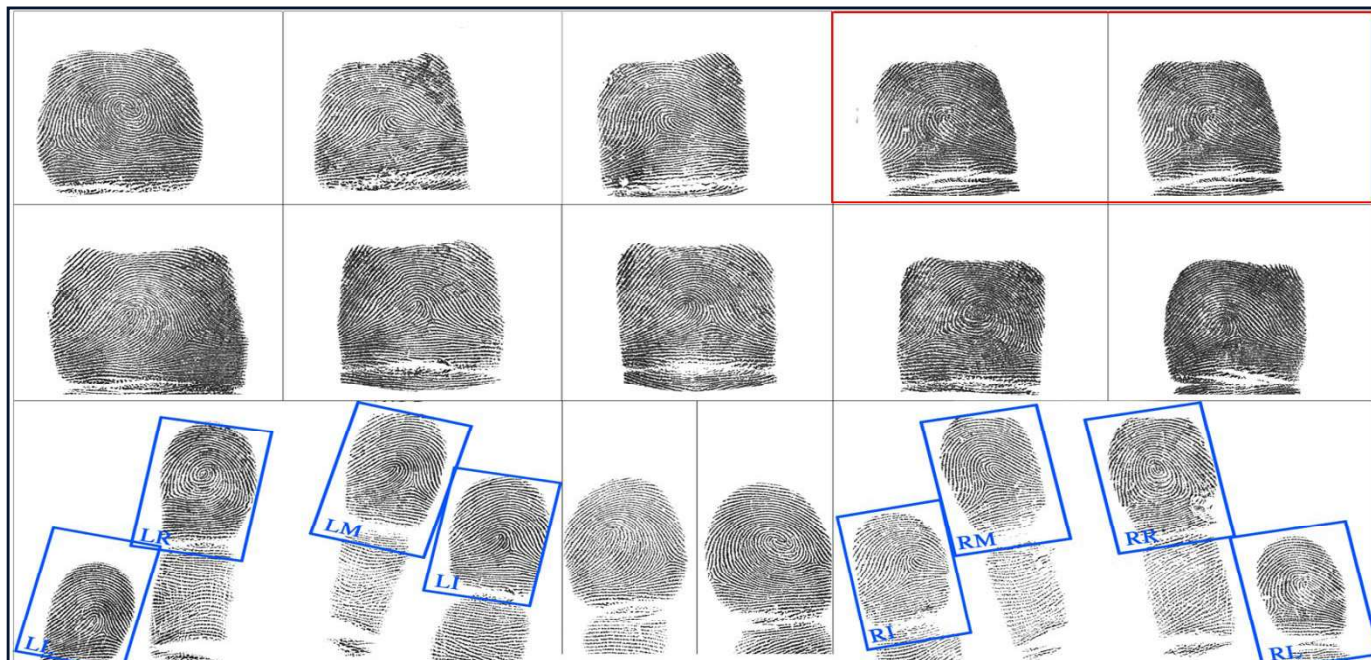
- ❖ Deformed or missing fingers—it may be necessary to use a postmortem kit, commonly known as a “spoon.” If the technician is unable to record the image, include a notation of “Unable to print (UP)” in its place. For electronic transactions, enter “UP” in the Amputated or Bandaged Field (2.084 AMP).
- ❖ Fully amputated fingers—enter a notation of “amp,” “missing at birth,” or “severed” in the fingerprint block. In an electronic submission, enter “XX” in the Amputated or Bandaged Field (2.084 AMP) of the electronic transaction.
- ❖ Extra fingers—do not record extra fingers in either the rolled or plain impressions. Record only the thumb and the next four fingers.
- ❖ Scarred fingers—record scarred fingers in both rolled and plain impressions. It is not necessary to enter notations.
- ❖ Worn fingerprints—apply light pressure and little ink. To raise the edges prior to printing, the technician may need to use the “milk the finger” technique, which involves applying pressure or rubbing the fingers in a downward motion from palm to fingerprint.

