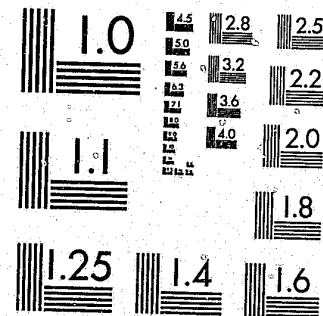


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**PROCEDURE FOR THE  
PERFORMANCE OF PRECINCT  
CRIME ANALYSIS**

(SECOND EDITION)



**OFFICE OF MANAGEMENT ANALYSIS  
CRIME ANALYSIS SECTION**

ROBERT J. McGUIRE, Police Commissioner

76870

BM 49A (11-80)

**PROCEDURES FOR THE PERFORMANCE OF  
PRECINCT  
CRIME ANALYSIS**

**Second Edition**

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**NCJRS**

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**ACQUISITIONS**

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## Preface

The procedures and techniques presented in this manual present a synthesis of current procedures in many commands within the New York City Police Department. This manual organizes what the Crime Analysis Section considers to be the best features of these techniques into a System for analyzing crime data manually. All precincts are encouraged to reevaluate their crime analysis efforts, comparing their present efforts in terms of usefulness to command decision making, with the system presented in this manual.

Included in this manual are the MINIMAL BASELINE BOOKKEEPING PROCEDURES which must be performed by each precinct as per Administrative Guide Section 316-29 (effective 4/1/77). Inasmuch as analysis capabilities are greatly affected by the amount and quality of the data captured, precincts should go beyond the mandated procedures where these procedures are insufficient for their needs.

Any questions, clarification, or suggestions concerning the procedures contained in this manual should be referred to the Crime Analysis Section of the Office of Management Analysis (374-5076). The Crime Analysis Section also provides, upon request, technical assistance in establishing and upgrading precinct crime analysis efforts.

The mention of "crime analysis" within the Department brings to mind such a wide array of procedures that it is best to begin by defining what crime analysis IS NOT. It is not purely record-keeping, nor is it simply a procedure for compiling reports for higher commands. While this manual will cover procedures that entail keeping records and assist in the compilation of reports, it should be kept in mind that these responsibilities are not the primary objective of an efficient and effective precinct crime analysis effort.

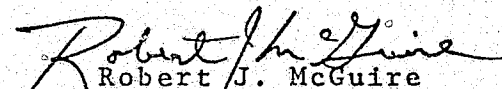
For crime analysis to succeed it must be viewed as a system. Data is collected and collated. It is then analyzed in terms of accessing operationally useful information, and deployment and tactical decisions are then made and evaluated in terms of their relative effectiveness. In short, crime analysis represents a rational system of data analysis for enhancing and validating decision making relative to crime reduction efforts. ✓



## FOREWORD

City agencies are not only responsible for cooperating with existing programs for New York's fiscal recovery, they must also develop management practices which continually reexamine the use of critical resources. Our department, as we all know, should be no exception to this policy. Every officer effectively deployed, every tactic carefully selected, every investigation aggressively pursued magnifies the usefulness of our limited resources.

In keeping with these objectives, I wish to direct your attention to this manual. These procedures give each precinct commander an efficient and effective tool for identifying local crime patterns. This detection process is step #1 in any Crime Control program. Deployment and tactical decision-making is step #2, and is greatly influenced by step #1. Additionally, these techniques allow each command to monitor and evaluate the impact of its efforts. The proper use of these tools is of the utmost importance in a continuing effort to use our resources wisely.

  
Robert J. McGuire  
Commissioner

## INTRODUCTION



# I. PRECINCT STAFF RESPONSIBILITIES

Precinct crime analysis is a staff support function that must be supplied to each precinct commander. It forms a base from which operational decisions can be made by the precinct commander and various responsible supervisors (i.e. operations lieutenant, anti-crime supervisor, ....etc.). The specific decisions the precinct commander and his subordinates will be called upon to make will vary from precinct to precinct and from day to day. However, the following process outlines the general situations requiring an effective crime analysis capability:

1. Periodically, supervisory personnel will require information detailing the current crime situation within the precinct.
2. Through the examination (analysis) of comparative statistics relating current to prior crime complaint incidence, a supervisor, with the assistance of crime analysis personnel, should be able to identify the precinct's current crime situation (problems). It should be noted that these situations are not restricted to a single variable such as type of crime or location but ideally entail multiple variable correlations which allow specific target development.
3. For these priority crime situations, more information will be needed so that decisions can be made, assigning particular personnel to specific problems. Additional information is also necessary for any attempt to formulate street tactics (time specific anti-crime target zones) or even general precinct-wide strategies (crime prevention officer's use of victim data for public education program). Some questions which are likely to be asked for the particular problem situations are:
  - a) Do incidents occur in a specific area? (Attempt to maximize interception odds and reduce response time.)
  - b) Do incidents occur at a specific time? (Maximize utilization of personnel through time specific assignments).
  - c) Are there any similarities in "M.O." found when recent complaint reports are examined? This covers almost any similarity with the exception of time and location which are covered in a and b. (M.O. = stake outs, case stacking).

- d) Are there any peculiarities associated with the area/s of highest crime incidence? (Bldg. types affording particular target possibilities, etc.)
- e) If there have been any arrests for this type of crime situation can the suspects be connected to similar prior incidents? Where are the suspects from? (P.I.U. followup)
- f) Quite literally, any combination of the above.

4. After reviewing the pertinent information obtained from precinct records the superior should have the information necessary to evaluate the current assignments of precinct personnel for possible re-deployment or modification of tactics.

Obviously, to answer these questions some effort above that of purely keeping records and gathering statistics is necessary. However, without meticulous attention to such detail, we cannot begin to answer these questions. Precinct Crime Analysis then, consists of several distinct steps:

- FIRST-** Those techniques and procedures developed to maintain, summarize and extract the information necessary to answer the questions a precinct commander or his designated subordinate are likely to ask when conducting a periodic review of the precinct's crime situation.
- SECOND-** the less well defined procedures used by Superior Officers, often with the close consultation of various precinct personnel, to arrive at a particular decision based on the statistical data supplied as a result of the first step.
- THIRD-** Procedures for evaluating the effectiveness of the decisions made in step two.

## II. PROCEDURAL OUTLINE

To adequately perform his tasks, the precinct crime analyst needs to develop:

- 1. Efficient and useful data collection and organization procedures.
- 2. Procedures for performing crime analysis.

- 3. Procedures for translating the results of analysis into deployment and other types of decisions.
- 4. Procedures for obtaining feedback from other precinct personnel so that the operational use of the data can be evaluated and information collection and/or analysis procedures modified.

These procedural steps are present in relation to one another in Figure 1.

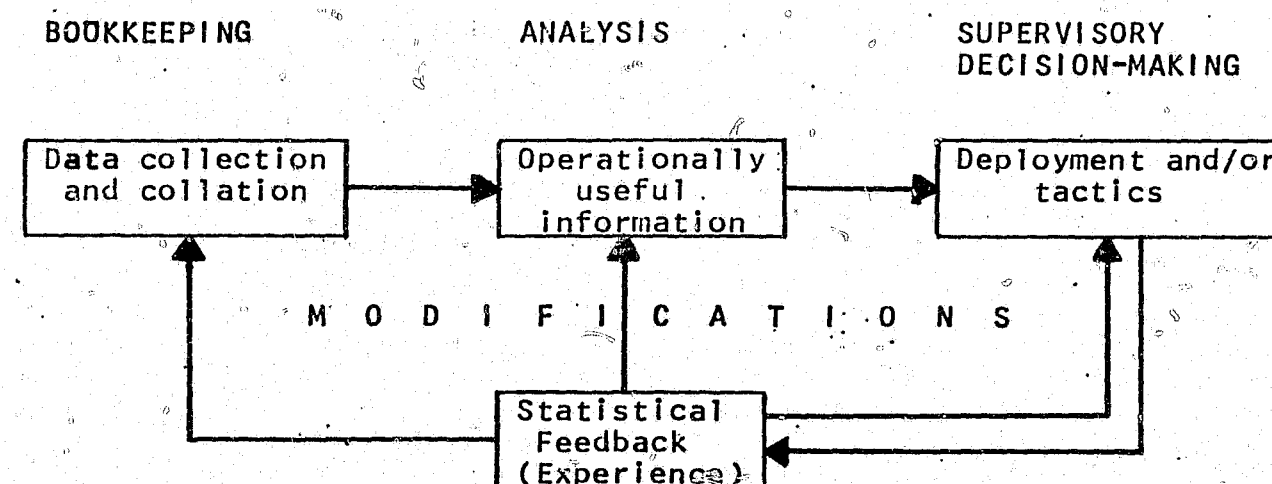


Figure 1.

It is important to note that Crime Analysis is a cyclical process (self-improving). As the analyst gains experience and familiarity with the data and system (including feedback), problem recognition and monitoring capabilities are increased. This in turn increases the quality of the data, resulting in an increase in the effectiveness and efficiency of the operational use of the information. The continuing feedback allows the analyst to evaluate any changes in the comparative effectiveness of the data and analysis techniques and to make modifications which will maintain the high operational usefulness of the data and increase the effectiveness and efficiency of deployment and/or tactics.

## III. THE CRIME ANALYST

Since the crime analysis function is a staff support function, potentially affecting the activities of the entire sworn force of each precinct, it is essential that the analyst:

- 1. Be meticulous, i.e., precise in handling the data; thorough, neat, and clear in his record keeping techniques.

2. Have analytic aptitude, i.e. thinks logically, can synthesize (organize and group data in meaningful ways), and can hypothesize (determine possible pattern developments which may exist in the data).

The analyst should also be able to communicate his findings clearly. Therefore, a facility for report writing is an important skill.

Each crime analyst will bring varying amounts of talent and knowledge to his job; this being particularly true in an organization as large as the New York City Police Department. This fact can however raise questions dealing with the expected performance of personnel with various types of experience. Is the quality of analysis work dependent upon familiarity with a precinct, or possibly with anti-crime, or PIU experience as opposed to patrol experience. These are questions which are not now nor may ever be answerable. However they point out the dependence of quality crime analysis efforts on knowledge not contained in complaint, arrest and other official records. Any individual's deficiencies must be made up through close communication and cooperation with other precinct personnel, uniformed patrol, anti-crime, etc.. The qualitative information developed in this manner can be the crucial information necessary to add meaning to the purely numerical data.

In addition to cultivating a wide knowledge of his own precinct, crime analysis officers must maintain frequent contact with the analysts in adjacent precincts.

Crime situations may develop along mutual boundaries and patrol activity can move problems to an adjacent precinct with little or no warning. Proper recognition of these situations can only come from frequent intercommand communication, either formally or informally.

Communication with other precincts should also create new options for precinct commanders by allowing them to develop a coordinated strategy between precincts in reaction to certain problems.

BOOKKEEPING -

THE DATA BASE



#### IV. ORGANIZING A DATA SYSTEM

This technical section is not meant to be, nor should it be considered, as the final word on manual crime analysis techniques. It does not attempt to cover all precinct situations and problems. Nor does it purport to cover all the data possibilities precincts can and do use (e.g. supplementary robbery reports, etc.). It has been developed to aid the precinct personnel responsible for performing the crime analysis function in establishing the MINIMAL BASELINE PROCEDURES that are being mandated and as a guide for establishing or refining procedures which go beyond the mandated material.

The aim is not the creation of a complete crime analysis model which precincts can follow but the creation of a STANDARDIZED MINIMAL LEVEL OF CRIME ANALYSIS department-wide. Most precincts are currently using most of the procedures contained herein and many are doing much more. Procedures which are both reasonable and effective and go beyond this manual should not be abandoned. Again, this section has been developed as a baseline standard to which all precincts should conform. It is hoped that precinct crime analysts will go beyond the mandated procedures and incorporate many of the recommended procedures, as well as any procedures which may have been overlooked in the preparation of this section.

The procedures which will be covered herein (chronologies, maps, cross-tabulations of variables, etc.) are procedures which have been found to present the most rational format for crime problem and pattern identification using data analysis techniques. For the most part, the procedures deal only with data that is currently available and readily accessed from the Department Complaint Report (PD 313-152), and Arrest Report (PD 244 -156 ).

The crime analyst hopes to contribute toward crime control by organizing incident and arrest information in such a way so as to make certain patterns or similarities evident, then communicate these findings to personnel who are in a position to act on these findings, e.g. deploy personnel.

His techniques usually concentrate on being able to identify various common pieces of information (variables) about groups of incidents, for example:

1. Location (address, in/out, type of premises, etc.)
2. Time (Hour, tour, day of week, day of month, etc.)
3. Perpetrator (physical description, M.O., etc.)
4. Victim (Sex, race, age, destination, etc.)

Pattern recognition involves:

1. Identifying similarities among incident and arrest data.
2. Identifying clusters of similar items, usually when or where these similar items occurred.

