LAW ENFORCEMENT ASSISTANCE ADMINISTRATION (LEAA)

POLICE TECHNICAL ASSISTANCE REPORT

SUBJECT: Planning for the Establishment of a Crime Analysis Unit

REPORT NUMBER: 77-021-129

FOR: Austin, Texas, Police Department
Population 291,000
Police Strength
  (Sworn) 462
  (Civilian) 170
    Total 632

Square Mile Area 90.9

CONTRACTOR: Public Administration Service
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CONTRACT NUMBER: J-LEAA-002-76

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Table of Contents

FOREWORD

This report was prepared in response to a request from the Austin, Texas, Police Department for LEAA technical assistance in planning for and establishing a Crime Analysis Unit in that department. Lt. Cliff J. Macsas was assigned as consultant for the project as a result of a specific request for his services based on his experience as commander of the Dallas, Texas, Police Department's Crime Analysis Unit.

Other persons involved in processing this request were:

Requesting Agency:	Mr. W. Frank Dyson Chief of Police Austin, Texas
State Planning Agency:	Mr. Darwin D. Avant Criminal Justice Division Office of the Governor of Texas
Approving Agency:	Mr. N. T. Fisher Police Specialist LEAA Region VI (Dallas)
	Mr. Robert O. Heck Police Specialist LEAA Central Office of Regional Operations

I. INTRODUCTION

The Austin, Texas, Police Department is seeking federal funding for an Integrated Criminal Apprehension Program (ICAP), which will be supported by an effective Crime Analysis Unit. As part of this effort, members of the Planning and Research Division of the Austin Police Department have visited several other departments' Crime Analysis Units, including the one in the Dallas Police Department, which impressed them because it provided the type of service which they envisioned coming out of their own unit. Technical assistance in planning for the unit, including setting up its files and procedures, presumably would help their unit to achieve the level of efficiency needed to support the ICAP program.

Specifically, the consultant was to accomplish the following technical assistance tasks.

- Meet with members of the Planning and Research Division to review and evaluate their expectations of the Crime Analysis Unit's role in the ICAP program.

- Meet with members of the Planning and Research Division and the Crime Analysis Sergeant to review and evaluate the procedures and activities of the unit which have already been implemented.

- Advise the Director of Planning and Research and the Sergeant regarding the establishment of Criminal Analysis files and procedures which would allow the unit to perform the necessary support functions for the ICAP program and the department.

During April, 1977, the consultant spent three days on-site in Austin, after which the Director of Planning and the Sergeant of Crime Analysis traveled to Dallas, where the consultant spent one day going over the working files of the Dallas, unit and explaining procedures to them. The following members of the Austin Police Department were interviewed:

- Mr. Frank Dyson
  Chief of Police

- Mr. Bob Chapman
  Director of Planning and Research

- Sgt. Bill Schwettman
  Supervisor of Crime Analysis

- Ms. Anne Gonzales
  Analyst, Planning and Research

II. UNDERSTANDING THE PROBLEM

The goals of the Integrated Criminal Apprehension Program (ICAP) which the department is instituting and which must be supported by a full-time Crime Analysis Unit are:

1. To identify crime patterns and career criminals in Austin in order to recognize and anticipate trends, thereby facilitating apprehension of criminals.

2. To develop and implement a program of crime information dissemination and feedback to both the Uniform Division and Criminal Investigation Division for the purpose of enhancing the department's detection and apprehension capabilities. This will naturally involve the identification of career criminals, for the police as well as for the Travis County District Attorney's office, in order to facilitate the apprehension and prosecution of career criminal cases.

3. To develop strategic planning for patrol resource allocation in order to better utilize manpower in recognized areas of greatest need.

4. To identify characteristics of victims as well as perpetrators of crimes and of property lost through crime, in order to target in on areas where crime prevention techniques can be utilized most effectively.

The police administration in Austin recognizes that the goals of ICAP can only be met by a functioning Crime Analysis Unit which has the capabilities of routinely identifying and analyzing crime patterns and trends and assisting in the identification of suspects. It was for the purpose of effectively establishing these functions that technical assistance was sought.