Some examples of the most common fingerprinting issues that require manual processing

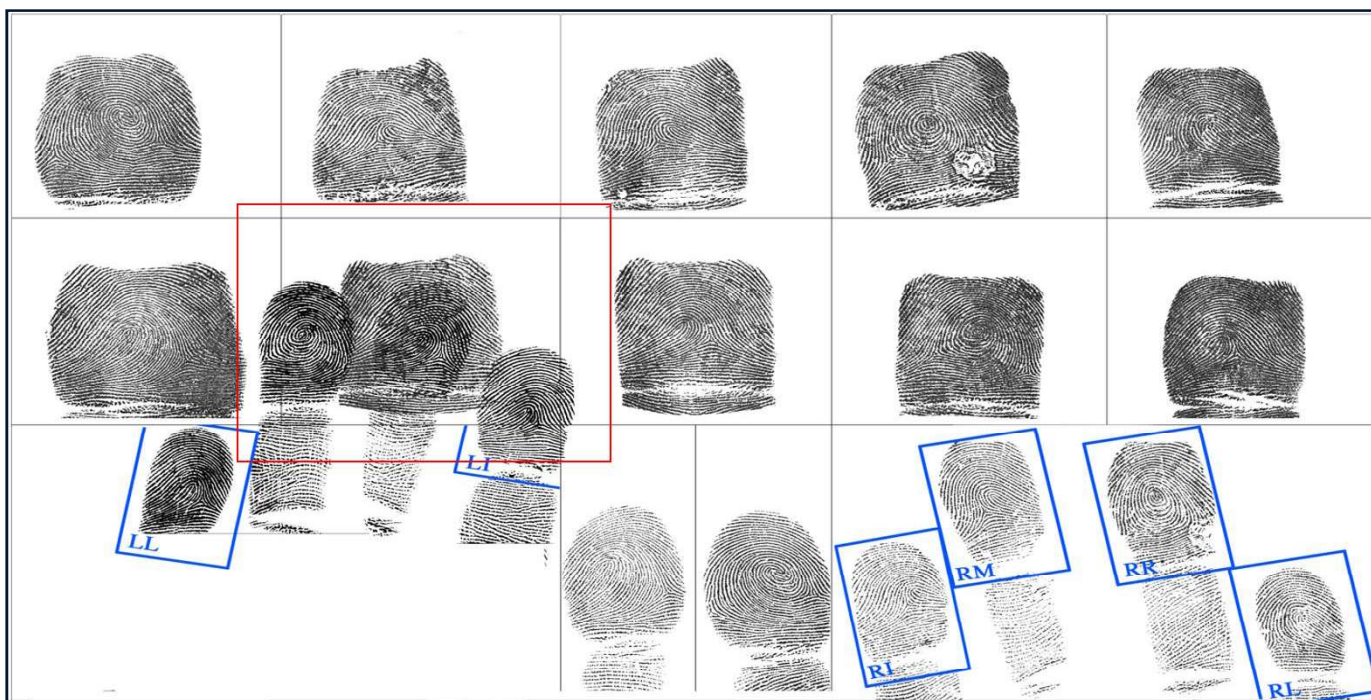
The example below is a low-quality fingerprint submission because it is blurry. The low resolution prohibits the examiner from seeing friction ridge detail.



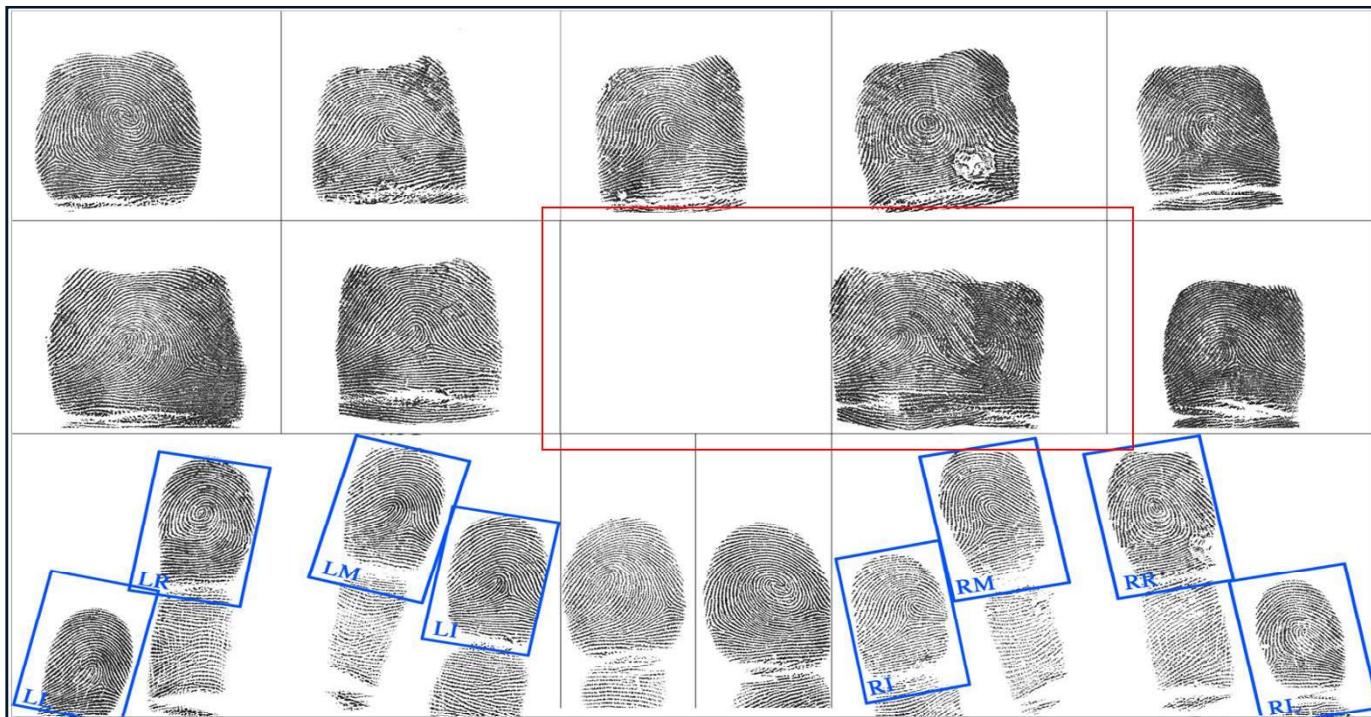
The fingerprints in the red box are duplicates of each other.



