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FY 2002 Crime Lab Improvement Program

Cumulative Report – Final – July 30, 2005

Grantee: Town of Middlebury, Vermont, Police Department

Grant Nbr: 2003-LP-CX-K030

Final Report Summary

Situation Prior to CLIP Funds:

- Limited ability to process evidence in-house, requiring most evidence to be delivered to the Vermont Crime Laboratory for examination.
- No ability to prepare court exhibits on latent print identifications and other evidence exhibits.
- No ability to photographically enhance images for examination
- Significant delays in the investigation on non-homicide cases due to State lab backlog and failure to meet loss threshold limits for most evidence to be accepted into other laboratories
- Rudimentary ability to handle biological evidence for temporary storage and preservation pending transit to Vermont Crime Lab.

Existing Situation, Post CLIP Funds:

- Enhanced ability to process evidence in-house; no evidence submitted to the Vermont Crime Lab for latent print or track/trail examination.

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- Providing a service to area rural agencies in processing evidence on property crimes that heretofore met with significant delay and/or failed to meet lab thresholds for acceptance.
- In-house ability to prepare and present static and dynamic exhibits for hearings.
- Enhanced ability to document specimens photographically, duplicate images onto “working” media for digital enhancement; adopt standards of the International Association for Identification for work with digital media.
- Reduce delays in examinations – little or no delay in processing evidence and conducting latent print and other physical match examinations; eliminate unnecessary delays in criminal investigations.
- Enhanced credibility in regional court for the handling and processing of evidence.
- Significant reduction in risk of contaminating biological evidence while storing and preparing it for transit to the Vermont Crime Lab.

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CLIP is part of a multi-phase development and improvement program of the Middlebury Department to improve the ability to manage and process evidence. The development phase that included CLIP was the lynchpin in the process – providing equipment for a newly constructed lab facility in a new police building. The Town of Middlebury has demonstrated a commitment to the overall project by local funding initiatives since 1992 and continuing beyond CLIP into 2006.

All stated goals and objectives of the CLIP program have been achieved.

Project Background and History

In 1991 there were changes in the administration of the Middlebury Police Department. A broad review of department operations included an assessment of the capabilities of the department in the field of criminal investigation. This assessment revealed a number of shortcomings:

- Many criminal investigations were not supported by physical evidence;

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- There was little or no forensic processing of crime scenes;
- Staff had little or no training in the most rudimentary processing techniques, such as ‘brush and powder’ latent print processing;
- Laboratory thresholds relegated most evidence collected at scenes as either low priority or failing to meet acceptance thresholds; and for evidence accepted by laboratories, the turn around time was excessive (6 - 12 months and more);
- There was little capability in the region for mutual aid support in processing crime scenes and examining evidence.

As a result, many crimes went unsolved, evidence was mishandled (complicating lab examination), and excessive time passed while awaiting examination results. Due to media attention in both entertainment and news, the public had increased expectations on the capability of the police to process crime scenes and examine evidence in a timely manner.

The Middlebury Police Department determined that developing an in-house lab for handling and processing the bulk of evidence recovered at crime scenes (latent print, physical match, and DNA) was a long term priority. However, in a rural area without a lot of violent crime, resources

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were insufficient to support this endeavor in the short term. Therefore, a long term, multi-phase plan was developed to correct this deficiency.

Crime Lab Development and Improvement Plan

A multi-year, multi-phase plan was developed to guide the process. The intent was to follow the laboratory scheme in use in some areas of the former Soviet Union. While nothing “Soviet” was ever a model of efficiency, in this case, the concept appeared to work very well. A large well-equipped regional laboratory handled evidence from major crimes only. A series of smaller, local, satellite labs handled evidence from property crimes and other crimes. The model that seemed to work was letting the regional laboratories focus on serology, trace evidence, firearms, physical match, impression evidence from major crimes predominantly; while the smaller laboratories processed evidence from the much more prevalent crimes such as burglary, fraud, larceny, and related crimes. This reduced the burden on the major labs and left the local, more accessible labs to deal primarily with latent print, impression, track and trail, and physical match evidence.

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Phase I – 1992 - 2002

- Train all staff in basic crime scene and evidence processing techniques.
- Designate space in the existing police department building to be used as an evidence processing (latent print) lab.
- Identify and train at least one person as a fingerprint and evidence technician and latent print examiner.
- Acquire new equipment and supplies and upgrade older equipment to support latent print processing .

The Phase I objective was to increase the department's ability to collect and process evidence to support criminal investigations and to reduce the need to submit specimens to the Vermont Crime Lab or other labs. An ancillary effect was to assist other area rural agencies in processing latent print evidence to reduce the turn-over period and reduce the need to submit evidence on minor cases to the state lab.

Phase I was completed primarily with local Town General funds.

Phase II 2002-2005

- Continued professional development of a laboratory technician;

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- Acquisition of equipment to enhance laboratory capability in terms of latent print processing; preserving biological samples for DNA processing elsewhere;
- Acquisition of equipment to aid in courtroom presentations and staff training.

Phase II objectives were to reduce the backlog of local and regional evidence processing and reduce reliance on the state lab and therefore reduce the backlog of evidence the state lab must process. Another objective was to enhance and expand the capability of this department to process evidence, further reducing reliance on the state lab. Phase II was funded primarily with CLIP funds.