To accomplish these identifications, analysts use techniques that fall into three categories:

1. Chronological lists
2. Maps
3. Cross-tabulations (Tables)

Occasionally a crime analyst may produce bar or line graphs, but these are used chiefly as methods of data presentation rather than as analytical tools. These usually identify changes in frequency of various types of crime incidents or arrests over a somewhat long time period and serve mainly to identify gross trends. Such charts, generally, have very little influence on specific day to day deployment decisions within the precinct. They are however, good monitoring tools for determining large scale trends in crime incidence and arrest performance.

In constructing and using an analytical tool to determine patterns and trends, the crime analyst must endeavor to answer several questions:

1. What kind of patterns is he looking for (Where they occur, repetitive M.O.'s etc.)?
2. What information does he need to determine these patterns? (location, time, perpetrator characteristics etc.)
3. What type of analytical tool makes the best use of the available data and yields the most information; and is the easiest to maintain and interpret?
4. Can the analytical tool be linked to other reports?
5. Can this tool be adapted for other uses as a by-product of its major use, e.g. for providing statistical counts for Area reports. This feature, while not absolutely essential, can contribute to the general efficiency of crime reporting by avoiding duplication of effort.

## CHRONOLOGIES

In order to select the proper tool for analyzing a crime situation it becomes important to understand the capabilities of the various techniques. The following sections will examine each of the techniques utilized in the mandated procedures.

What should be readily apparent at this point is that crime analysis, while dependent upon the procedures in this section for maximal effectiveness and efficiency, does not end upon the completion of the bookkeeping tasks which this section will cover. The converse is true. Analysis begins upon the completion of the bookkeeping and builds from it.

#### V. CHRONOLOGICAL LISTS

Chronologies are lists of information which are maintained in either a log book, notebook, or spiral binder. Each line in the chronology represents one case (complaint, arrest, etc.) and is subdivided into a variety of column headings designating the information (variable/s) to be recorded in each column.

All precincts have maintained chronological lists. The "UF60 sheet" (P.D. 313-141), a summary listing of all complaints recorded during a tour, is an example of a standardized list maintained by all precincts. The UF60 is, however, not particularly valuable as a crime analysis tool. Other more detailed chronologies, dealing with specific crimes, are commonly prepared to provide crime pattern data (M.O./time-location/suspect-victim patterns).

Another commonly used chronology is the "hot sheet". These forms are more useful for distribution and/or posting since they are usually condensations of larger chronologies and are specific as to the information contained (e.g. felonies for last 24 hours, robbery cases which form a pattern, etc.)

Analysts usually employ both types of chronologies. The main chronology, used for analysis, incorporates all cases and as much information as possible on each; and the short chronology, used for reporting to other precinct personnel, incorporates selected information and/or cases. In as much as the short chronology is usually dependent upon a larger chronology and its format is often determined by the informational content of the larger chronology our main concern is with establishing and maintaining the larger chronologies from which analysis is actually performed.



The analyst, in utilizing the chronology for analysis purposes, determines patterns by visually scanning columns in the list for similar entries, such as time, location, etc.... It must be borne in mind therefore that in using this type of chart the eye is constantly moving in attempting to cluster similarities, and that certain techniques, if used, will increase the efficiency and effectiveness of the analysis. These techniques, which are covered in depth later in this section, include: the establishment of separate columns whenever possible (not combining variables into a single column), using colored pencils to highlight values within columns (e.g. using red to underline or write cases in the weapon column where a gun was used, etc.) and the use of masking techniques which reveal only the columns in the chronology in which the analyst wishes to check for similarities.

Another characteristic of the detailed chronology is the ability it gives the analyst to access a great deal of information on a case, or a group of cases which have been found to form a pattern by a different analysis tool (such as a map cluster or cross tabulation pattern), without having to search for and through the original reports.

Summarizing at this point, the establishment and maintenance of long chronologies have certain advantages:

- They are easy to maintain. Information is entered as soon as available on the next blank line.
- The format is flexible. Chronologies are easily adapted to provide more information by the addition of columns.
- They provide a great variety of information on each case at a single glance.
- They can provide information about changes in a particular feature relative to time.
- They provide detailed information quickly about groups of incidents or a particular incident from the past.

In the following pages, specific types of chronologies will be covered in greater depth. The emphasis will be on complaint chronologies since they are perhaps most useful for analysis purposes re: types of crime. It must be kept in mind at all times that while the following chronologies are mandated, they are mandated "baseline procedures". They are not meant to be restrictive, and any procedures currently in use in precincts which go beyond these guidelines should be continued or incorporated within the basic chronologies. The chronologies in this section were developed for use with the information which is obtained from the U.F. 61 (Complaint Report). Those precincts which utilize supplementary forms to gather information not usually obtained from the U.F. 61 (e.g. Victim destination) should incorporate such information within the mandated baseline chronologies through the use of supplementary columns.

Once again, mandated chronologies are baseline procedures which should be expanded on and improved with both the recommended procedures in this manual and the current or planned precinct level innovations.

#### A. Robbery and Purse Snatch Chronology:

Of the major prevalent crimes, robbery lends itself particularly well to analysis, i.e. those who commit robbery do tend to follow definite patterns. These patterns may involve time, location, modus operandi, etc.

The purpose of a complaint chronology is to relieve the analyst of the necessity of attempting to determine patterns directly from source documents, (such as complaint forms, etc.) by having the relevant information about each incident reduced to a single line of a chronological list.

To facilitate analysis, and to insure that all commands maintain a minimal crime analysis capability, certain procedures have been mandated department-wide for all precinct personnel engaged in crime analysis functions.

1) A chronology is to be maintained, preferably in log-book form, which is to include both robbery and purse-snatch complaints. The chronology shall also contain Robbery Homicides and Robbery Sex Crimes when the information available indicates that Robbery was probably the initial intention.

The reason behind combining robbery and purse-snatch is that purse snatches, although often technically classifiable as larcenies, do form part of the robbery problem, and in general follow and strengthen robbery patterns.

Including Robbery Homicides and Sex Crimes in the Robbery-Purse-snatch chronology serves a similar purpose. It includes these incidents in their proper context. At a later date, if an arrest is made for a Robbery, it may be possible to tie the perpetrator back to a prior Robbery incident which also involved a sex crime or homicide. The procedure may be particularly effective in certain commands for Robbery Sex Crimes which may be opportunistic in nature and provide a victim for suspect identification.

2) The robbery purse-snatch complaint chronology is to include at least the following column headings (See fig. 2)

- a) Control number
- b) Complaint number
- c) Date
- d) Day (of Week)

# ROBBERY/PURSESNATCH CHRONOLOGY

cont no.	compl no.	date	day	time	address	type location	s e c	cross street/s	Suspect Information				wpn type	M.O. Remarks	victim info			Arr. no.	L. S. I.
									no	r a c e	age	other			s e x	r a c e	age		
164	1130	1/26	W	2115	Ave. B & E. 2nd St.	Street	C	E. 2nd St	1	H	35	5'5" lt. skin	gun		M	H	25		150
P45	1134	1/26	W	2045	108 Ave. D Apt. 24	Street	D	7-8th St.	1	B	15	lg scar on forehead	unk		F	H	21		P44
105	1139	1/27	Tu	2300	544 E. 11 St	Dwelling	E	Ave A-B 2nd Ave	2	B	30s	both over 6' tall	knife	asked for Super	F	H	38		
155	1156	1/15	Th	2000	8 E. 3rd St Apt 1C	Street	I	Bowery 1st Ave	3	B	Unk	Unknown	Phy Force	Victim Intox.	M	W	70		
167	1160	1/27	Tu	1500	141 E 3rd Apt 11	Dwelling	F	Ave. A 2 Fl.	2	H	20	Brn Hair Red Hair	Guns	Posed as Phone Rep	M	W	64		
168	1168	1/27	Tu	1330	465 E 10th	Dwelling	D	Ave C-D	1	H	25	5'10"	Phy Force	Posed as Exterm.	F	W	58		
169	1170	1/27	Tu	1645	108 Ave D	Elevator	B	7-8th St.	2	H	18	5'7" Mustache lt. skin	knives		F	W	51		146
P47	1176	1/28	W	0945	123 Ave A E. 10th St	Chk Cash	G	8-9th St.	1	H	16	5'7" Dk skin	unk	Customer Pocketbk	F	W	60		
170	1179	1/28	W	1700	Ave. B	Street	E	Ave. D	1	B	20	Scar on Rt cheek	gun		M	H	17		
171	1214	1/28	W	1230	430 E. 6th E. 11th St.	Street	G	Ave. A	2	H	25	5'8" 170lb Mutche	knife		M	W	53		
172	1220	1/29	Th	1220	Aves. A-B St. Marks Pl	Hallway	E	Ave. A-B	2	W	25	5'10" 195 6'2" 160	Phy Force	Force vlt Into hall	M	H	48		
P48	1224	1/29	Th	1330	3rd Ave Apt. 2C	Street	J	3rd Ave	2	B	15	5'5" beret 5'8"	unk	Fled in Brn Stawag	F	W	63		
173	1228	1/29	Th	1530	90 Ave. D	Dwelling	A	6th St 12th St	1	B	25	5'9" 165lb Mstch 5'6"	razor		F	W	74	450	
174	1235	1/29	Th	1630	1 Haven Pl	Elevator	D	Ave. C	2	H	19	5'8" 140lb	knife		F	W	75		169

FIGURE 2

- e) Time (of Day)
- f) Address
- g) Type of Location
- h) Sector
- i) X-Sts
- j) Perpetrator Information: number, race, age, other.
- k) Weapon
- l) M.O. remarks
- m) Victim Information: Sex, race, age
- n) Arrest number
- o) Last Similar Incident (LSI)

The material to be contained under these headings will now be elaborated upon:

a) Control number:

Control numbers are numbers assigned to each precinct as the incidents are entered in the chronology from the complaint form. These numbers are used to uniquely identify the incident at several stages of the analysis process to be explained below.

The control numbers are to be no more than three characters (letters & digits) in length in order to avoid clutter.

Although robberies, purse snatches and robbery homicides and sex crimes are to be combined in the chronology separate numbering schemes are to be used for each situation. In addition, purse snatches, robbery homicides and robbery sex crimes control numbers are to be preceded by the following letter prefixes:

- P - Larceny Purse Snatch
- S - Robbery Sex Crimes
- H - Robbery Homicides

A page in the chronology may then have the following sequence of control numbers:

S3, 214, 215, P41, 216, P42, P43, 217, H1, 218, 219, P44 .....  
on successive lines.



This dual numbering scheme enables the analyst to count, analyze or extract these situations separately or together.

After control number 999 for robbery and P99, S99, or H99 is used, the numbering scheme recycles to number 1 for the particular crime.

When a series reaches 999, P99,...etc the chronology should be marked at that point, so that information for longer periods of time can easily be compiled by summing the appropriate number of cycles plus the count in the current cycle. Numbering cycles should be restarted on January 1st of each year.

1) X-Sts:

Nearest cross street(s) to stated address, e.g. if address is 49 THOMAS, then the X-Sts entry would be CHURCH.

j) Perpetrator Information:

Several separate columns are most convenient for providing this information and must include provision for at least: number of perpetrators, race, age, other information (usually a somewhat wider column than the preceding categories). The "other" column might include compact descriptions of unusual physical features, e.g. RED BEARD, BERET, SCAR-RT CHK.

Note that no column need be provided for the sex of the perpetrator(s), since the relatively few incidents in which female perpetrators are involved could be effectively indicated in the "other" column by entering F or FEM.

k) Weapon:

Be specific - Use e.g. KNF, PHYS FORCE, GUN (if this means only handgun), RIFLE, RAZOR, GOLFCLUB, ETC. Don't use "force", "firearm", "threat" and the like. Be as specific as possible.

1) M.O. Remarks:

The entries in this column should be restricted to short key words or phrases which deal with the modus operandi, e.g. dragged victim into car; jumped counter and opened register.

Long narratives should be avoided in the main body of the chronology, since the analyst should be able to develop patterns through scanning and not be slowed by having to read long descriptive paragraphs.

Unusual M.O.'s could be indicated by using a check (X) column headed "UNUSUAL" and referenced to either a separate listing of incidents with unusual M.O.'s or to the UF61's themselves.

m) Victim Information:

As with perpetrator information, separate columns are most convenient for listing victim information. Here, victim information need not be as detailed as perpetrator information, since the object of analysis is to apprehend the perpetrator rather than the victim!

Therefore, it usually is sufficient to provide columns just for sex, race, and age.

For victim information, as well as for perpetrator information details about more than one victim or perpetrator can, within reason, usually be entered on parallel lines within the same incident, e.g.