At present, the Crime Analysis Unit is located organizationally within the Planning and Research Division. A sergeant has been assigned to establish the unit, which he will eventually supervise. Plans call for assigning two police officers and an analyst to the unit, which is housed in an office located beside the Patrol detail room.

The department has already decided on the four specific categories of crime which the unit will focus on -- robbery, burglary, rape, and motor vehicle theft. These crimes were selected because they comprise over 50 per cent of all Index crimes in Austin. Small commercial maps have been purchased and placed around the walls of the unit's office, one map for each of the crime categories. Colored pins are being used to designate the location of crimes within each category, but the maps are not posted

2

regularly and do not serve any useful purpose at this time.

Offense reports are stacked on open shelves and are separated only according to crime category. There has been no attempt to set up files by date or geographic area, and if an offense report has to be referred to after it is pinned, it is necessary to leaf through the entire stack. The sergeant had initially set up some known offender and hazardous location files, from which he intended to produce some routine bulletins; however, the police administration had correctly assumed that the function was more in the nature of intelligence than crime analysis and ordered the procedure discontinued. There currently is no routine output from the Crime Analysis Unit.

The consultant also reviewed the unit's data collection process, which starts when the sergeant receives an extra copy of some offense reports. The department uses a snap form-type report, but all of the copies in the form are presently being used by other units. The Crime Analysis Unit receives a typed copy which is made by the Records Division, three to five days later, but are indications that the unit is not receiving all reports, only those which come to the attention of the sergeant. The unit also receives copies of booking cards but no arrest reports; it does not receive any investigative supplement reports.

The political climate at the Austin Police Department, which is in the process of updating many of its philosophies and procedures, seems receptive to the concept of crime analysis. The department's efforts toward establishing a successful Integrated Criminal Apprehension Program is indicative of the present administration's attitude toward improving the efficiency of the department for the benefit of the citizens of Austin. While the general attitude of the people involved with establishing crime analysis is good, there were some question on the part of the unit's sergeant regarding where crime analysis has been placed organizationally since he fears that Planning and Research has a negative image among operational officers of the department which would have an adverse effect on his unit's acceptance. The police administration, aware of the sergeant's fears and a bit troubled by them, asked the consultant to address that particular problem and attempt to reconcile the sergeant's attitude toward Planning and Research. While the administration is convinced that the sergeant has the necessary qualities to perform well as the Crime Analysis Unit supervisor but at the same time is adamant about the unit being attached to Planning and Research.

The greatest problem encountered in Austin was that while the department is committed to the concept of crime analysis and has organizationally formed one, there has been no serious effort on the part of the unit to establish itself and begin operations. This is probably because the sergeant in charge had never seen a Crime Analysis Unit in operation and was not sure how to proceed. This should not be taken as an indication that the sergeant is not qualified for the job; to the contrary, the consultant found him very well qualified but simply on unfamiliar ground.

III. ANALYSIS OF THE PROBLEM

During the consultant's four days with the personnel of the Austin Police Department who will be responsible for establishing the Crime Analysis Unit, much of that time was spent discussing and reviewing data sources, collation process, and support files. All of the observations and recommendations in this report are based on the consultant's own experience with crime analysis gained through establishing a working unit in the Dallas Police Department.

The three board areas in which the Austin Police Department desired technical assistance recommendations were:

- Identify the data sources needed to supply an ongoing Crime Analysis Unit

- Establish files and procedures which will allow the unit to begin operation and provide maximum support to the ICAP grants.

- Ensure that crime analysis becomes a viable part of the departmental structure, both at the operational and staff levels.

These areas include, of course, the basic procedures for establishing any new Crime Analysis Unit. Because the entire ICAP principle in based on the premise that there is a functioning Crime Analysis Unit, the ability to support ICAP is inherent in a properly established unit.

Data Sources

There are many data sources which crime analysis may draw upon from time to time, but there are three basic ones which are used to construct working files and provide analytical data. These three sources are the offense report, investigative supplement report, and the arrest report. The offense report and investigative supplements are used to identify and analyze crime patterns and trends, while the arrest reports are used to construct suspect files for the possible identification of perpetrators.

