FORENSIC SCIENCE OVERSIGHT BOARD

Springfield Police Department Identification Division Status Assessment Report

January 10, 2025

1. Executive Summary

Pursuant to Section 9 of Chapter 69 of the Acts of 2018, *An Act Relative to Criminal Justice Reform* (hereinafter "The Criminal Justice Reform Act"), the Forensic Science Oversight Board (hereinafter "FSOB" or "the Board") was established to "have oversight authority over all commonwealth facilities engaged in forensic services in criminal investigations" and to "provide enhanced, objective and independent auditing and oversight of forensic evidence used in criminal matters, and of the analysis, including the integrity of such forensic analysis performed in state and municipal laboratories."

The FSOB is also charged with: creating a process by which the scientific validity of a forensic science technique or analysis commonly used in criminal matters shall be investigated; developing, implementing and periodically reviewing a system for forensic laboratories to report professional negligence or misconduct; actively engaging stakeholders in the criminal justice system in forensic development initiatives and recommending ways to improve education and training; and developing, implementing, and periodically reviewing a system to evaluate laboratory education and professional licensing processes.[1]

The following report contains a discussion of the FSOB process for identifying laboratories that provide evidence to the courts in Massachusetts and the FSOB's findings of its audit of the Springfield Police Department Identification Division which was chosen as an example of a small laboratory associated with a local police department. This report is based on information obtained during the period of December 2020 through April 2022. It should be noted that this process was new to the Springfield Police Department, and they are actively working toward meeting many of the suggestions that are provided in this report. The foundation of this report is a review of documents provided by the Springfield Police Department Identification Division as well as information gathered over the course of three visits to the Springfield laboratory with additional information provided via email or telephonically. The information describes the organization, management system, training and qualification records, and laboratory documentation. The report also includes recommendations for moving forward toward certification of examiners and accreditation of the laboratory.

The review of the Springfield Police Department Identification Division was greatly aided by the officers who work there. This exercise will allow the FSOB to create a framework for interacting with, assessing, and assisting other small non-accredited laboratories.

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[1] See Section 9(d)-(g) of Chapter 69 of the Acts of 2018 "*An Act Relative to Criminal Justice Reform*".

2. Identifying Forensic Service Providers

The FSOB initially discussed which forensic service providers in the Commonwealth should be audited. It is important to note that presently there is no comprehensive list of forensic service providers in Massachusetts. Therefore, the FSOB began by compiling a list of public forensic laboratories in the Commonwealth. As part of this effort, the FSOB issued a Survey of Forensic Services in the Commonwealth. The FSOB also sent questionnaires to the Massachusetts District Attorney Association (MDAA), the Massachusetts Chiefs of Police Association (MCOPA)[2], and the Committee for Public Counsel Services to determine where forensic services are performed in the Commonwealth. Based on the information received the following is a list of forensic service providers the FSOB has compiled to date:

> Acushnet Police Department
> Andover Police Department
> Auburn Police Department
> Barnstable Police Department
> Bentley University Police Department
> Boston Police Department*
> Boston Police Department Firearms Analysis Unit*
> Boston Police Department Crime Lab*
> Boston Police Department Latent Print Unit*
> Brookline Police Department
> Burlington Police Department
> Cambridge Police Department Crime Scene Services*
> Carlisle Police Department
> Chelsea Police Department
> Concord Police Department
> Dalton Police Department
> Dudley Police Department
> Easthampton Police Department
> Framingham Police Department
> Gill Police Department
> Groton Police Department
> Hudson Police Department
> Lancaster Police Department
> Lawrence Police Department
> Lexington Police Department
> Lincoln Police Department
> Lynn Police Department
> Marshfield Police Department

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[2] The Board sent a questionnaire to over five hundred police departments including college and university campus police departments. The Board received 127 responses. Out of the 127, the list included herein represents those that indicated they perform forensic services. Going forward, the Board intends to attempt to obtain responses to the remaining police departments.