Date	Victim Information		
	Sex	Race	Age
10/14	M	H	23
	M	B	19

n) Arrest Number:

The arrest number is a valuable entry which indicates to the analyst possible clearances of prior situations relevant to his analysis.

o) Last Similar Incident (LSI):

This column, which is to be used in conjunction with column (a)- (control number), provides the analyst with a very powerful procedure for grouping or "clustering" similar incidents. This procedure is a type of internal linking or cross-referencing.

Using this method, the analyst, by performing a very small amount of work at the moment he enters the details of an incident, can group similar incidents in an easy and automatic fashion.

The LSI column is used in the following manner:

The entry in the LSI column is the control number of the last incident which is similar in several respects to the incident being entered.

The criteria to be used in determining the similarity of incidents should be based chiefly on M.O., perpetrator information and victim information. Time and location consideration are of lesser importance here, as these types of similarities will more readily appear from examining maps and cross-tabulations, as will be described later.

The analyst, after entering the details of an incident, scans the recent entries above the group he is presently entering (going back at least 10 incidents) and determines whether any of these is similar to the incident being entered. We assume that the analyst, because he will usually be entering a group of incidents at a time, will be able to spot similar incidents within this group and then enter the appropriate control numbers in the LSI column.

Therefore, we see in Figure 2, in the line denoted by control number 174, that the analyst entered 169 in the LSI column. Here, the analyst felt that, since both incidents dealt with two hispanic teenaged perpetrators robbing elderly women in elevators, using knives, he had cause for regarding these incidents as "similar". Even agreement in fewer categories than in this example is enough to regard incidents as similar.

Continuing along in this example, we next note that on the line having control number 163, the analyst entered 146 in the LSI column. On the previous pages (not shown), possibly 146 referenced in like manner to, successive incidents having control number 141, 137, 129, 119, 116 and 106.

Note that only the control number of the last similar incident is to be entered, and not all previous similar incidents!

Hence, 169 leads us to 146 which leads us to 141 etc. in this manner until we get to 106 which has the LSI column blank.

Here, we would now have available to us eight incidents, similar to one another, with control numbers identified, namely 169, 146, 141, 137, 129, 119, 116 and 109.

We could now, on the basis of this information, do several useful things:

1) Put out a hot sheet (short chronology of relevant information) for distribution to anti-crime units or other precinct personnel to be deployed in response to the problem.

2) Further analyze the situation. Since we now know precisely which incidents make up the particular pattern, we may now, if we wish, get more information by looking at these (eight) UF61's.

3) Clustering of this type, or "case stacking", is also of value for identifying major offenders. For example, if the alleged perpetrators of incident number 146 are apprehended, and it is felt that they could have committed the other crimes in the cluster, then all victim involved in the cluster could be invited to attend a lineup containing the perpetrators.

At such a lineup, if several victims should identify the perpetrators, much leverage is thereby added to the Prosecutor's case and the likelihood of securing a meaningful conviction is increased.

Note: Entry of a control number in the "last similar incident" column is not simply a clerical function. The analyst should enter the control number of a previous case only if he/she feels that there is a reasonable chance that the crimes were committed by the same person or persons. This is essentially a judgment call.

#### B. BURGLARY CHRONOLOGY

A burglary complaint chronology is also being mandated to be maintained by precinct personnel responsible for crime analysis

Burglary offenders, as well as robbery and purse snatch offenders tend to follow patterns. The relevant information required to ascertain patterns is, naturally, different. (For example, method of entry is more appropriate than perpetrator description). Also, the level of available information is not as high as with robbery and purse snatch because of the usual lack of a witness to the crime. This means, for example, that the hour of the commission of a burglary can rarely be pinpointed and a rougher time estimate for analysis must be chosen. We have chosen tour. This may not be fully satisfying either, but a rough estimate is better than no estimate, since time can be an important variable in burglary patterns.

Again, as with the robbery/purse snatch chronology, the columns which are being mandated are minimal, and any additional columns or features which are consistent with the mandated columns, and are felt to be useful, should be retained. The emphasis, once again, is on doing useful tasks while eliminating clutter and duplication of effort.

1) A chronology is to be maintained, preferably in log-book form, which is to include all burglary complaints.

2) The burglary complaint chronology is to include at least the following column headings (See Figure 3).

- a) Control number
- b) Complaint number
- c) Date
- d) Day (of Week)
- e) Tour(s)

### BURGLARY CHRONOLOGY

[illegible]

**FIGURE 3**



- f) Address (& Apt. No.)
- g) Type of Premises
- h) Sector
- i) X Sts
- j) Entry Location
- k) Method of Entry
- l) Type of Property
- m) Value of Property
- n) M.O. remarks
- o) Arrest number
- p) Last Similar Incident (LSI)

Items a, b, d, h, i, n, o, and p, are to be prepared and entered in a similar manner to those discussed in the robbery/purse snatch chronology. An effort should be made to include burglary homicides and burglary sex crimes in the burglary chronology as was done in the Robbery/Purse-snatch chronology. Once again a determination must be made from the available information as to whether the primary initial motive was burglary, and the final situation developed from the initial motive. These crimes, when they can be identified in this manner, are best analyzed as part of the larger burglary picture within the command. The alphabetic prefixes S and H are to be used with a separate numbering system when assigning control numbers to these crime situations as described in the section on robbery/purse snatch.

Regarding the other columns, some remarks are in order:

c) Date:

Here, often, the date that the crime was committed is not known with certainty. It may be necessary to give bounds for the date of occurrence, e.g. 9/22-9/24.

Use the best estimate of the tour during which the crime was committed. Either 12 x 8, 8 x 4, 4 x 12 or 1,2,3 may be used to designate the tour, whichever is more convenient. If no estimate of the tour is possible, enter UNK or 0.

f) Address (& Apt. No.):

With burglary, the street address is usually more readily available than with robbery. The street address along with the apartment or room number should be given when applicable. e.g. 892 Foster, 8J or 1977 5th Ave., Rm 551.

g) Type of Premises:

Information about floor and hotel name should be included in this column if applicable. Typical entries are: BSMT, APT., 3FL. LOFT, 8FL. HOTEL ACME, CLEAN STORE.

j) Entry Location

SIDE DOOR, FRONT WINDOW, SKYLIGHT, ETC.

k) Method of Entry:

JIMMY, BYPASS ALARM, DOOR LEFT OPEN, ETC.  
(Be as specific and concise as is possible)

l) Type of Property

This refers to type of property actually taken, e.g. FURS, JEWELRY, APPLIANCES, CASH, BONDS, MACHINERY, NONE, ETC.

m) Value of Property:

Approximate value in dollars, e.g. \$25, \$1000, \$200, NONE.

C. AUTO LARCENY:

The crime of auto larceny, because of incidence volume, is an analysis necessity in many commands. With this in mind, the following chronology headings have been developed as a guide for those precincts which desire to, or already, perform an analysis of auto larceny. It is important to note that all auto larcenies (grand and petit) should be included within one chronology. As with the Robbery/Purse Snatch chronology, a numbering system can be used to differentiate within the chronology, those cases which are petit larceny, auto.

Auto larcenies, like robberies, tend to follow patterns. These trends or patterns tend to involve location (both theft and recovery), time, veh. type, etc. It is important that the analyst be familiar with precinct characteristics such as commuter locations (R.R. Stations, Express Bus routes, etc.) Very often the key to auto larceny analysis is the Complaint Follow-up Report (PD 313-081). An effort should be made to get as much information as possible entered and extracted from these reports. Many of the more successful auto larceny programs have been directed at identified

dumping and receiving locations for stolen vehicles. Since this often involves other commands it is important that liaison with those commands be established and, if possible, joint programs developed where mutual patterns emerge.

An auto larceny chronology should incorporate the following column headings:

- a) Control number
- b) Complaint number
- c) Date of theft
- d) Day of week
- e) Tour/s
- f) Address of theft
- g) Type of location
- h) Sector
- i) Cross Street/s
- j) Yr. & make of auto
- k) Auto description
- l) Recovery date
- m) Pct. of recovery
- n) Recovery location
- o) Type of location
- p) Recovery Sector
- q) Cross street/s
- r) Stripped
- s) Arrest number
- t) Last similar incident

If same  
as  
pct. of theft

The column entries under these headings are defined as follows:

Column a) through d) are used in the same manner as described in the robbery/purse snatch chronology.

- e) Tour/s - As in Burglary, the best estimate should be used. Since many thefts occur over multiple tours (e.g. 2100-0600) coding conventions should be employed. The use of #'s to signify tours is especially useful; 12 x 8 = 1, 8 x 4 = 2. In this manner the thefts which occur over multiple tours can be coded easily (e.g. 2100-0600 = 3-1). This convention also allows more precise documentation of other cases where tour is inappropriate (e.g. multiple day thefts day thefts = 5, etc.)
- f) Theft address - Location stolen
- g) Type of location - This data should be specific, e.g. parking lot, driveway, etc... Since many auto larcenies occur "from street" this is a poor identifier. If possible, more specific identifiers should be entered. (e.g. St. - RR for streets near or bordering RR stations, St. Residence for Street thefts in the vicinity of the complainant's residence. This allows for a finer breakdown as to the type of theft. (e.g. from street at night away from residence- is there a B & G or Movie theater nearby, etc.)
- h) Sector - as in other crimes this is usually better than posts or zones.
- i) Cross Street/s - same as previous chronologies
- j) Yr. & make of auto - e.g. 72 Chev. 74 Ford, etc.
- k) Auto description- Number of doors (2 or 4) and Model (Impala)
  - 1) Recovery date- Month and day- (e.g. 1/26, etc.)
- m) Pct. of recovery- Number of Pct. where auto recovered
- n) Recovery location - Address or site where recovered
- o) Type of location - e.g. woods, parking lot, etc. Again be as specific as possible.
- p) Sector recovered - If Pct. of recovery same as that of theft.
- q) Cross street/s - same as column "p"

- r) Stripped - This is a check-off column. If the auto had been stripped a check would be entered in the column. If not, then no entry is made.
- s) Arrest number- Same as described in previous chronologies.
- t) Last similar incident- This might be determined by matching incidents where the theft and recovery locations are similar to identify cases from specific parking lots, schools, etc....

#### D. SEX CRIMES

The format for a sex crimes chronology follows the same basic format found in the Robbery/Purse snatch Chronology (see Figure 1). Since the various sex crimes generally have complementary patterns and low volumes, a single chronology can be employed. The specific types of sex crimes can be identified by the use of an additional column and the use of highlighting techniques. Letter-prefixed control numbers (as in the Robbery chronology) can also be used for counting purposes.

If a command decides to maintain a sex crimes chronology and analysis capability in addition to the mandated robbery and burglary chronologies, the following conventions should be used when dealing with the robbery sex crime situation:

1. Enter the crimes on both respective chronologies.
2. Use the S with a separate series of control numbers in the robbery/purse snatch chronology (Section A.)
3. Use the prefix "R" and a consecutive control number within the sex crimes chronology to identify that particular sex crime as a robbery sex crime use a "B" for the burglary sex crime situation.

In analysis, sex crimes generally tend to require information similar to that provided for in the robbery format.

E. MISCELLANEOUS

The basics for crime analysis are usually provided by time, location, M.O., perpetrator and victim descriptors of some kind. For some situations, modifications of these basic data elements are necessary, e.g. in auto theft, the "victim" can be thought of as the vehicle. Frequently, an analysis by the type of auto in this context will reveal specific patterns useful for allocation of patrol forces. Grand Larceny, other than the theft of autos, really has two subgroups of crimes (a) those situations where a perpetrator may be identified; i.e. con games, extortion, bad check and (b) those situations which are similar to burglary; i.e. theft of vehicle accessories and other forms of unwitnessed theft.

Any chronologies above and beyond those mandated should be reviewed from time to time, particularly when they were begun as a result of the sudden emergence of a particular crime problem. The problem may have ceased and the analysis efforts should be directed toward a different crime situation or other tasks within the precinct.

M A P S



## VI. MAPS

Every precinct uses maps of one type or another in reporting and analyzing crime incidents. The use of maps at the precinct level generally can provide three basic types of information about crime incidents:

1. The locations where particular types of crime incidents frequently occur.
2. Change of the location of sites of various crime incidents through a comparison with earlier maps.
3. Any other type of information in which visible clusters of items and their location is needed (e.g. arrest locations, recovered stolen auto sites, etc.)