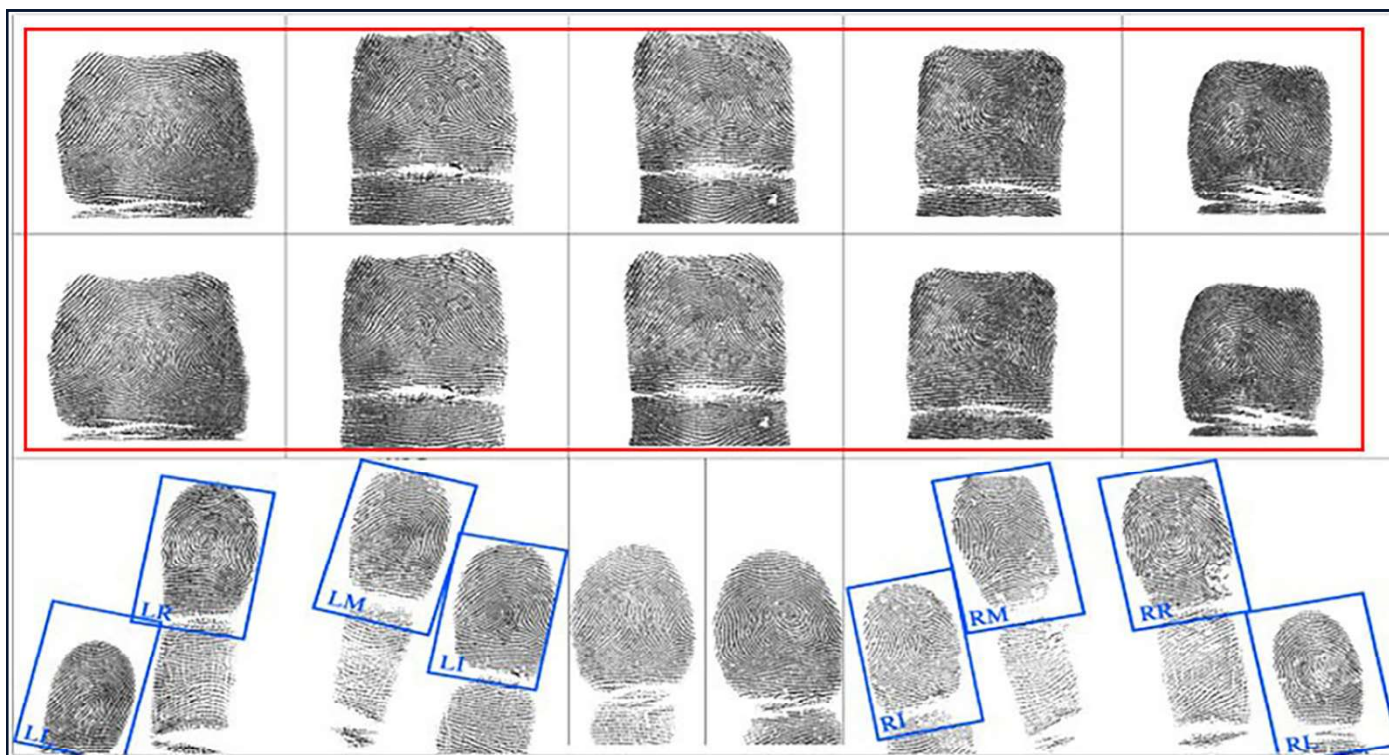
In this example, the plain fingerprints are partially in the blocks for rolled fingerprints.