To be sufficient, the offense report must contain such basic information about the crime as classification, location, time, victim information, object of attack and suspect information, including modus operandi(MO). The investigative supplement should include any additional information which has come to light during the course of the investigation. The arrest report should provide information about the physical descriptions, MO, vehicle, nickname, and address of the arrested person. If the reports contain these basic data elements, the Crime Analysis Unit can build the necessary files to identify patterns and trends, analyze them, and provide operational units with allocation information and identify possible suspects.

4

Of course, the timeliness of these data elements are of great importance. If the unit cannot get the data quickly and systematically, then its degree of sufficiency loses in importance since the unit will not be able to provide the needed operational information in time for adequate response. The time lapse between reporting of crime and the Crime Analysis Unit receiving the report must be measured in hours rather than in days, if the unit is to provide timely information to Patrol. The timeliness can be ensured by adopting procedures which automatically forward copies of the reports when they are received by the Records Division. If the department intends to establish a serious Crime Analysis Unit and achieve any degree of efficiency, it must pay the price of ensuring timely and sufficient data.

Crime Analysis Procedures

The most basic crime analysis procedure and certainly the most traditional is a spot map operation. The spot map serves several useful functions. First, it graphically displays problem areas. Second, because certain data elements concerning the offense can be recorded on the map, it becomes a working data file. A spot map operation also ensures that each offense report will be read and tabulated if the map is kept updated. The spot map is the simplest way to determine geographically based crime problems. It is a useful tool for any unit and an essential one for a manually operated unit such as the one being established in Austin, Texas.

Just as important as a spot map is the need to establish a good working file of offense reports. The reports should be filed by geographical area such as beat or district in order to be readily available and allow the analyst to quickly relate them to the spot map. The reports should be maintained for a minimum of 60 days. If colored tabs are utilized, offenses containing certain data elements can be extracted from the files relatively easily, i.e., offense with suspect description available. Of course, supplemental information must be filed with the offense report as soon as such information becomes available.

The unit must also construct suspect files (from arrest reports) that will allow for the identification of possible suspects. If the unit does not have the benefit of a computer or mini-computer, then index cards must be made to cross-index such things as suspect's name, nickname, address, physical description, vehicle and unique MO's. In order to eliminate clerical time, the unit should consider utilizing a key-sort card system (see Appendix A) or the suspect file. If is from the suspect files that the crime analyst must develop the ability to identify career criminals for the purpose of satisfying ICAP objectives.

The analyst, as a matter of routine, should check daily for geographically based patterns on the spot map and read offense reports to determine if any patterns develop which are not geographically based but rather similar in MO or suspect descriptions. When patterns are detected,

the analyst must gather all of the pertinent information regarding the pattern, make determinations about the pattern if possible, and provide the information to the appropriate operational unit in the form of a problem profile. The profile should include the identification of possible suspects if such information is available.

The duties of the crime analyst must be flexible enough to allow the unit to fill special requests from its working files such as searching for stolen property or monitoring seasonal problems.

When the unit has set up its files as described and adopted routine procedures for processing data, it will be in a position to satisfy the department's needs for crime information in whatever form is required. The unit will certainly be able to support the objectives of ICAP.

Acceptance of the Service of Crime Analysts

The concept of a formal crime analysis operation is fairly new; however, the practice of crime analysis is· as old as the police profession. Police officers have always attempted to correlate offenses and offenders. The practice has simply been formalized and given greater resources and data, and consequently it is not difficult for police officers to accept and approve of a crime analysis unit. Generally, initial acceptance involves nothing more than informing the department of the crime and its service. This is simple enough; however, it is critical. Police tend, as a rule, to be suspicious of operations that they do not understand.

While initial acceptance may come easily, trust and confidence will only come after the unit has proven itself able to produce good, useful information routinely. New crime analysis units usually feel frustrated in the beginning because they sense a lack of confidence on the part of the line units. This is a normal reaction from line units and can be overcome if the unit handles its business competently and continues to produce good, solid crime analysis.