Phase III 2002 – 2005

Construction of a new laboratory with appropriate space and health and safety features.

Phase III was a capital modernization project. In 2004, a entirely new police facility was constructed, included a 4-room laboratory with cold storage, long term evidence storage, and two examination rooms.

Phase III was funded primarily with local Town general funds.

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Phase IV 2004-2006

This was a Lab Support phase, and is in-progress.

- Advanced technical equipment for crime scene processing and documentation;
- Acquisition of computer crimes computers and equipment for the lab;
- Crime Scene mobile vehicle for command and control and field processing/examination.

Phase IV was jointly funded by grants, private sources, and Town General local funds.

Phase I was successful. Though the “lab” was very simple and rudimentary, a number of criminal cases were successfully investigated and prosecuted due to latent print identifications and the successful collection and processing of evidence from crime scenes. During Phase I, equipment was acquired to assist in processing and a technician received initial and advanced training in the field of latent print processing and identification.

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The Middlebury Police Department also received evidence from area rural agencies with a request to process the specimens for latent prints as well as to perform latent print examinations. A number of latent print identifications were effected for other rural towns.

With an increased awareness of crime scene processing techniques and the importance of evidence to support criminal investigations, came an increase in the number of crime scenes processed and an increase in the volume of evidence collected for examination. The existing facility and resources were insufficient to process the volume of evidence. In addition, the Department had only a rudimentary lab camera system, and no means to process photographs of specimens, relying instead on private or state labs for photo enhancements, court exhibits, and training material.

In 2001, the planning process began to study either a complete renovation of the existing police building to accommodate an improved laboratory, or to seek support for the construction of a new facility. Planning also took place in conjunction with the facility study on what

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equipment would be needed to enhance lab operations and what source of funds could be developed to support this initiative.

While the facility issue was being researched, the Crime Lab Improvement Program was announced (2002). The Middlebury Police Department sought and received funding under this program to fund Phase II of the Middlebury program. The CLIP grant funded the acquisition of equipment for the laboratory project.

In May 2003, local funding was approved for a new police facility in Middlebury that included a laboratory.

In early 2004, concurrent with the completion of the new facility, equipment funded by the CLIP grant was acquired and installed. This included:

- A NIKON digital lab camera system
- A high- speed, high capacity off-line computer dedicated to image enhancement, complete with the latest version of Adobe

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Photoshop software, along with a work station to support the system;

- Chemical, vapor, and powder fuming chambers;
- An alternate Light source (Poli-light);
- A forensic drying cabinet for biological samples;
- Color and black & white printers for exhibits, examinations, and training.

The lab was opened and equipment began operation in May 2004.

In 2004, Phase IV of the Crime Lab Improvement Program commenced with the acquisition of a mobile crime scene vehicle and command post and the acquisition of field equipment to make the link between the crime scene and the lab. Further funding, from a variety of other sources, will finance other Phase IV improvements.

Exhibits – Tangible Examples of the CLIP Grant and overall Lab Improvement At Work

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March, 2004 – a series of events occurred in a dense neighborhood in Middlebury. The events involved the burglary of an area police officers home and the theft of his duty weapon; the burglary and attempted arson/destruction of another home which involved the theft of several firearms and nearly \$40,000 in damage; and a drug related multiple shooting.

Footwear evidence was preserved and photographed at the burglary scene. A number of specimens were collected and brought to the Middlebury Police lab for examination. Evidence designated for DNA processing was sufficiently dried and preserved and transmitted to the Vermont Crime Laboratory. Within a week of the event, a suspect was identified on three separate latent prints developed by different processes in the lab, leading to the subsequent seizure of the suspect's footwear. Bootprint impressions recovered at the scene were subsequently identified as impressions of the suspects boots. This quick turn around of evidence led to the recovery of most of the stolen firearms (including the police officer's).

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Critical to the success of these investigations was the ready availability of the local lab, not encumbered by threshold priorities. Equipment acquired through the CLIP grant was utilized for the processing and subsequent identification of the suspect. None of this evidence (with the exception of the DNA evidence) required submission to other labs.

In the multiple shooting case, digital photography equipment and other lab equipment was used to reconstruct the crime scene, preserve bloodstain pattern evidence, bullet trajectory evidence, and process specimens for latent prints. Evidence in this case helped support the subsequent arrest of three perpetrators for the armed assault.

(Middlebury Police Incident Numbers 05-742; 05-754; 05-781; 05-992)

Conclusion and Assessment

The broad objectives of the Crime Lab Improvement Program and those of the Middlebury Police Department were met by this project.

The National Institute of Justice CLIP grant provided important resources to the Middlebury Police Department in the overall Crime Lab Improvement Program. As the LAB capabilities continue to improve, we

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expect local and area use of the Lab for “routine”, non-priority cases to expand, relieving the Vermont Crime Lab of some of their backlog and burden. We are continuing to seek a partnership with the Vermont Crime Lab, to provide backlog assistance with primarily latent print evidence. To further this objective, the Middlebury Police technician, with the full logistical support of this department, has recently become the President of the New England Division of the International Association of Identification and is developing a close working relationship with Vermont Crime Laboratory staff.

Thomas Hanley

Chief of Police & Grant Administrator.