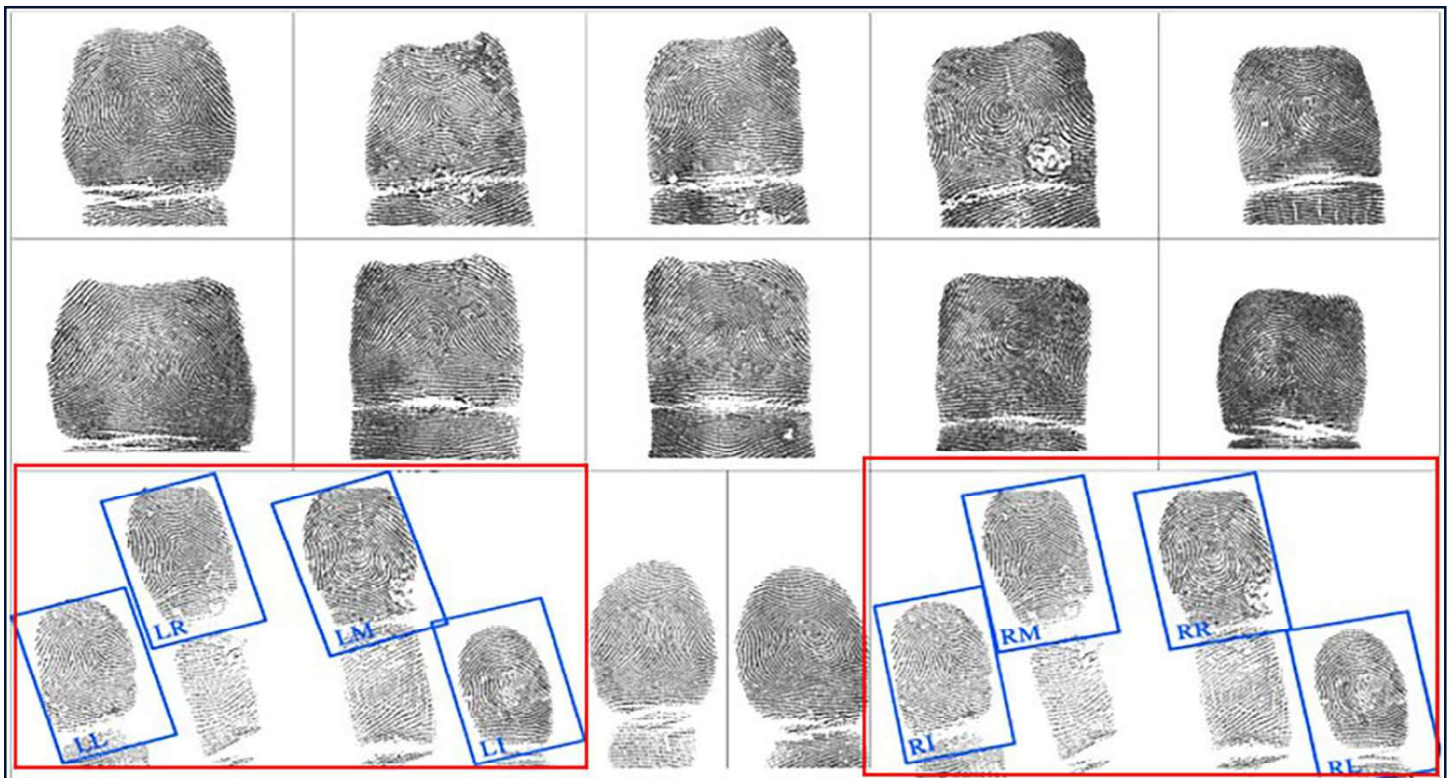
This is a second example of multiple fingerprints in the same block.