IV. FINDINGS AND CONCLUSIONS

The following conclusions were reached after completion of dis-
cussions with and observations of the Austin Police Department's Planning
and Research Division.

- The organizational location of the Crime Analysis Unit is
  correct. The plans for staffing and adequate, and com-
  petent supervision has already been provided for. There
  was some apprehension on the part of the unit supervisor
  concerning the unit being organizationally located in
  Planning and Research; he feared that some officers might
  be reluctant to utilize crime analysis due to the staff
  image of Planning. These fears were groundless. If there
  is an image problem with planning, it is due to the fact
  that most officers are not familiar with it because they
  have no occasion to use or observe that division's services.
  The Crime Analysis Unit will overcome that problem. By its
  very nature, functioning properly, it will enhance the image
  of Planning and Research. When the Austin supervisor had an
  opportunity to observe a unit in operation in Dallas, he
  agreed that Planning and Research was the proper location for
  the unit.

- The physical facilities are very good. The unit will be housed
  next to the patrol detail room and has adequate space for
  desks, files, and spot maps.

- The present method of receiving offense reports in crime
  analysis is not adequate. The unit does not receive all
  reports, and those that are received are usually three days
  late.

- The unit does not receive any investigative supplements.
  There has been no procedure adopted to ensure the unit
  receiving the supplements, and there are not yet plans to
  adopt such a procedure.

- The unit does not receive jail arrest reports; however, it
  does receive booking cards. The cards contain most of the
  information needed and can be utilized in lieu of arrest
  reports.

- The present method of filing offense reports is not adequate.
  The offenses are simply separated by crime type and stacked
  on an open shelf. If there is a need to retrieve a report or
  relate it to the spot map, all of the reports must be sorted.

o The present maps in use are not adequate. They are small commercial maps, and the street names and block numbers are barely readable. The colored pins used to indicate crime categories are not being kept up to date.

o The unit does not have any type of suspect files. There is no way to relate a suspect's description to a known offender. This applies to his MO and vehicle as well as his description.

o The unit is not producing any routine analysis of trends and is not attempting to identify patterns or disseminate information to line units, largely because no adequate files have yet been established.

o The city and police administration are committed to the concept of ICAP and sincere in their desire to establish a Crime Analysis Unit; however, there is some apprehension on the part of the Planning and Research Division concerning the eventual acceptance of the Crime Analysis Unit by the line units of the department. This apprehension is a natural one that is experienced by any new unit. Acceptance will come naturally as the unit begins to function and to supply useful information routinely. In order to expedite and main-tain that acceptance, the staff of the Crime Analysis Unit must constantly monitor its processes and functions to ensure that the user needs are really being fulfilled.

V. RECOMMENDATIONS

In connection with the establishment of a Crime Analysis Unit within the Austin Police Department in order to enhance support of the forthcoming Integrated Criminal Apprehension Program, the following are recommended:

1. That the department formulate and adopt a procedure whereby the Crime Analysis Unit will receive copies of all offense, investigative supplements, and arrest reports. In order for the information to be timely and complete the Record Division should adopt procedures to ensure that a copy of all of these reports are sent to the unit. Such a procedure may very well entail some expense and will increase the workload of the Record Division; however, the acquisition of that information is vital to the crime analysis operation. If the unit does not receive this needed information in a timely and structured fashion, it is not likely to ever be able to achieve any acceptable level of efficiency.

2. That the unit read and tabulate all index offenses for the purpose of crime trend analysis but limit its pattern identification to Robbery--Commercial and Individual, Burglary--Commercial and Residential, Auto Theft, and selected Sex Crimes.

3. That the unit institute and maintain a spot map operation. The present maps in Crime Analysis are not adequate for such an operation and should be replaced with larger maps; the unit should maintain six maps utilize them to cover the following topics:

   A. Robbery (commercial and residential)

   B. Residential burglary

   C. Commercial burglary

   D. Auto theft/recovery

   E. Sex crimes

   F. Special project or problem map

   The maps should reflect police districts and sectors. The location of each offense should be noted with a gummed spot or an acetate overlay rather than with a colored pin. The

9

spots can be color coded to designate the month, and other data such as date and type of location can be recorded on the spot.