There are generally three types of precinct maps, each with its own advantages and disadvantages:

ADVANTAGES	DISADVANTAGES
<b>1. PIN MAPS</b>	
<ul style="list-style-type: none"> <li>- Base maps can be reused</li> <li>- Errors are easily corrected</li> <li>- Have excellent visual scanning properties</li> </ul>	<ul style="list-style-type: none"> <li>- Storage in a secure location is usually required.</li> <li>- Difficult to store without having pins fall out.</li> <li>- Are not readily reproduced</li> </ul>
<b>2. SPOT MAPS</b>	
<ul style="list-style-type: none"> <li>- Are readily reproduced</li> <li>- Can be prepared in small format for easy distribution and/or storage.</li> <li>- Easily maintained</li> <li>- Provide maximum capability for color and symbol use.</li> </ul>	<ul style="list-style-type: none"> <li>- Difficult to alter or erase in case of mistakes</li> <li>- Some precincts because of size must use multiple part maps.</li> <li>- Other precincts have small "block" size on the available maps</li> </ul>
<b>3. PLASTIC OVERLAYS</b>	
<ul style="list-style-type: none"> <li>- Combine permanence of spot maps with the flexibility of pin maps.</li> <li>- Various features are easily superimposed (grids, schools, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Are currently costly and generally unavailable.</li> </ul>

Given that this manual's concern is analysis rather than reporting, the type of map mandated for analysis purposes at the precinct level is the spot map. This map is currently available in all precincts in ready supplies and is easily maintained by the crime analyst.

There are several rules which should be followed in designing maps for analysis purposes. Often, too little forethought is given to the advantages and drawbacks involved in developing maps. The following guidelines must be followed in preparing maps for analysis:

1. Choose a format that satisfies your needs and conforms to analysis limitations.
2. Plot only useful types of data and don't clutter a map needlessly with data that obscures trends (i.e. It is mandatory that separate crimes be kept on separate maps. Robbery and purse snatch must not be kept on the same map as burglary, etc.)
3. Select a meaningful time period for pattern identification. In some precincts; robbery trends become apparent by examining a two week period. Other precincts require a couple of months data for pattern development. The time period should be a function of the volume of complaints and analyst experience.
4. It is mandated that control numbers from the base chronology be used so that incidents do not lose their identity once posted on the map. In high volume precincts, this may require the maintenance of two maps per time period. One using only the spots or symbols and another using only the control numbers. If done at the same time no great effort is required for maintenance. This procedure overcomes the problem of clutter which the use of control numbers sometimes creates.
5. Save old maps for comparison of time of month trends and post the maps of several adjacent time periods, whenever practical, alongside one another. This allows not only time trend analysis, but also allows deployment evaluation in terms of displacement dynamics (i.e. monitoring the movement of crime incidents from an area which was targeted by anti-crime, etc.)
6. Make the best use of color and symbol variation to distinguish factors such as:

- a) Time subdivisions - (e.g. the use of successively darker or different colors during a 4 week cycle. Any movement in the incidence of crime incidents becomes readily apparent.)
- b) Type of crime (e.g. taxi robbery).
- c) Type of location (e.g. street, hallway, residence, etc.)

NOTE: It should be remembered that there is almost always a trade-off involved in attempting to gain more information from a map. For every extra factor incorporated, visual scanning capabilities are reduced. Maps are mainly directed at location correlations and attempts to extract other information is usually achieved much more efficiently through the use of cross-tabulations or chronologies.

Precinct crime analysts are mandated to maintain two specific types of paper spot maps: (Approx. 14 x 20).

- 1) Robbery/Purse snatch complaint map (using control numbers).
- 2) Burglary Complaint map (using control numbers).

Besides the two above types of maps, the analyst may find it convenient, or be asked, to maintain other kinds of maps for display or for other purposes within the station-house.

Therefore, what is being mandated is that precinct crime analysts maintain at least these two types of maps.

Details regarding the maintenance of the two types of mandated maps now follow:

In an ordinary map, pins or spots or symbols are used to represent crime incidents. When a sufficient number of these symbols (etc.) gather in one area (or "cluster"), this indicates to the analyst the possibility of a pattern. To further delve into the question of whether the cluster of incidents in a particular area form a true pattern, it is often necessary to examine characteristics of these incidents other than just their location. The use of different types of symbols or different colored pins may add one or two dimensions to the picture, but the real drawback to doing in-depth analysis of a cluster on a map lies in the fact that once an incident is reduced to a symbol there is no way on an ordinary map of going back and identifying what specific incident corresponds to that symbol.

The mandated maps provide a solution to this loss of identity. In these maps, each incident maintains its identity and may be cross referenced to a complaint chronology from which further details necessary for analysis may be taken. This is accomplished by placing the control numbers of the incidents directly on the map.

This may be done in several ways.

For example:

1) Placing control numbers alongside symbols.

This allows the analyst to keep all of his location information on one map. For example, if a daytime dwelling robbery occurred at a certain location, the analyst might enter  $\Delta$  149 - the  $\Delta$  signifying the type of robbery, and followed by the control number.

Often, however, because of crime volume, maps which are maintained in this manner tend to become cluttered and difficult to maintain or interpret.

This problem may be dealt with either by restricting the map to a shorter time-period, e.g. bi-weekly rather than monthly, or by:

2) Maintaining parallel sets of maps.

Changing a map to a shorter time period may have the effect of "thinning out" the data and an emerging pattern cannot be recognized by the analyst because it has not had sufficient time to develop.

For this reason, the recommended procedure for maintaining analysis maps is as follows:

a) Choose a convenient time format, (e.g. monthly) over which the maps are to be maintained.

b) Prepare two "parallel" maps for this time period. One containing only the symbols, and the other containing only the control numbers of the incidents.

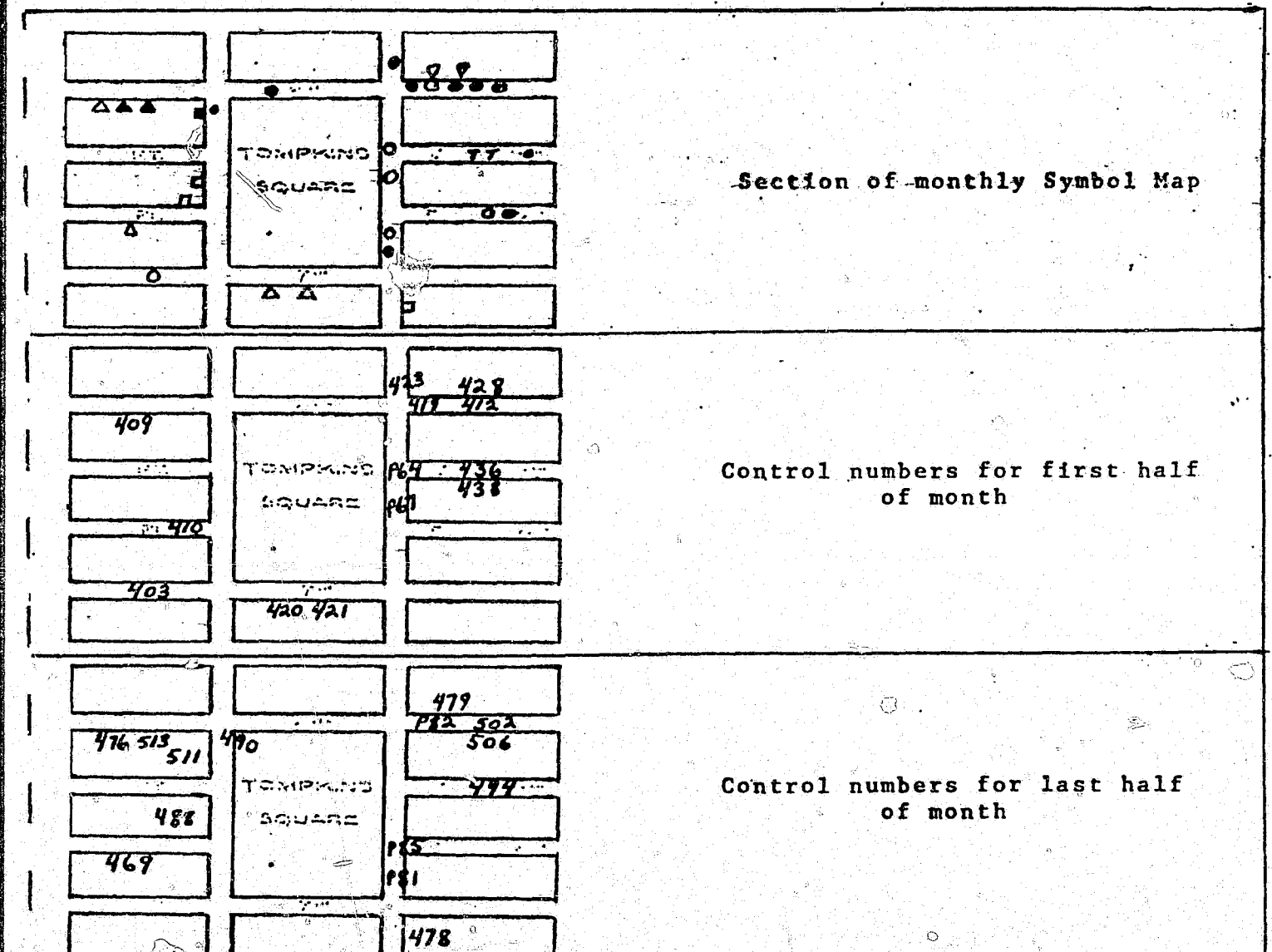
This does not entail a great deal of extra work on the analyst's part, as all the analyst has to do is place the two maps next to each other, then enter the symbol on one map, and then the control number at the same geographic location on the other map.

FIGURE 4

ROBBERY/PURSE-SNATCH COMPLAINT MAPS

Legend

- Street (Day)
- Street (Night)
- △ Dwelling (Day)
- ▲ Dwelling (Night)
- Comm (Day)
- Comm (Night)
- ⊙ Elevator (Day)
- ⊗ Elevator (Night)
- ⑦ Taxi (Day)
- ⑧ Taxi (Night)
- ⊕ Subway (Day)
- ⊖ Subway (Night)



This procedure allows the analyst to determine what possible patterns he might have by findings clusters on the symbol map. If he wishes to analyze further, the analyst now looks at the same location on the control number map and examines those incidents in the chronology having those particular control numbers.

Since control numbers can be up to three characters in length and complaint volume in some commands is high, it may happen that one month's worth of symbols may comfortably fit on a map; it may be next to impossible to enter all the corresponding control numbers on the parallel map.

This can be easily remedied by maintaining the control numbered maps for shorter time periods, e.g. weekly or bi-weekly, while continuing to maintain the symbol map for the longer time period. This does not alter the time period for analysis but makes the actual analysis more effective by eliminating distracting clutter.

Using the above method, the analyst would then find his clusters of symbols on one map, e.g. for the month, and then look at his two bi-weekly maps covering the same time period for the corresponding control numbers. (See Figure 4).

For the majority of situations, monthly maps strike the best balance between lack of "clutter" and proper time for developing patterns, although, depending on the nature of the crime picture in various precincts, shorter or longer time periods may be the only alternative.

Crime Location Analysis utilizing maps consists of two steps:

- (1) Problem Identification
- (2) Analysis of data relevant to the identified problem.

In many precincts it may be fairly apparent where certain kinds of crime problems exist.

For example, there may be a small area within the precinct which accounts for approximately 20% of the precincts outdoor robberies and purse snatches.

In such a case, we are not interested in knowing that there is a clustering of incidents at a particular place and time, as much as we are interested in finding out other information regarding the incidents, e.g. a more specific time range, day of week, perpetrator, victim or M.O. information. The assumption here is one of the most basic to crime analysis, namely that additional information of the foregoing type will assist in the rational planning of deployment and crime prevention tactics, with a particular view toward the adjustment of deployment to maximize interception odds by reducing or eliminating police response time.

Therefore, if it is known that certain areas are always busy, it makes no sense to attempt to fit 40 control numbers in a tiny area of a map.

Instead, these areas should be labeled A4, B1, C2, etc. and room provided on the margin of the map for a listing of the appropriate control numbers (See Figure 5).

The numbers following the letters indicate the number of months (or other time period covered by the map) it has been since the area was identified as a trouble spot by the analyst.

The procedure for assigning these number is as follows:

1. Assign a letter followed by "1" if a small specific area has a significant number of incidents in a particular time period covered by the map.
2. If such an area again has ten or more incidents for the next time period, increase the number following the letter designation by 1. Thus if B1 is again "hot" in the next time period, it would be labeled B2, and if it again remains "hot" would be labeled B3, etc.