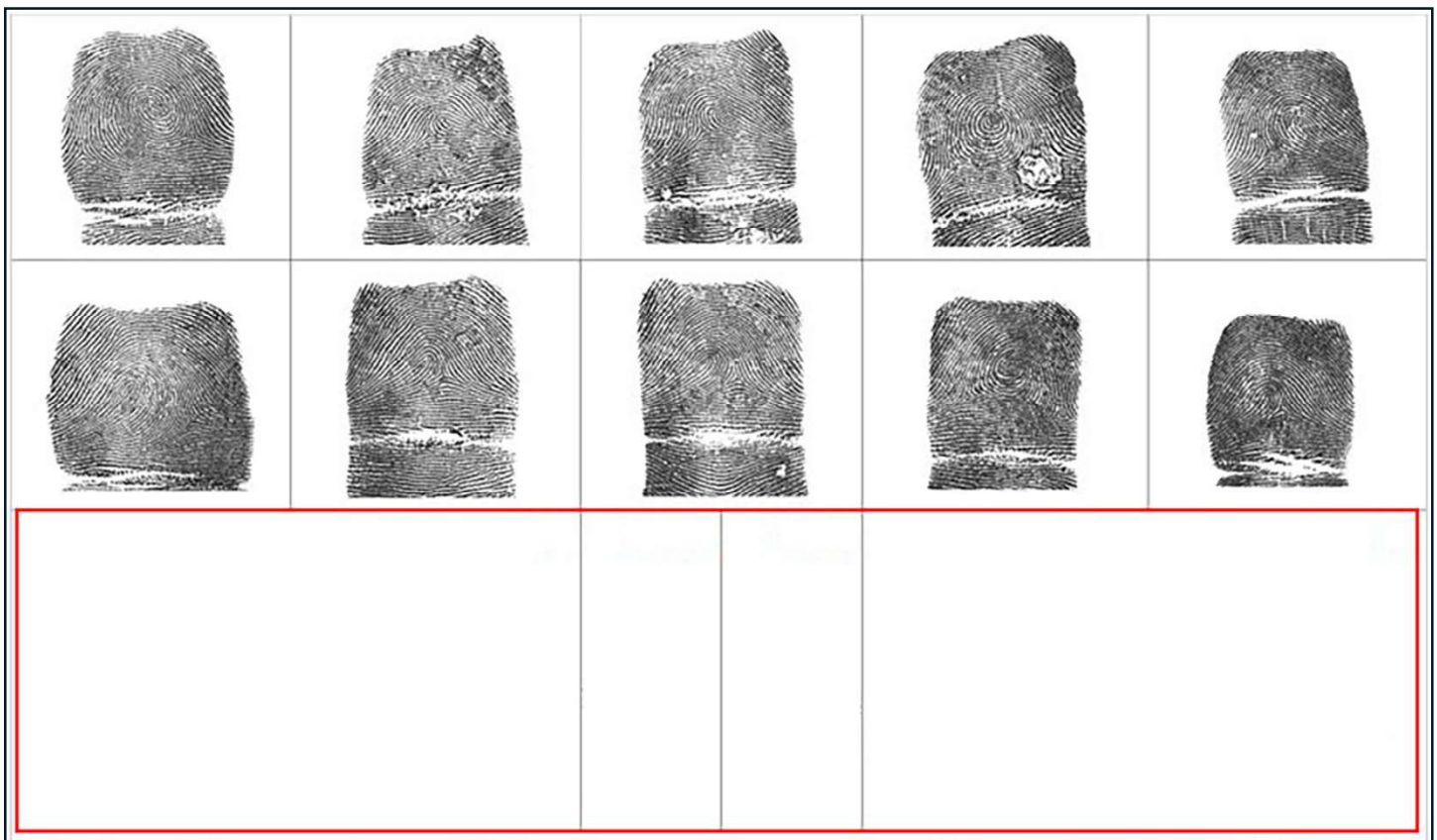
In the following case, the same hand was fingerprinted twice in the rolled impressions.