4. That the Crime Analysis Unit establish working files on offenses to be analyzed for problem identification; these files should be organized by crime type and police district. The file should be maintained for a minimum of the last two months and records should be filed in expanding files which can be stored in the file cabinet. This allows the analyst to remove the entire file in order to access it. Colored tabs should be utilized to indicate various data elements in the offense reports, such as suspect or vehicle information. These tabs will allow the analyst to pluck those particular offenses from the files without a lengthy search.

5. That suspect and suspect vehicle files be constructed and maintained by the unit. This information should be obtained from the jail arrest cards. The files should note the name, address, age, sex, race, physical descriptions, vehicles, and unique MO elements of persons arrested for robbery, burglary, narcotics, sex crimes, or carrying weapons. The files should be cross-indexed on file cards or a key sort card system (see Appendix A) utilized. All suspect and vehicle descriptions listed on the offense reports should be checked against the suspect files for possible identification.

6. That the unit begin conducting trend analysis and pattern identification and analysis as soon as the data is available and the maps and files are established. The analytical process should include periodic crime trend analysis, pattern identification--both geographic and similar offense, time frequency charts, victim similarities, possible suspect identification, and target projections when possible. These are the basic analytical processes which must be performed by the unit.

7. That the Crime Analysis Unit prepare a monthly district crime profile to be disseminated at the end-of-the-month changeover in order to facilitate the district officer's understanding of crime and problems on the watch he is going to. All pattern identification should be disseminated to the proper person as soon as the unit can provide the necessary support information.

8. That the Planning and Research Division prepare an information bulletin or memo to all members of the department informing them of the establishment, purpose, and services of the unit. It should be signed by the Chief of Police.

9. That an informative lecture concerning the concept, operations, and services of the Crime Analysis Unit be included in the curriculum of the Recruit Training Program.
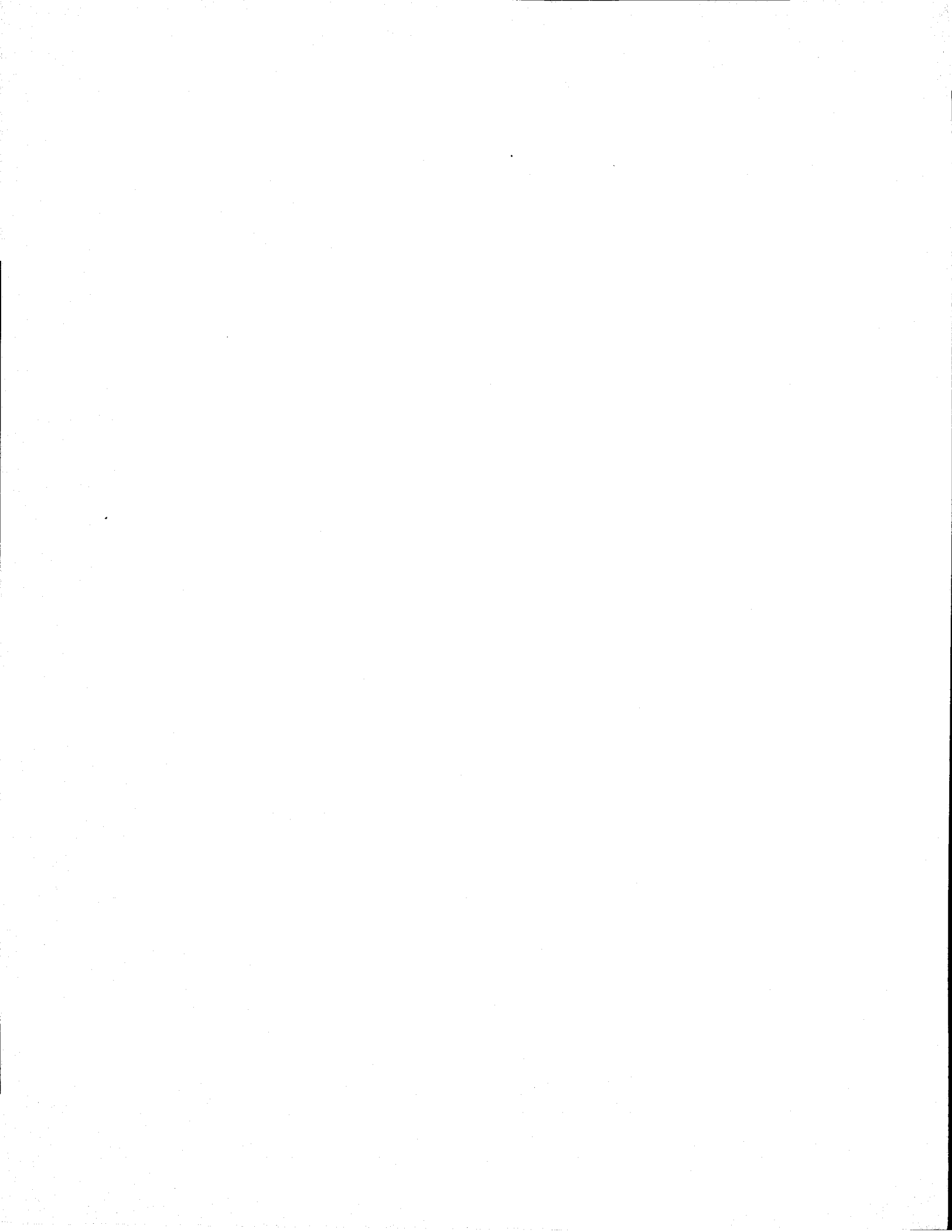
Appendix A
Key-Sort Card Files