PRECINCT

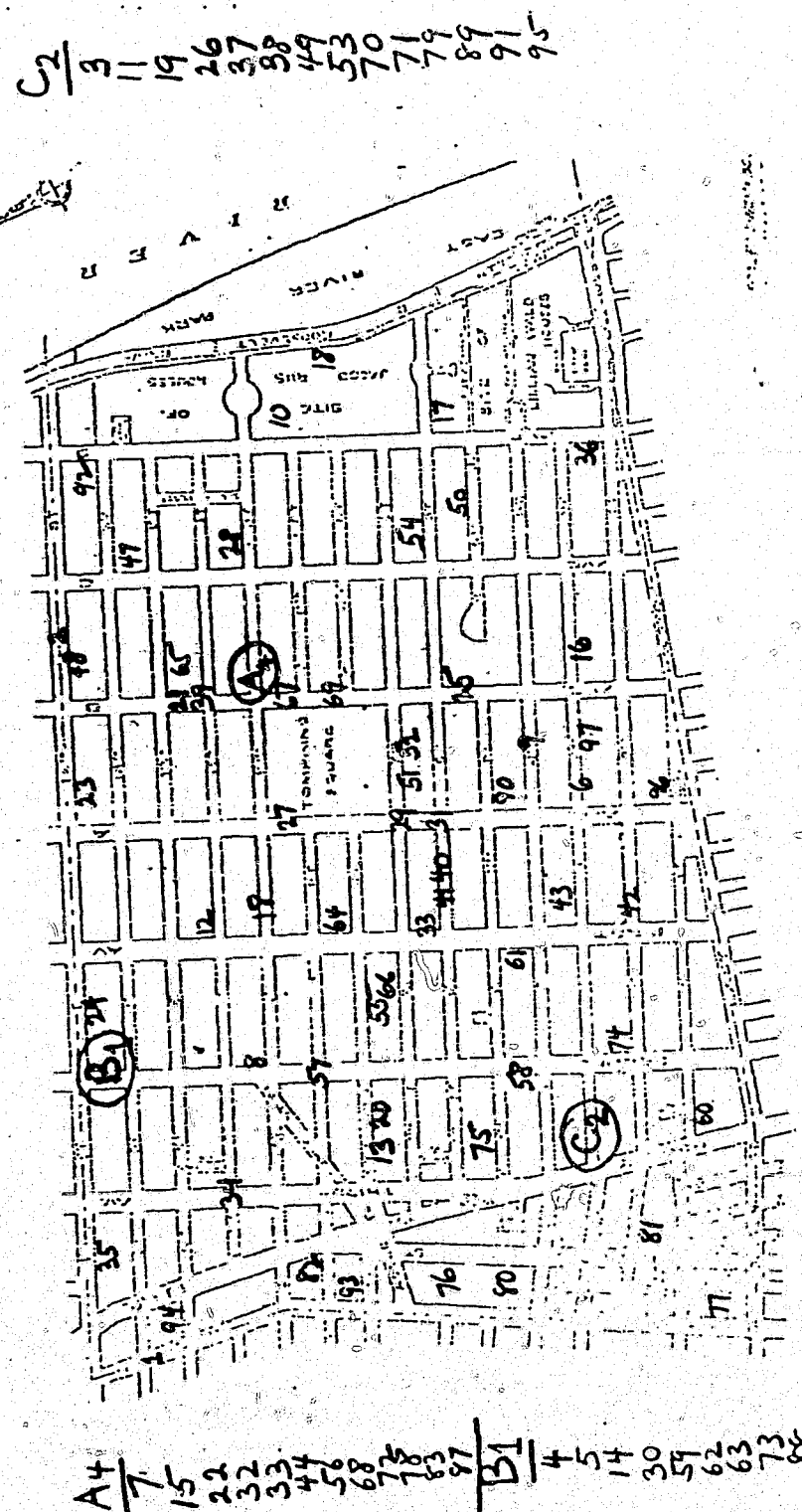


FIGURE 5

Continuing in this manner, we obtain a quick indicator of what length of time has elapsed with no incident drop (below the threshold value of 10) since the area was first identified as a problem location.

Usually, there are no more than four or five "hot spots" throughout any one precinct. If at some future time, a particular area "cools off" or another "heats up", we can easily add or remove these letters from the next-time period's map to reflect these changes. It is recommended that a previously used letter not be reused until the entire alphabet has been exhausted. This will reduce any chance of confusing different crime problem areas.

Whenever an area needs to be assigned a letter in the above manner, it is indicative of a problem situation. Likewise, if an area constantly remains "hot", it may indicate any of several situations, some of which may require further study. For example, it may indicate that:

1. Existing police deployment is ineffective and reasonable adjustments in deployment levels and/or tactics may still reduce and/or eliminate the problem, or
2. The area is particularly fertile for the existence of certain crime situations, e.g. secluded streets or hallways near elevated train stations. Here other remedies might be proposed such as the use of outside units such as CWAC or TPU, or crime prevention programs aimed at the victim population.

Usually, some mixture of the above two possibilities is actually the case.

Identified problem areas should be immediately brought to the attention of all precinct personnel responsible for deployment decisions. The effect of all subsequent deployment changes should also be monitored (e.g. complaint and arrest changes checked frequently for the problem area). This follow-up procedure is necessary to insure that these problems do not linger on and fester. It is far too easy to complacently assume that certain areas are always busy and therefore could not be helped by some change in police response.

# VII CROSS TABULATIONS

Cross-tabulations are used to identify certain combinations of variables such as time, location, etc.. They can be used to match any two variables (Crime descriptors) connected with crime incidents (e.g. sector by day of week, weapon type by victim age...). As stated above, cross-tabulation should not be used to attempt to cluster the values of more than two variables. Many analysts, in attempts to extract more information from cross-tabulations, add extra variables to the data tables through the use of colors or symbols. In general, this tends to be self defeating since it obscures clusters and clutters the tables. If one desires information on a third variable, it can be achieved by using a third variable as a control variable. For example, if an analyst wished to identify incident clusters using the variables "hr of day", "day of week" and "sector", he should prepare a two variable table for any pair of the three variables above and restrict it by the third variable (e.g. hr. of day by day of week for a specific sector or target area only).

SECTOR A  
Hour of Day

Day  
of  
Week


The cross-tabulation table if properly designed and used can be effective as both an analysis tool and a reporting tool. In analysis, patterns are identified by noting the cells in the table which have a comparatively large (or small) number of incidents. Reporting information can be obtained by calculating the sums across the rows and/or down the columns. Less frequently, percentages are computed for individual cells and/or row and column totals. These totals are useful for they may often provide information which the precincts must supply periodically to Area or other commands and is commonly the responsibility of the crime analysis personnel

Cross-tabulations have been found to be most effective in analyzing "robbery and purse snatch" situations, and less so in other crime area where the amount and quality of the information is generally reduced (e.g. burglary, where time of occurrence is usually estimated).

X TABS

The variables (incident descriptors) most frequently employed in robbery and purse snatch cross-tabulation tables are:

- Hour of day
- Day of week
- Month
- Sector
- Victim Age

The most commonly used variables pairs are:

- Hour of day by Day of Week (See Figure 6)
- Hour of day by Day of month
- Hour of day by Sector
- Day of week by Sector (See Figure 7)

CRIME	(EXCEPT BURGLARY) FROM TO						
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
0000							
0100							
0200							
0300							
0400							
0500							
0600							
0700							
0800							
0900							
1000							
1100							
1200							
1300							
1400							
1500							
1600							
1700							
1800							
1900							
2000							
2100							
2200							
2300							
TOTALS							

Figure 6

SECTOR	A	B	C	D	E	F	G	H	TOTAL
SUNDAY									
SUNDAY - MONDAY									
MONDAY									
MONDAY - TUESDAY									
TUESDAY									
TUESDAY - WEDNESDAY									
WEDNESDAY									
WEDNESDAY - THURSDAY									
THURSDAY									
THURSDAY - FRIDAY									
FRIDAY									
FRIDAY - SATURDAY									
SATURDAY									
SATURDAY - SUNDAY									
WEEKEND									
TOTAL									

Figure 7

THE FOLLOWING GUIDELINES MUST BE FOLLOWED IN PREPARING CROSS-TABULATION TABLES:

1. No more than two variables should be used for computing cell entries.
2. Entries, instead of being tally marks, shall be control numbers of incidents obtained from main chronology.
3. Provisions should be made, whenever possible, for the summing of rows and columns for statistical purposes.
4. Several old cross-tabulations containing identical variable combinations, for adjacent time periods, should be posted. (e.g. hr of day by day of week cross-tabulations for time one and time two, to identify time displacement of incidents caused by anti-crime deployments, saturation patrol, etc.).

Once again, any particular type of cross-tabulation which has yielded useful results in the past and whose information could not be gotten from another source should, subject to command constraints, be continued.

Two particularly useful cross-tabulations are mandated:

- 1) Robbery/Purse snatch: Hour of Day X Day of Week (See Figure 6)
- 2) Burglary: Sector X Day of Week (See Figure 7)

It is mandated that each entry of an incident in these cross-tabulations be the control number of that incident- not tally marks or other symbols.

YES

NO

86 P31  
104 136  
112 H2  
127 141

|||| ||  
or  
Δ Δ Δ Δ  
Δ Δ Δ Δ

In this way, the analyst knows not only the fact that certain cells of the cross-tabulation have many incidents, but also the corresponding control numbers so that he may refer to the chronology and/or map to examine the characteristics of these incidents to ascertain whether or not patterns exist.



In the majority of cases, as with maps, the monthly time format for cross-tabulations is the most strongly recommended time period.

It is convenient to provide room in the cross-tabulation for totals should these counts be requested by the area commands.

MANDATED PROCEDURES

VIII. RECAP OF MANDATED PROCEDURES (Administrative Guide Section 316-29)

The mandated procedures for BASELINE precinct crime analysis are:

1. Robbery/Purse snatch Complaint Chronology  
(Section V,A pg. 9 Figure 2 )
2. Burglary Complaint Chronology  
(Section V,B pg.15 Figure 3 )
3. Robbery/Purse snatch Complaint Spot Map  
(Section VI pg23 Figure 4,5)
4. Burglary Complaint Spot Map  
(Section VI pg 23 Figure 4,5)
5. Robbery/Purse Snatch Complaint Cross-tabulation  
(Section VII pg32 Figure 6 )
6. Burglary Complaint Cross-Tabulation  
(Section VII pg 32 Figure 7 )

# 1. PRECINCT APPLICATIONS

The techniques previously covered (chronologies, maps, cross-tabulations) are the tools for the first of the three tasks involved in crime analysis (See Pg 2). The second task in crime analysis is the transformation of crime data into operationally useful information through analysis. It must be borne in mind that crime analysis is a support function and does not impact on crime directly. It requires that the information be utilized by other field or support units. TABLE 1 illustrates, generally, some of the tasks precinct units and/or personnel are responsible for under current Department guidelines. Your analysis should be thought out in terms of meeting these needs.

## ANALYSIS TECHNIQUES

TABLE I

Anti-crime Supervisor	<ul style="list-style-type: none"> <li>-Identification of crime location and time patterns</li> <li>-Identification of offenders active in the area.</li> <li>-Tactical assignments.</li> <li>-Evaluation of tactics and deployment</li> </ul>
Planning Officer	<ul style="list-style-type: none"> <li>-Planning in terms of: Crime pattern information Resource allocation Program development</li> <li>-Maintenance of liaison with the Crime Prevention Officer</li> </ul>
Crime Prevention Officer	<ul style="list-style-type: none"> <li>-Supply prevention data for: Individual victims (personal &amp; commer.) Identified target groups General public</li> </ul>
Pct. Investigation Unit	<ul style="list-style-type: none"> <li>-M.O. information for: Locational stakeout Case stacking</li> </ul>
Patrol	<ul style="list-style-type: none"> <li>-Identification of crime location and time patterns</li> <li>-M.O. information</li> <li>-Ident. of offenders active in area</li> </ul>



## 2. PERFORMING AN ANALYSIS

### A. GENERAL MODEL

The preceding material defined the crime analysis function through its objectives and the tools available to satisfy precinct responsibilities. These techniques and the overall precinct analysis objectives can be integrated to produce a general model of the analysis process.

Figure 1 presents a schematic diagram of the precinct crime analysis process. Before discussing these steps in some detail it is important to understand that this is a general model of the precinct procedures. Because of variations in precinct administration and organization as well as analyst capabilities these steps can be performed with a great deal of clerical and administrative flexibility. However, to attain the goal of the analysis function, "consolidated intelligence identifying the current and emerging crime situations", the steps outlined in Figure 8 must be accurately and effectively completed.

### B. PROCEDURAL STEPS

Refer to Figure 8

1. Reports should be forwarded to the crime analyst on some routine basis. These reports may have passed through a number of hands before arriving at the analyst's desk depending on individual precinct procedures; however some attempt should be made to receive the necessary reports in a timely fashion. Arrest reports and Complaint Follow-up reports as well as Complaint Reports should be routinely routed to the analyst.

2. A Complaint Follow-up Report or Arrest report submitted against a complaint, already contained in the chronological list for that crime type, is a potential candidate for "case stacking" (also see Section V pg. 13). The original complaint entry in the chronology should be located and the "LSI" column inspected. If there is a control number entry in the "LSI" column that complaint should be retrieved. If its entry also has a control number in the "LSI" column that complaint should be retrieved...and so on until no further "LSI" entries are encountered. In this manner cases with similar perpetrators and M.O.'s can be collected for review. Since this search was prompted by an arrest the cases similar to the one producing the arrest are candidates for multiple charges in addition to the original arrest and possible major case status for the multiple offense perpetrator.