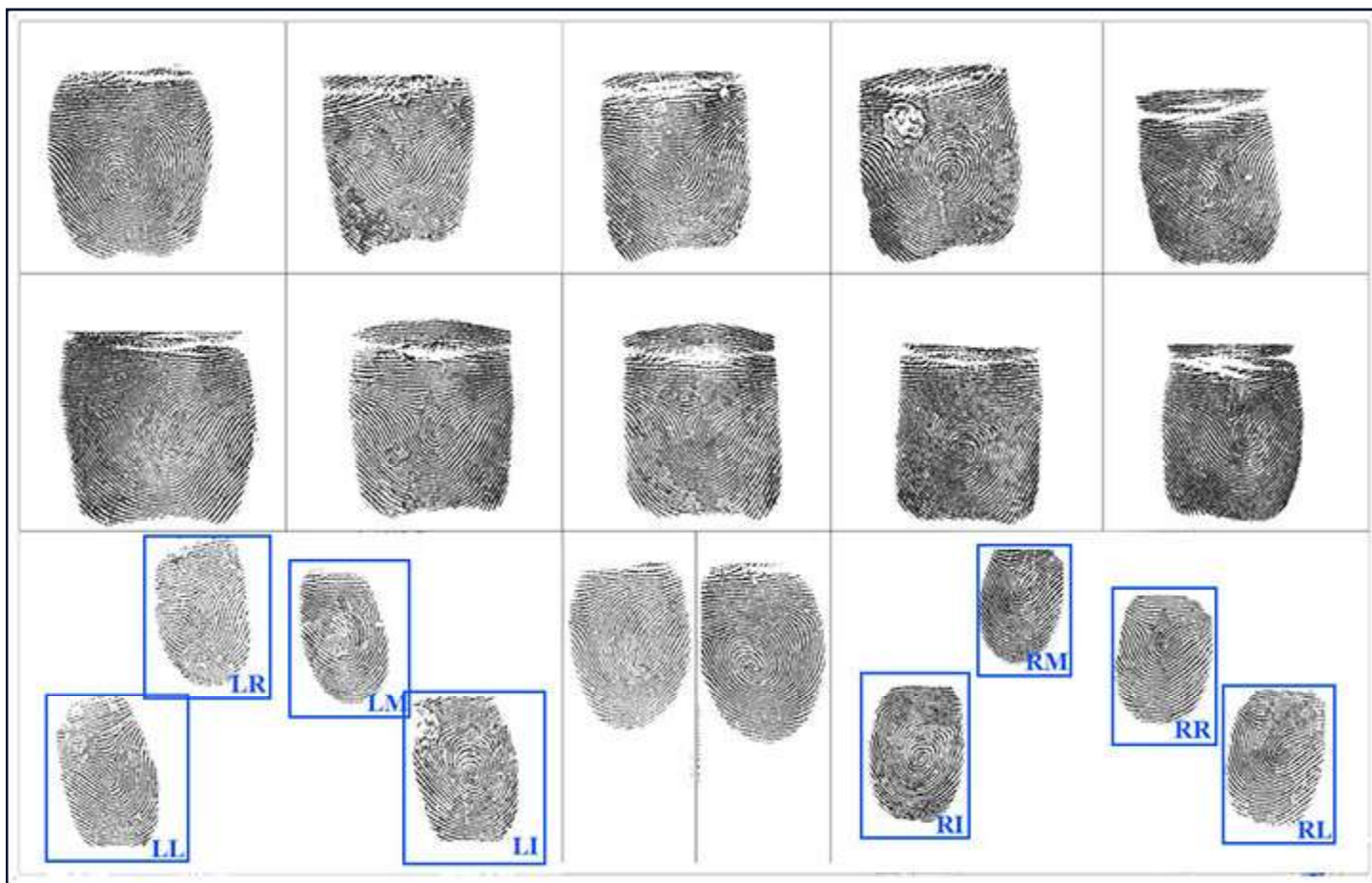
The right hand was captured twice in the plain impressions.