Massachusetts State Police Crime Lab (Maynard)*
Massachusetts State Police Crime Lab Crime Lab (Boston)*
Massachusetts State Police Crime Lab Crime Lab (Bourne)*
Massachusetts State Police Crime Lab Crime Lab (Danvers)*
Massachusetts State Police Crime Lab Crime Lab (Lakeville)*
Massachusetts State Police Crime Lab Crime Lab (Springfield)*
Massachusetts State Police Crime Lab Crime Lab (Sudbury)*
Massachusetts State Police Crime Lab Crime Lab (Worcester)*
Medford Police Department
Melrose Police Department
Milford Police Department
Milton Police Department
Monson Police Department
Monterey Police Department
Natick Police Department
North Reading Police Department
Pittsfield Police Department
Plymouth County Sheriff's Department Bureau of Investigation
Rockport Police Department
Salem Police Department
Salem State University Police
Saugus Police Department
Somerville Police Department
Southampton Police Department
Southborough Police Department
Southbridge Police Department
Spencer Police Department
Springfield Police Department
Stockbridge Police Department
Stoneham Police Department
Sudbury Police Department
Taunton Police Department
Tewksbury Police Department
Town of Sherborn Police Department
UMass Lowell Police Department
UMass Medical School Drugs of Abuse*
Ware Police Department
Watertown Police Department
Wayland Police Department
Webster Police Department
Wellesley Police Department
West Boylston Police Department
West Brookfield Police Department
West Springfield Police Department
Weston Police Department
Weymouth Police Department
Wilbraham Police Department
Williamsburg Police Department

Winchendon Police Department
Winchester Police Department
Worcester Police Department – Crime Scene Unit*
Worcester Police Department – Latent Print Unit*
(* indicate accredited labs)

In the above list, three of these organizations, the Massachusetts State Police Crime Laboratories (MSPCL), the Boston Police Department Laboratories (BPD), and the Worcester Police Department Crime Scene Unit and Latent Print Unit are ANAB accredited. The MSP laboratory in Maynard has been reviewed by the FSOB as has the BPD. The FSOB ultimately chose to audit the Springfield Police Department Identification Division (SPDID) as an example of a smaller Police unit doing fingerprint comparison.

Officials from the Springfield Police Department Identification Division agreed to host an on-site meeting and tour, but it was delayed as a result of COVID-19. On December 2, 2020, Dr. Robin Cotton, Prof. Tim Palmbach, and Lisbeth Pimentel visited the facility at 50 East Street, Springfield, MA in person. They met with Sergeant McCoy and Captain Trent Duda. Two additional trips were made to the Springfield facility. Robin Cotton, Tim Palmbach, and Lisbeth Pimentel visited again on August 31, 2021, and Robin Cotton and Amy Putvinskas visited on April 22, 2022. This report summarizes the information gathered during those visits and from documents provided by the Unit. Additional progress, changes, and improvements have likely been made by the SPDID since the last communication and are not captured in this report.

3. Springfield Police Department Identification Division

Organizational Structure

Crime Scene Unit and Photo Lab

Structure of the unit:
The Unit consists of one Sergeant (Unit Supervisor), three Detectives, and one new member in training. This is a full-time assignment for each of these personnel. In addition to on-scene crime scene analysis, they are also responsible for all aspects of fingerprint collection, enhancement, and comparison. In addition, two Detectives are assigned to conduct Digital Evidence collection and analysis. All of the personnel are under the Captain of the Detective Division. This unit provides all of these types of services within Springfield and rarely has the capacity to provide assistance to neighboring jurisdictions. Training time for new personnel is expected to take between 1 and 2 years.

Case Volume:

The supervisor of this section maintains several databases including a Crime Scene Log and a log of Latent Print Cases.

1. **Crime Scene Log**: The database has a historical record of 348 homicides within Springfield.

2. **Latent Print Cases:** In 2020 there were 353 cases requiring some form of latent print analysis associated work for this unit. This database has a historical case total of 18,300 cases involving work with fingerprint evidence.

Services Provided by the Identification Division

Crime Scene Processing:

Their general area of responsibility is to provide crime scene services for major crimes and assist Patrol functions with less serious crimes. As a CSI unit, they principally document the crime scene, and locate, collect, and preserve relevant evidence. For major cases, with significant amounts of blood evidence, they request on-scene assistance from personnel assigned to Massachusetts State Police Crime Laboratory. If a shooting crime scene involves more than the collection of expended cartridge casings, they request assistance from Firearms Examiners assigned to MSPCL. With any impression-based evidence, they also get on-scene assistance from MSPCL personnel. Moreover, if there is a need for any crime scene reconstruction, including bloodstain pattern analysis and shooting incident reconstruction they rely on assistance from MSPCL. They report that the requested help is provided and the working relationship with the State Police units is good. The Springfield Police Crime Scene Unit processes approximately 30-40 vehicles per year related to violent crime.