PRECINCT CRIME  
ANALYSIS  
GENERAL MODEL  
FIGURE 1

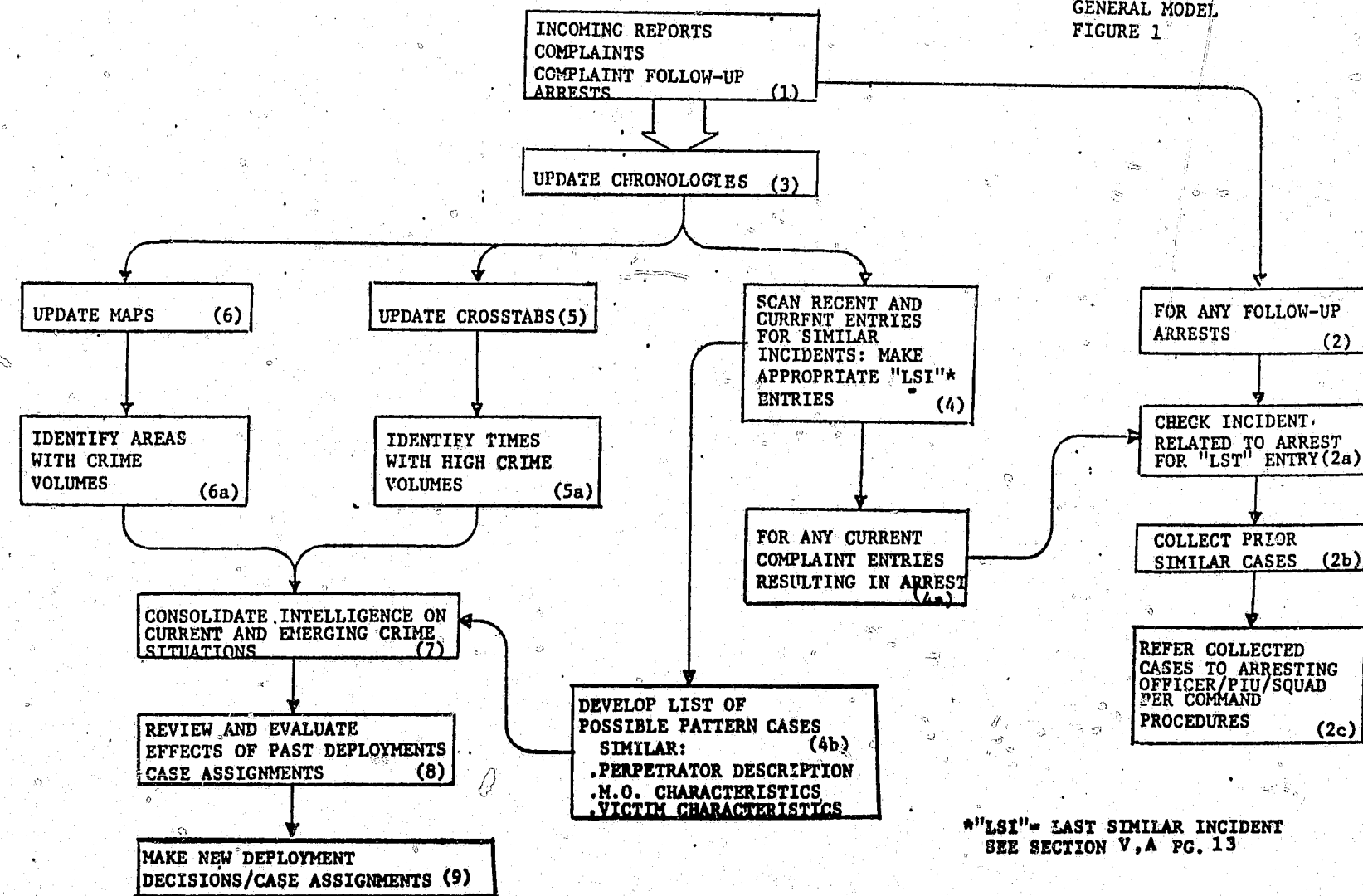


Figure 8

2. Cont'd.

The crime of robbery obviously offers the greatest potential for case stacking but peculiar M.O.'s, fingerprints, or other physical evidence may be available for corroboration of similarities for Burglary and Grand Larceny.

Note that if the follow-up arrest is made some time after the original complaint there may be complaint entries after the original complaint that identify the arrest related complaint in their "LSI" column. Therefore complaint entries made after the arrest related complaint should be examined to see if any refer back to the arrest-related complaint.

3. Routinely received complaint reports should be added to the chronologies in as timely a fashion as possible. Complete entries should be made at all times (See Section V - Page 9).

4. When making routine entries in the chronology, recent entries must be scanned to determine if any of the current complaints are similar to prior cases. Appropriate entries should be made in the "LSI" column of each new entry. Be sure to examine the current entries for similarities amongst themselves. If there is a questionable similarity examine the original complaint reports. If the original complaint does not contain enough information to confirm the similarity perhaps the victim(s) should be contacted by the analyst or other personnel depending on the command's policy.

Any current complaints that indicate arrests should be processed in the same manner as follow-up arrests (see steps 2 through 2c).

Any sets of incidents grouped in the above manner are candidates for generation of "hot sheets" or referral to anti-crime or PIU depending on command policy. They will also be used to construct a consolidated summary of activity in step 7, 5 and 6. After the chronologies have been updated, maps and cross tabulations can be quickly updated. The order of update is not particularly important and is left to the analyst's discretion. Control numbers must be used on both maps and crosstabs. Their importance lies in the ease with which a cluster of cases by area or in time can be analyzed when control numbers appear on the respective map or cross-tabulation.

5a. and 6a. These steps involve the identification of high crime areas and times. These steps are extremely important to the analysis procedure particularly when coupled with the analyst's knowledge of general precinct conditions. All major clusters by both time and area should be examined in the chronologies. Note that this analysis may contribute to intelligence gathered in steps 4 through 4b. on pattern cases. If a series of cases involving similar perpetrators can be localized to a specific area, time or both, the interception odds increase. This increase is one of the

primary goals of precinct crime analysis.

7. Depending on the actual pattern cases, time of occurrence grouping and geographic groupings encountered in steps 4, 5 and 6 much of the consolidation necessary to define the current crime situation may already be completed. This step (7) is necessary however to tie up any loose ends and obtain an overall picture of precinct activity. The analyst may find, for example, that no area or time concentrations exist incidents being scattered randomly over the whole precinct. However, several pattern grouping may be embedded in this seemingly random situation, depending on the type of crime and information available from the original complaint report.

Understandably all possible situations cannot be identified in this manual so the analysis and judgment of the analyst and supervisory personnel are of great importance at this point.

8. Once this procedure is adopted it becomes possible for the precinct command (or designated supervisor(s) to review past deployment and resource allocation decisions and factor their effects into current decisions. A timely analysis can show that recently employed tactics have been ineffective, that they should be continued or slightly modified or that the services of Area Task Forces, CWAC, or other special units are required to combat a particular problem.

The Crime Analyst can effectively give the command this capability by incorporating the required clerical procedures monitoring deployment and tactics into the analysis routine at this point (for further discussion of evaluation procedures see Section X.).

9. While this step is not the responsibility of the crime analyst it has been included to mark the completion of an analysis cycle. It should also serve to indicate the dependence of this step on all that has preceded it. It is unlikely that this step can be responsibly and effectively carried out by any command without the intelligence gathered and analyzed in the preceding steps.

C. VARIATIONS BY CRIME TYPE AND OTHER CONSIDERATIONS

It should be obvious from both the preceding discussion and prior sections of this manual that the importance of the analysis steps vary considerably by type of crime. Robbery, Rape and various sex crimes and Grand Larcenies involving confrontations have the highest potentials for producing well defined patterns. Burglary, Grand Larceny Auto and non-confrontational Grand Larcenies are characterized by less specific data and may best be attacked through an analysis of time and area concentrations.

The Analysis procedures just discussed can be followed with a great deal of flexibility addressing those problems unique to a command in the most effective manner.

A crucial element necessary to support the analysis procedures is accurate report data. The Crime Analyst is responsible for monitoring and advising superiors if the quality of reports submitted from the field hinder the analysis. It should be made clear to field personnel that the quality of their reports has a significant impact on the commands ability to perform its missions of crime control and apprehension.

### 3. ANALYSIS NOTES

#### A. SUBDIVISION OF DATA:

When analysts are confronted with the task of handling and processing large amounts of data, a frequently employed tactic is to subdivide the data into smaller groups through the use of categories determined by one or more crime characteristics.

For example, precinct crime analysts often keep separate sector chronologies, separate precinct robbery spot maps for each tour, or separate folders for particular problems such as purse snatches or school-related crimes.

This process has a certain obvious attraction.

First of all, the amount of data included in any one analytical tool, such as a chronology or map is minimized, thereby keeping any one file uncluttered.

Secondly, the analysis is immediately localized and therefore one aspect of identifying problem situations is already taken care of.

There are, however, several major drawbacks to subdividing data, and the analyst should be aware of their effect on his analysis.

1) Breaking down data into categories often makes the data within any one category too sparse for any emerging patterns to be noticed.

There may be patterns involving several adjacent categories which may never be spotted by looking at individual categories, e.g. in Figure 9 there is obviously a problem where sectors H, I, E, and F meet.



Figure 9

However, by examining any one sector map individually, nothing appears to be particularly unusual.

A very common instance of this type of problem often occurs when the analyst maintains separate tour maps for robbery incidents. Often, problems which are shared by consecutive tours are obscured. For example, there may be a problem in the time range 2200-0200 hours in a particular area that would go unnoticed when separate tour maps are examined. There may not be enough incidents in the area in either the third or first tour map to command the analyst's attention.

On the other hand, by an analysis of the entire 24-hour map, the analyst could ascertain particularly busy time frames, such as 2200-0200, by a secondary analysis using either the chronology or a crosstabulation, after a map has informed him of the busy area. By communicating this more precise information to the precinct anti-crime supervisor, for example, more effective use could be made of available anti-crime personnel.

2) There seems to be a tendency to maintain certain types of subdivided files out of fear that this information will be required at some future time.

For example, because in the past, a request came down from a higher command requesting a list of all taxicab robberies in a



certain time period, a precinct crime analyst might have set up a taxi log (this situation may apply to other special books as well e.g. schools, houses of worship, subway entrances, etc.) in an attempt to anticipate future requests for similar information. Such books may very well become "permanent logs" and although faithfully maintained, are hardly worth the effort. Unless there is a constant demand for such specialized information, there is no justification for maintaining separate logs of this type.

It is of utmost importance that the analyst and his supervisors realize that information of this type can best be obtained from the main chronology for that crime. Special codes or highlighting techniques (See Sect. V. Pg. 8 ) are the most efficient means at hand for extracting data on particular crime situation. The chronology, if properly coded and highlighted, requires only the original entry of each complaint and a quick "look back and count" procedure to obtain a year-to-date tally.

#### 4. CODING CONVENTIONS

As the techniques for precinct crime analysis become well known and routine it is the responsibility of each command to see that appropriately selected personnel receive the information necessary for the performance of their duties. To further this objective, analysts should include a dictionary of codes, highlighting conventions and any other information necessary to interpret their chronologies, maps and cross-tabs at the beginning of any chronology log book. Other precinct personnel should be made aware that this explanatory material is included in the log.

The purpose for including this information in the log is to make the chronologies, maps and cross-tabulations available to precinct personnel when the analyst or backup is not present i.e. late tour.

From time to time commands may experience particularly serious crime situations which may be effectively combatted only if additional information were available for each incident; information not normally contained on the department's complaint or complaint followup report. One solution to this problem may be a special form put in use for a particular crime for a short period of time, Figures 10 through 12 present examples of such forms developed by the department in the past. They are offered purely as guidelines.

For specific problems, at particular times, they may be useful for gathering additional information which can contribute to the suppression of a specific crime situation.

**SUPPLEMENTARY COMPLAINT REPORT - ROBBERY** (Misc. 766-Rev. 9/73) **INSTRUCTIONS:** To be prepared in cases of Complaint or Arrest for Robbery. If there are multiple perpetrators, fill in the coding blocks only for each additional perpetrator. **NOTE:** The dot (•) indicates fill-in required for descriptive word or phrase. The asterisk (\*) indicates that word should be inserted in space but no code entered in code block (that will be done by crime coding from list of building codes).