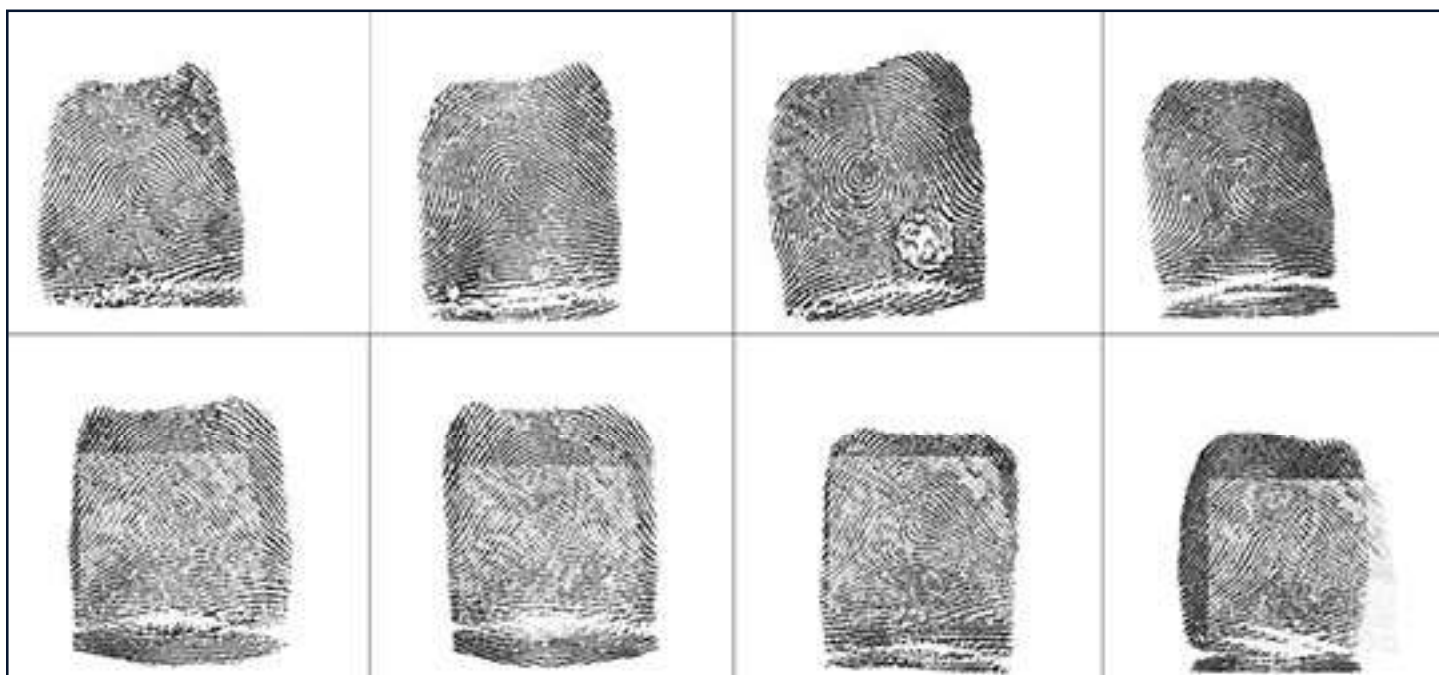
In the following case, the agency did not collect all the fingerprints. The submission is missing the plain impressions.



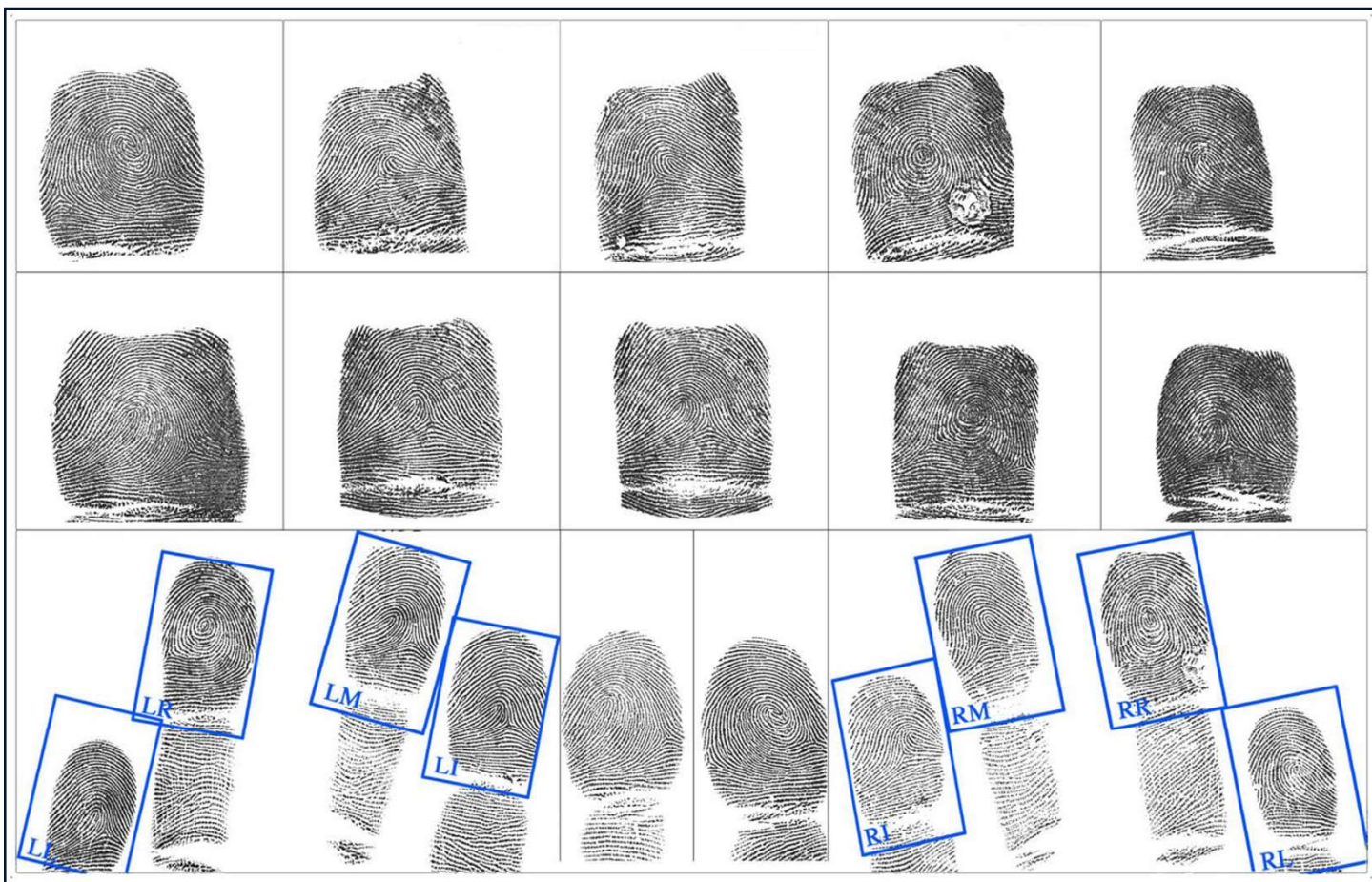
In this case, the device was improperly oriented, resulting in upside down fingerprints.