Latent Print Collection:

The unit processes major crimes for latent and patent print evidence. Minor crime scenes are handled by patrol personnel.

Data provided by the SPDID shows that from 2016 to 2020 the Unit analyzed 2,128 latent print cases during this time frame with an average of 425 cases per year.

Latent Fingerprint Enhancement:

The dedicated evidence processing room is primarily utilized for fingerprint enhancement and photographic documentation of latent prints. They have the appropriate equipment needed for these procedures.

Latent Fingerprint Comparison:

The unit is responsible for the management of known 10 print (and palmprints) cards generated by Springfield Police Department officers. In addition, the personnel conduct all fingerprint work utilizing ACEV (analysis, comparison, evaluation, verification) methodology. They do semi-blind verifications. That is: the latent prints and known prints are received by the

second examiner without the report. The second examiner conducts an analysis. Any disagreements go to a supervisor for resolution.

The laboratory also possesses and maintains the Automated Fingerprint Identification System (AFIS) terminal for uploading and search of developed fingerprints. This system is connected to and supported by personnel at MSPCL in Maynard. The AFIS system is being changed to the Automated Biometric Identification System (ABIS) system. New equipment for ABIS has been purchased by the State. Springfield PD will pay for the appropriate license for this equipment going forward.

Digital Evidence Collection and Analysis:
Two additional Detectives are assigned in this area. Their main workload is the extraction of digital data from cell phones and video implements such as Ring doorbells. All other digital extraction and analysis is conducted by personnel at the Massachusetts State Police Digital Evidence Examination Unit in Pittsfield.

Facilities and Equipment Controlled by the Unit:
This unit has a newly renovated, dedicated facility space located at 50 East Street, Springfield, MA. The size and type of spaces seem adequate for their current staffing and mission. There are office spaces for Detectives and the Supervisor. There is a common meeting room space as well. There is file storage in the general work area. The evidence processing room is utilized for evidence documentation and in some cases examination. This room is used predominantly for latent print enhancement and documentation. It includes a cyanoacrylate fuming chamber, chemical hood, alternate light source, camera and tripod, and eye wash station. They also have a crime scene response van with basic evidence collection, documentation, and packaging materials as well as space to process vehicles.

As required by their procedures, photos of evidence are taken in the field. Evidence is photographed again in the laboratory adjacent to measurement tools. These cameras have been recently upgraded.

There is a separate space for evidence storage. The evidence storage and management system are modern, well-secured, and has a large enough storage space for many years to come. Entrance into the evidence storage area is restricted, monitored, and requires card access. The long-term storage area is further segregated and secured and is only accessible to a few key personnel. There is a storage locker system where patrol officers and detectives can store or recover evidence to and from the main evidence storage areas.

The evidence area has recently been further organized to assist with ensuring evidence tracking, prioritization and submission for further testing.

Training:

In general, all personnel assigned to this unit seem to have good access and opportunity to a variety of training programs. Many of the programs are offered through Ron Smith & Associates. Most of the training courses range in time from a day to a week. The unit supervisor maintains a detailed training binder for all personnel in the Unit. The binders contain training dates, descriptions, and copies of Certificates of Completion for training modules as well as a syllabus for each specific training or training module.

Proficiency Testing:

As of Spring 2023, the Springfield Police personnel who conduct Latent Print examinations have each passed a Latent Print proficiency test from Ron Smith & Associates.   This is an excellent step and proficiency testing should continue for each person in the Unit once per year. There should be a protocol describing the proficiency testing program, review and evaluation of results and description of implementation of remedial training should it be needed.

Standard Operating Procedures:

At the time of the first visit of the unit Supervisor had gathered significant amounts of material describing best practices and relevant standards involving crime scene activities, latent print examination and comparison, and other related functions. This material had not been collated, modified for their specific unit, and put into a unit-specific Standard Operating Procedure (SOP). All members of the unit doing fingerprint processing and comparison had the same training and thus were doing this work in the same way. They are aware of the work being done by the Organization of Scientific Area Committees (OSAC) and they plan on creating an SOP for this work as time permits. Their stated overall goal is to implement all of the relevant OSAC Standards and related policies that apply to their work and then seek accreditation, likely through ANSI National Accreditation Board (ANAB). These standards will be drawn from standards drafted by the OSAC Friction Ridge Subcommittee as well as the International Association for Identification (IAI) guidance documents. In an effort to actively work toward that goal, they hired a graduate student intern with related educational experience. However, setting aside that time has been challenging. Likely they will need a sustainable solution to not only prepare these guidance documents but to maintain data necessary for an ongoing quality system.