PERPETRATOR INFORMATION																																																																																																																																									
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Figure 10

SUPPLEMENTARY COMPLAINT REPORT - VEHICLE THEFT (Miss. 819-7/73)						(1) PCT. OF COMPL.	(4) COMPL. NUMBER	(9) YEAR OF COMPLAINT
INSTRUCTIONS: To be prepared in cases of Complaint, Arrest or Recovery of a stolen vehicle. If more than one perpetrator is involved in the same incident, prepare one form for each additional perpetrator, completing PERPETRATOR INFORMATION only. • Indicates fill-in required for descriptive word/s or phrase/s.								
(13) PCT. OF ARREST OR RECOVERY	(16) APPARANT VEHICLE IDENTIFICATION NO.	(44) YR. OF MANUF.	(45) MAKE OF AUTO	(47) TYPE OF AUTO	SPECIFIC MODEL (Impala, LTD, etc.)			
	(30) TRUE VEHICLE IDEN. NO., IF KNOWN	1. 74 6. 67-69 2. 73 7. 64-66 3. 72 8. 60-63 4. 71 9. 59 and before 5. 70	1. Chevrolet 9. Plymouth 2. Cadillac 10. Dodge 3. Lincoln 11. Chrysler 4. Oldsmobile 12. American Motors 5. Pontiac 13. Volkswagen 6. Buick 14. Porsche 7. Ford 15. • 8. Mercury	1. Luxury 2. Full Size 3. Intermed. 4. Sta. Wagon 5. Compact 6. Conv. 7. Sports 9. •				
(13) _____	(16) _____	(44) _____	(45) _____	(47) _____				
(48) MAKE OF TRUCK	(49) TYPE OF TRUCK	(50) MAKE OF MCV.	(51) ENGINE SIZE (CC's)	(52) PRESENT VALUE OF VEHICLE				
1. Mack 6. Kenworth 2. O.M.C. 7. Brockway 3. Chev. 8. Intern'l. 4. Ford 5. White 9. •	1. Panel 6. Light Duty Box 2. Van 3. Tractor only 7. Heavy Duty Box 4. Tractor only 5. Trac. & Trail. 8. Camper 9. •	1. Harley-Dav. 2. Honda 6. BSA 3. Yamaha 7. BMW 4. Suzuki 5. Triumph 9. •	1. 900 + 6. 100-199 2. 750-900 7. -100 3. 500-749 8. Scooter 4. 350-499 5. 200-349 9. •	1. +15,000 2. 10-15,000 6. 1500-4,000 3. 8-10,000 7. 250-1500 4. 6-8,000 8. -250 5. 4-6,000				
(48) _____	(49) _____	(50) _____	(51) _____	(52) _____				
(53) COLL/REPAIR WORK WITHIN LAST 90 DAYS?	(54) ANTI-THEFT DEVICE IN OPERATION?	(55) TYPE OF DEVICE	(56) VEHICLE INSURED FOR THEFT	(57) PLACE OF OCCURRENCE OR RECOVERY				
1. Yes If Yes, 2. No Where? 9. Unk. •	1. Yes 2. No 9. Unknown	1. 73 Manufacturer's 6. Gas Cut-off 2. Audible Alarm 7. Cut-off/ 3. Cut-off Switch Hood Lock 4. Steering Col. Lock 8. Comb. of above 5. Krook Lock 9. •	1. Yes 2. No 9. Unknown	1. Resident. Area 6. Business Area 2. Resident Driveway 7. Isolated Area 3. Indoor Garage 8. Dumping Place 4. Attended Lot 5. Unatt. Park. Area 9. •				
(53) _____	(54) _____	(55) _____	(56) _____	(57) _____				
(58) WEATHER	(59) STREET LIGHTS	(60) LIGHT COND. INSIDE	(61) ALARM TRANSMITTED?	(62) WAS VEHICLE DRIVEABLE	(63) CONDITION OF VEHICLE	(64) WAS VEHICLE STRIPPED?		
1. Clear 2. Rain 3. Snow 9. •	1. None 2. Incandescent 3. Fluorescent 4. Hi-Intensity (Sodium/Mercury)	1. Good/Bright 2. Poor/Dim 3. None/Dark	1. No 6. 1 - 12 Months 2. Less than 8 Hrs. 7. More than 1 Year 3. 8 - 24 Hours 4. 1 - 6 Days 5. 7- Days - 1 Month	1. Yes 2. No	1. Good 2. Light Damage 3. Heavy Damage	1. No 2. At Recovery Location 3. Before being dumped		
(58) _____	(59) _____	(60) _____	(61) _____	(62) _____	(63) _____	(64) _____		
(65) ITEMS REMOVED	(66) ARE BODY SHOPS OR JUNK YARDS WITHIN 4 BLOCKS OF RECOVERY?	(67) METHOD OF THEFT	(68) REASON FOR THEFT					
1. Wheels only 6. Completely 2. Engine & Trans. Stripped 3. Doors/Fenders 4. Complete Front 5. Comb. of Above 9. •	1. Yes 2. No	1. Damaged Ignition 6. Tow/Push 2. Replaced Ignition 7. Robbery 3. Hot Wire 8. Credit Card/ 4. Keys left in veh. Fraud 5. Made Key 9. •	1. Joyride 6. Parts 2. Unaware of vio. 7. Professional 3. Purchaser 8. Auto Ring 4. Seller of veh. 5. For other crime 9. •					
(65) _____	(66) _____	(67) _____	(68) _____					
(69) NO. OF PERP.	PERP. NAME & ADDRESS (list only 1) (Include Resident Pot.)		(71) RACE	(72) SEX	(73) AGE	(74) ADDITIONAL CHARGES (If Arrested)		
1. one 2. two 3. three 4. four or more 9. Unknown	(70) ARRESTED? 1. Voided Arrest 2. Yes 3. Summons-Alt. VIN 4. No		1. White 2. Black 3. Hisp. 4. Yellow 9. Unknown	1. Male 2. Female 9. Unknown	1. -16 2. 16-20 6.+50 3. 21-25 9. Unk. 4. 26-30 5. 30-50	1. None 5. Gun 9. Purse 2. Alt. VIN 6. Nar. Fel. 10. Snatch 3. Burglary 7. Bribery 10. Traf. Vio. 4. Burg. Tools 8. Robbery 11. •		
(69) _____	(70) _____		(71) _____	(72) _____	(73) _____	(74) _____		

Figure 11



SUPPLEMENTARY COMPLAINT REPORT - HOMICIDE/ASSAULT (Misc. 818-7/73)										ORIG. PRECINCT		COMPLAINT NO.		YEAR		
INSTRUCTIONS: Place Appropriate Code Number in Designated Space Immediately Below Caption.										DUPL. (1)		(4)		(9)		
(13) NO. OF PERPETRATORS	(14) SEX	(15) RACE	(16) COMPLEXION	(17) AGE	(18) HGT.	(19) WGT.	(20) BUILD	(21) HAIR COLOR	(22) HAIR STYLE							
1	Male	1	Black	2	Light	1	Under 16	1	Under 5'	1	100-125	1	Black	1	Bald	1
2			Hispanic	3	Medium	2	16-20	2	5'1"-5'4"	2	126-150	2	Brown	2	Part.Bald	2
3	Female	2	Other	4	Dark	3	21-24	3	5'5"-5'8"	3	151-175	3	Blonde	3	Straight	3
4 Or More			Unknown	5	Unknown	4	25-29	4	5'9"-6'0"	4	176-200	4	Gray	4	Curly	4
9 Unknown	Unknown	9		6		5	30-40	5	6'1"-6'4"	5	Over 200	5	Gray/Blk	5	Kinky	5
				7		6	Over 40	6	Over 6'4"	6	Unknown	6	Red	6	Afro	6
				8		7	Unknown	7	Unknown	7		7	Other	7	Wig	7
				9		8		8		8		8	Unknown	8	Unknown	8
				9		9		9		9		9		9		9
(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)							
(23) HAIR LENGTH	(24) ACTIONS	(25) FACIAL HAIR	(26) PECULIARITIES	(27) REASON	(28) PRIOR RELATIONSHIP	(29) WEAPON OR FORCE USED										
Regular	Had Been Drink.	1	Mustache	1	Family	1	Handgun	1								
Collar	App. Addict	2	Goatee	2	Common-Law	2	Other Firearm	2								
Shoulder	App. Psycho	3	Beard	3	Boy/Girl Friend	3	Knife	3								
Unknown	Unknown	9	Muttonchops	4	Friend	4	Sharp Instrument	4								
			Must. & Beard	5	Casual Acquaintance	5	Blunt Instrument	5								
			Must. & Mutton	6	Stranger	6	Other Physical Force	6								
			Must./Goatee	7	Unknown	7	Poison/Chemical	7								
			Muttonchops	8		8	Bomb	8								
			Clean Shaven	9		9	Unknown	9								
			Unknown	9		9										
(23)	(24)	(25)	(26)	(27)	(28)	(29)										
PERPETRATOR KNOWN? Yes 1 No 2 (30)										PERPETRATOR'S NAME, ADDRESS, RES. PCT., AND CLOTHING DESCRIPTION						
VICTIM INFORMATION																
(31) SEX	(32) AGE	(33) RACE	(34) RESIDENT PCT	(35) INJURED	(36) ATTITUDE	(37) TYPE OF VICTIM	(38) WEATHER	(39) LIGHT								
Male	Under 10	1	White	1	Slight	1	Cooperative	1	Gang Member	1	Clear	1	(Inside)			
	10-20	2	Black	2		2	Uncooperative	2	Drug User	2	Rain	2	Good/Brt	1		
	20-30	3	Hispanic	3	Serious	2	Will View Photos	3	Had Been Drinking	3	Snow	3	Poor/Dim	2		
Female	30-40	4	Oriental	4	DOA	3	Will Appear in Court	4	Motorist	4	Other	4	None/Drk	3		
	40-60	5	Other	5					Cab Driver	5						
	Over 60	6		6					Other	6						
(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)						
(42) STREET LIGHTS																
Incandescent 1																
Fluorescent 2																
Hi-Intensity 3																
(Sodium-Mercury)																
PERPETRATOR'S INITIAL STATEMENT TO VICTIM:																
ADDITIONAL HELPFUL INVESTIGATIVE LEADS:																
VEHICLE INFORMATION																
(43) MAKE	(44) LICENSE NO.	(45) STATE	(46) BODY COLOR	(47) TOP COLOR	COLOR CODES - ENTER CODE NUMBERS FOR ITEMS (46) AND (47)											
G.M.	1	N.Y.	1	1	Black	1	White/Cream	4	Gold/Yellow	7						
Ford	2	N.J.	2	2	Blue	2	Brn/Beige/Tan	5	Red/Maroon	8						
Chrysler	3	Conn.	3	3	Green	3	Gray/Silver	6	Unknown	9						
Amer.Mtrs	4	Other	4	4												
Foreign	5	Unknown	5	5												
Unknown	9			9												
(43)	(44)	(45)	(46)	(47)	PAGE _____ OF _____											

Figure 12



In analysis, regardless of the crime type being examined, effective data collection is a crucial element necessary for success. Generally, the level of analysis capability is correlated with the amount, accuracy and specificity of the data collected. However the objective of the particular analysis should always be considered before initiating a new chronology with its related maps and cross-tabulations. The benefits one hopes to gain should be carefully weighed against the cost in clerical effort and the availability of personnel to carry out any tactical decisions given other concurrent crime problems.

# 1. THE VALUE OF FEEDBACK

It follows that for the crime analysis system to operate at an optimal level, feedback is required as to the value of the data supplied. Feedback increases the value of the system by:

- a) Maximizing the effectiveness and efficiency of the person performing the analysis by allowing him to evaluate the comparative usefulness of data and analysis techniques for specific needs. He can then allocate his time accordingly.
- b) Maximizing the effectiveness and efficiency of other support and field units, especially the assignment of discretionary personnel, by supplying them with high level detailed information. (e.g. time specific target zones, etc.)

It is therefore suggested that the staff performing the crime analysis function document:

1. Any crime patterns and information developed.
2. Any communications developed from this information.
3. The results obtained from particular deployment or tactics targeted on the problems.

It is also valuable for the analyst to periodically confer with those using crime data so that modifications, if necessary, can be rapidly and easily made to the format or content of the information he is supplying.

## NOTE:

The analyst should always be open to the possibility that certain techniques available or the use of existing procedures may be quite unusual or unexpected.

The following are some examples:

- Deployment of personnel may not only be effective directly at the site of high crime incidence, e.g. a robbery condition in which teenagers were the offenders was effectively dealt with by deploying personnel to the area where they fled after committing the crimes (their part of the neighborhood)
- Certain forms already in existence and largely ignored may form the basis of useful information files, e.g. DD5's for auto larceny recovery locations, stop frisk forms (UF250's) for M.O. correlations, etc.

- The volume and distribution of crime incidents may have an important bearing on the comparative usefulness of an analytic tool. For example, in a precinct with a high volume of burglaries evenly distributed throughout the precinct, maps alone are of lesser value in analyzing crime since we are already aware that they occur almost everywhere with equal probability.