In the following submission, the agency did not adequately clean the collection surface, which resulted in residual fingerprint images intersecting with new fingerprint images.



A high-quality fingerprint submission looks like:



If the individual being fingerprinted is deceased, see postmortem fingerprint collection tips that the Laboratory Division developed at <https://fbibiospecs.fbi.gov/biometric-training>.

For questions about fingerprint submissions or to verify that your equipment complies with the *Electronic Biometric Transmission Specification*, go to <https://fbibiospecs.fbi.gov/>.

In the future, the FBI's official YouTube channel will include a video series on fingerprint collection tips and best practices.

Agencies with questions should contact the Biometric Services Section's Customer Service Group by telephone at 304-625-5590.

Changes to the MSG Field in the Subject Results Biometric response in the Next Generation Identification System

In December 2022, the FBI released *Technical and Operational Update* (TOU) 11.1 of the *Electronic Biometric Technical Specifications* (EBTS). The update included adding an additional occurrence of the Status/Error (2.060 MSG) field in the Subject Results Biometric (SRB) response for *EBTS* 10.0 compliant investigative searches that are not friction ridge. This information should serve as a reminder to *EBTS* 10.0 contributors that the 2.060 MSG field change for the SRB response is expected to be released during an operational build of the NGI System scheduled for January 2024.

The following information is included in the *Electronic Biometric Technical Specifications*, Version 11.2, dated September 20, 2023:

Appendix E: Summary of Logical Record Layouts for Type-2 Investigation, Information, and Notification Transactions

Table E-1 Summary of Field Lists for Investigation, Information, and Notification Transactions

Tag Element SRB

2.060 MSG 0..2

Agencies with questions should contact the Biometric Services Section's Customer Service Group by telephone at 304-625-5590.

***CJIS Information Letters* have a new home on JusticeConnect**

Current *CJIS Information Letters*, as well as those dating to 1999, have a new home! The documents are now located within the CJIS Advisory Process Community on LEEP.

To access the documents, users will need to be members of the CJIS Advisory Process Community on LEEP.

To join the CJIS Advisory Process Community, click on JusticeConnect.

After clicking on the I Agree button under the JusticeConnect Terms and Conditions:

- ❖ Click on the magnifying glass.
- ❖ Enter the words Advisory Process in the search area.
- ❖ Click on the Enter button on your keyboard.
- ❖ Select the CJIS Advisory Process Community.

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The *CJIS Information Letter* index provides the date and topics covered in each *CJIS Information Letter*.

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