The key-sort card system has been in use for many years as a simple but effective data element retrieval means. It has been widely used by public libraries and, prior to the advent of computerization, provided the only mechanical means of sophistication beyond card-by-card manual/ optical search. The system is very adaptable to a manual crime analysis system. The medium used is simply a card with prepunched holes around the edges and one corner clipped for the purpose of aligning the cards right side up. Each of the holes represents a different data element. The card is validated for the file by notching out the appropriate hole or holes with a hand punch, and additional information or reference information can be written on the card. Retrieval is accomplished by inserting a mechanical sorter (spindle) through the deck in the appropriate hole. When the spindle is raised, all of the notched cards fall out. The cards can be adapted to many different data elements, such as suspect descriptions, MO elements, or vehicle descriptions. On a card printed with vehicle data, the holes on one edge of the card represent vehicle make and the holes on the other side represent color. One end of the card has holes representing year model, and the holes at the opposite end represent the police district in which the vehicle was stolen or found. Pertinent data concerning the vehicle is written in the center of the card. If the analyst needs to identify a 1973 gold Chevrolet, he places the spindle into the deck of cards at the hole above "Chev." When the spindle is raised, all of the Chevrolet cards fall from the deck. He then places the spindle in the hole above "gold" and extracts the gold Chevrolets. If necessary, he can use the spindle to search out the 1973 model of gold Chevrolet. The analyst can search through 1,000 cards in a very few seconds. The file is quick, easy to maintain, and inexpensive.

The cards can be used for many different files. To avoid the expense of preprinting for each file, the analyst can choose to print a number for each hole rather than actual data elements. The analyst can then assign a code value to the numbers and use the same printed card for many different files. File changes can be made by simply changing the number codes.

If more data elements are needed, it is possible to have the cards made with double rows of holes. This generally is not necessary when numbers are used, since it is not necessary to incorporate so many data elements on one printed card.

The size of the cards used is optional, and 4- by 6-inch and 5- by i-inch cards are common. The size selected should be one that fits available filing space. The cards need not be filed in any order except that each file or system must be stored separately. The cards can be printed and drilled at most commercial print shops. The inexpensive notching device and spindle can be purchased through office supply companies.

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