## 2. EVALUATION: A GENERAL APPROACH

If a problem has been identified, a solution is usually proposed and an appropriate course of action to combat the problem is implemented. The course of action, hopefully, will be matched to the problem. However, given the variation in the types of patterns possible (M.O., Victim Type, location, etc.) and the types of response available (Anti-crime, Spec. Unit, Patrol, etc.) this is easier said than done. Basically there are two factors to consider once a pattern has been established; first there is the type of response and second, the all important result. Did the pattern disappear, change (dislocation) or remain the same? The relationship is illustrated by Figure

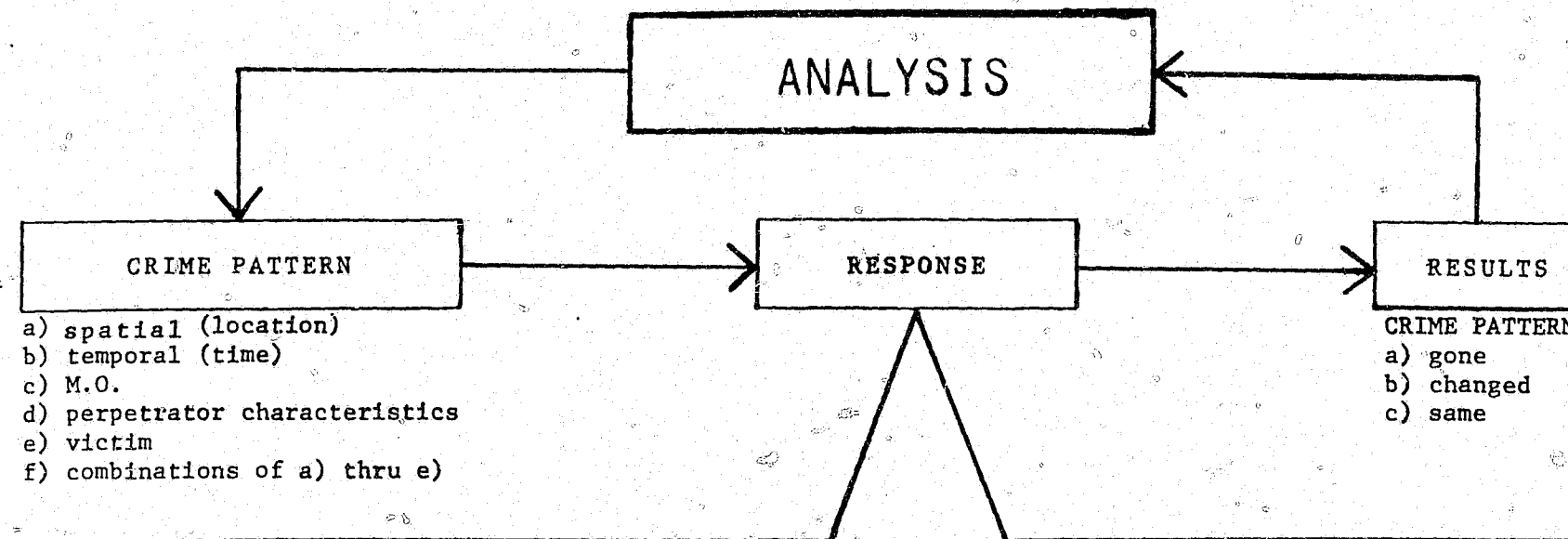
Operational evaluations must be done frequently and at relatively short time intervals. For example, time specific anti-crime deployments may be analyzed weekly, bi-weekly or monthly with the variations in complaint and arrest levels noted and analyzed. If, after the passage of time, no significant reduction of incidents has occurred:

1. The times and/or locations may have to be adjusted to account for possible displacement.
2. Field tactics (type of personnel and mode of deployment) may have to be modified.
3. A different approach altogether may be taken (e.g. Use of Cr. Prev. Officer to educate identified victim type).
4. Special assistance may be requested (i.e. Area Task Force, SCU, TPU, etc.)

The short term evaluation (monitoring) is essential in that it fine tunes the "response" to the timeliness of identified problem situations. It is important to note that the scope of any evaluation at the precinct level should be small. This is, that given the number of factors involved (patterns, response, results) and the variation possible with each, precinct wide or even sector size operations are often difficult to properly monitor. The following evaluation example illustrates only one way of coping with the evaluation factors previously mentioned.

EVALUATION  
PROCEDURES





DISCRETIONARY FORCES	DEPLOYMENT MODE				
	Uniformed Patrol	Foot Posts	Scooters	Car Stops	Directed Patrol
Anti-Crime	Target Zones	Decoy	Stake Out		
P.I.U.	Investigative Canvass		Stake Out	Victim Interview Follow-Up	
Crime Prevention Officer	Victim Specific Pattern	Specific Location Surveys	M.O. Pattern Public Education		Community Seminars Victim Groups
Special Units	Area Task Force	Senior Citizen Robbery Units	Tactical Patrol Unit	Street Crime Unit	Auto Crime Unit
Other	Special Cars	Special Teams	Multiple Precinct Projects	Multiple Unit Projects	Other Police Agencies



### 3. EVALUATION: A SPECIFIC EXAMPLE FROM THE 41ST PRECINCT

A type of on-going monitoring system which has proven to be valuable in practice is currently in use by the crime analysis officer at the 41st precinct.

The chief tool is a special chart keyed to a "grid map".

This map subdivides the precinct into target-areas whose size is convenient for evaluation purposes. Generally, these areas are greater in area than a post and smaller in area than a sector.

These have been numbered from 1 to 22. ( See Figure 14 ).

A monthly chart is maintained which cross-tabulates target areas (grid numbers) versus 2-hour time intervals. (See Figure 13).

The crime targeted at the 41st precinct are robbery, purse snatch and rape. This combination is then identified only as either street or inside.

Tally marks are entered in the cells of this cross-tabulation in various colors, depending on whether the tally refers to a street complaint, an inside complaint or an arrest.

(These will be shown here as S.I.A. in lieu of colored tally marks).

In addition to providing the usual analytical benefits that a cross-tabulation offers (See pp 32), the main use of this chart, is to segment various tours into 2-hour blocks and the precinct into convenient, fairly small, areas in order to better assess the effectiveness of various deployment in various areas of the precinct for different parts of a tour. In this way, for example, a special anti-crime team, or robbery car, can be shifted to times and/or areas of highest incidence depending on information gathered in the chart. Changes can then be made dynamically, i.e. wherever a pattern change is noticed. When different patterns in incidence appear, different time and area combinations can be used in response to help maximize interception odds.

For examples, a team may on the basis of the given chart be assigned to work grids No. 9, 10, 17 on a 1000 x 1800 tour with the first four hours in grid No. 17 and the last four hours in grid No. 9 and/or 10.

It may be that the assignment of the personnel at the locations above resulted in a geographic displacement of incidents. That is, when personnel were assigned to zones 9 and 10 the incidence of robbery for those areas went down but the incidence level in the adjoining zones (11 & 12) went up. Incident displacement should be expected and is not restricted to location. Very often there will

be a time displacement. The total incidence level for zones 9 and 10 would remain the same but the time of occurrence would be changed. Instead of the prime occurrence time being 1400 to 1800 it might be displaced to 1800 x 2200. Another possible effect of deployment is target displacement. That is, "street robberies" may decrease but "inside robberies" would increase.

It is important to realize that as an analyst you have gained information. By comparing the time 1 Chart (preceding page) to the time 2 Chart any or all of the above displacement possibilities could be identified. The next step would be an attempt to use the displacement information in formulating tactics and/or deployment. For example, in the case of the geographic displacement to zones 11 and 12, the precinct may want to flood zone 9 and 10 with all available uniform personnel and use anti-crime personnel in the identified displacement zones (11 and 12). The key factor in any event, is the incidence level- not the arrest level. Success should be thought of in terms of reducing the incidence level of the targeted crime. While arrest levels may contribute to reducing the incidence level, a reliance upon arrest levels for evaluation purposes can be very misleading.

It should be noted that the techniques used by the 41st Precinct still rely on the basic chronology and control numbered spot map. The chronology is still the basic summarized data source used by the additional analysis tools. The control numbered spot map provides essential information on both locational displacement and indirectly (referring back to the chronology) of victim type or M.O. changes. The spot map can also be examined periodically to determine if grid areas should be modified to reflect changing precinct conditions.

#### 4. CONCLUSION

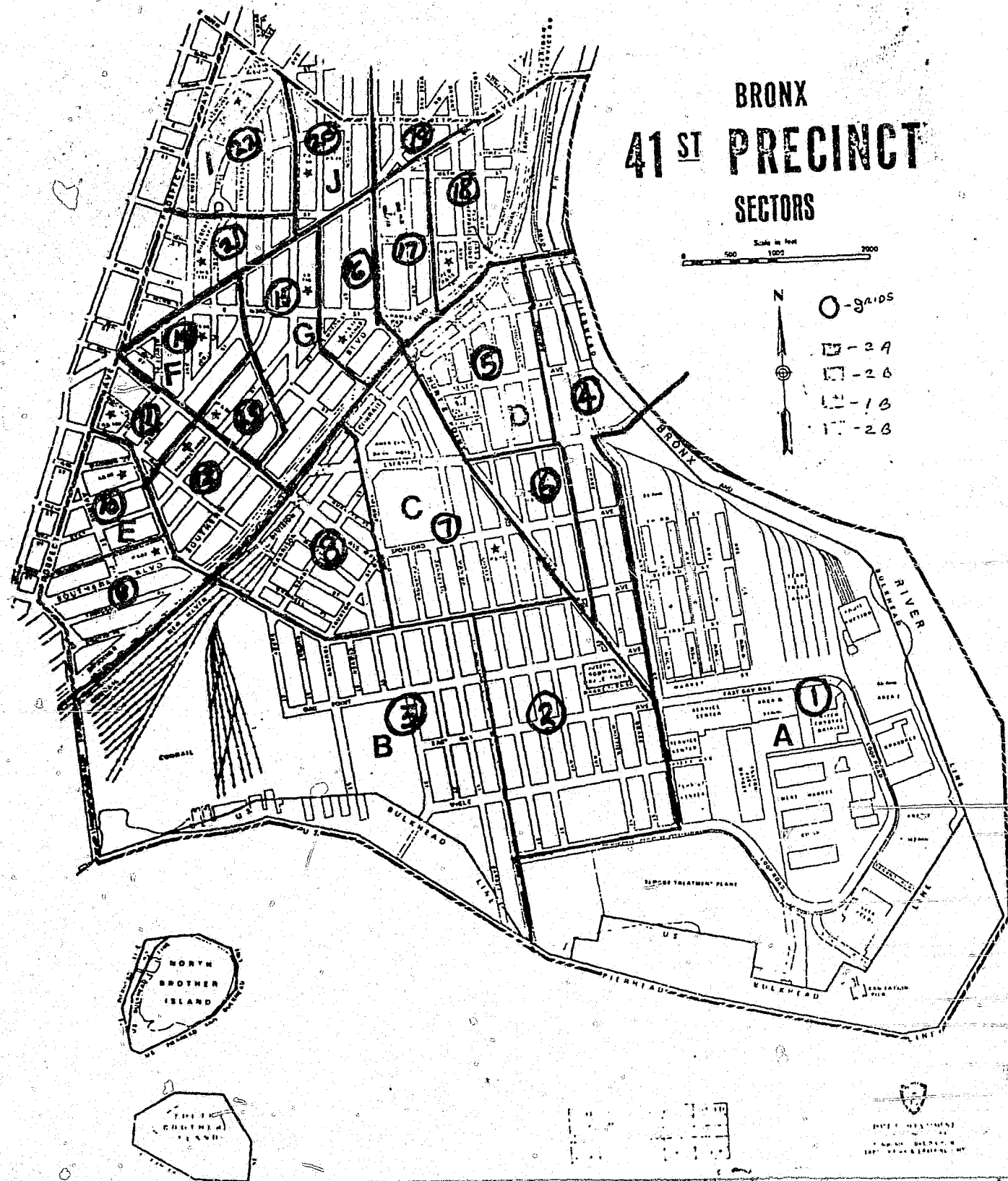
The primary purpose of an on-going evaluation of precinct activity is to satisfy a basic need for operational flexibility. This weeks problems may not be next weeks problems nor will this weeks tactics, necessarily, be adequate to combat next weeks problems.

The crime analysis procedures described in this manual, not only identify current crime patterns, they can and should be used to produce operational flexibility through the intelligent allocation of scarce resources to real problems.

GRID NO.	0000 to 0200	0200 to 0400	0400 to 0600	0600 to 0800	0800 to 1000	1000 to 1200	1200 to 1400	1400 to 1600	1600 to 1800	1800 to 2000	2000 to 2200	2200 to 2359	S I A
1													1
2													1
3													0
4													0
5													0
6													0
7													1
8													0
9													3
10													3
11													3
12													5
13													5
14													5
15													5
16													5
17													5
18													5
19													5
20													5
21													5
22													5
STREET	3	4	2	2	3	2	3	6	9	11	5	8	58
INSIDE	2	1	0	1	0	0	1	2	2	1	2	1	13
ARRESTS	0	1	0	0	0	0	0	1	1	1	1	1	6

Figure 13

Figure 14



END