Between the first visit to the SPDID and the time of this report, the unit has continued to add to and improve its documentation. Recent improvements include adding page numbers to each of the procedures and implementing the use of chemical batch numbers. Additionally, the Unit is maintaining quality control logs and has instituted the use of positive and negative quality control samples.

Review of Reports:
The laboratory made improvements in their report format and has provided examples of these reports. Some of the significant changes in the new policy, when contrasted to the manner in which they previously drafted reports are as follows:

1. They moved away from their current 8 minutiae points minimum for identification to a standard that emphasizes the overall quantity and quality of the image.
2. Their requirement for a technical review will be expanded from only cases resulting in identification and include cases with exclusion(s) as well.
3. In reports, they added the use of a conclusion of "inconclusive" when a definitive inclusion or exclusion conclusion cannot be made from a comparison.
4. The changes require that reports will address the individual conclusion of each individual fingerprint examination. Previously, unless a comparison resulted in an identification, all other examined prints were deemed "exclusions".

Certification of Personnel:
While all of the personnel in the crime scene services and latent print sections are members of the International Association of Identification (IAI) none of them are certified latent print examiners through IAI or any other relevant professional organization. In addition, none of the personnel are certified as crime scene analysts, etc. through IAI or any other relevant professional association.

Cognitive Bias Training:
They do not have formal, externally sourced, training on cognitive bias. They stated they are very aware of and have informal policies in place to help minimize the potential for bias in their work.

4. Springfield Police Department, Identification Division: Budget

The FSOB has not asked for or been provided with any specific budget information at this time. In conversations, there were references made to police department priorities that compete with Unit personnel moving more rapidly towards individual certification and/or Unit accreditation.

5. Observations

The members and supervisor of the Identification Division are actively working to enhance their skill base. They are creating, with the assistance of their intern and colleagues from MSPCL, the documentation of policies and procedures that will be needed for eventual accreditation. These documents will eventually cover all of the steps in obtaining, processing, analyzing, and reporting of fingerprint associations. This process may be ongoing for several years.

The officers we spoke with were cooperative and interested in building a better unit and were interested in the perspectives of the FSOB.

During the time span of this review, all members issuing reports of latent print comparisons have taken and passed a proficiency test.

6. Recommendations

1. The members of the Identification Division should be certified thru the IAI Latent Print Certification process, and the Laboratory should apply for and receive appropriate accreditation such as through ANAB. It may make sense to accomplish individual certifications first and then work toward accreditation. A timeline for these activities that is feasible and supported by the Springfield Police Department should be developed and budgetary support for these activities should be provided. (Certification belongs to the individual who is certified and is transportable while accreditation is the laboratory as a unit.)
2. In the interim period before certification and accreditation are achieved, the unit should continue annual proficiency testing requirements for all members of the Identification Division.
3. A review of the current space and evaluation of options to increase the laboratory working space and equipment should be conducted, with a focus on increasing resources to meet current and future needs.
4. All staff should receive formal training on Cognitive Bias issues that may impact the reliability of latent print analysis, including the importance of minimizing exposure to domain irrelevant information and other steps that can reduce the risk of cognitive bias. Additionally, the unit should seek to implement the use of blind verification processes to assist in reducing bias and ensure accuracy of both inclusions and exclusions.
5. Explore grant funding opportunities where applicable, to allow for replacement and/or purchase of upgraded equipment to increase efficiency.

7. Further Considerations

1. Based on the information gathered during this assessment, a questionnaire could be developed for other laboratories that report the results of latent print analysis and comparisons in Massachusetts. This would allow for:
    i) A more accurate count of these laboratories
    ii) A general assessment of the training and use of proficiency testing in these laboratories
    iii) A general assessment of the use of standard operating procedures in these laboratories
2 The goal would be the development of an FSOB procedure for the assessment of small non-accredited laboratories and a suggested path forward to ensure that personnel are trained and proficiency tested and that procedures are sound and are documented.
3. An assessment should also be made of the number of IAI-certified examiners throughout Massachusetts to evaluate where there is a need for support for this process to increase the speed and consistency of the examinations done throughout the state.