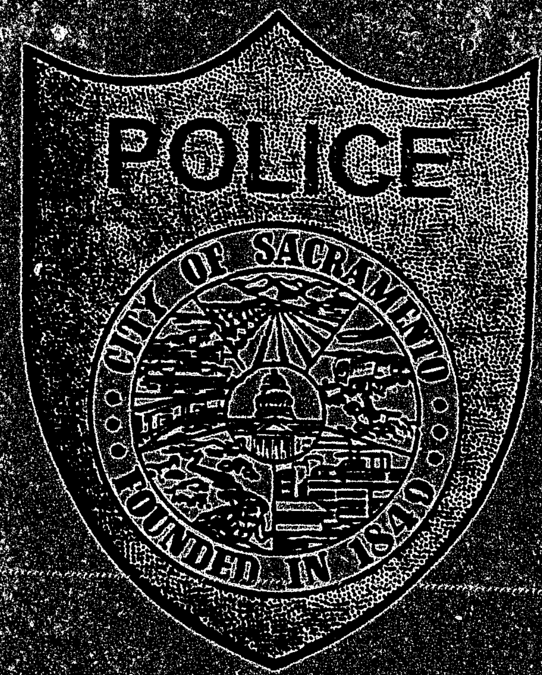
MANAGING PATROL OPERATIONS FINAL REPORT



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MANAGING PATROL OPERATIONS
FINAL REPORT
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The Sacramento Police Department is pleased to submit this final report on Managing Patrol Operations (Test Design). The grant set out to challenge age-old assumptions relative to the fundamental role of the police patrol function and to test the efficacy of alternative approaches. Basically, we set out to replace random patrol with a concept of "Directed Patrol" targeting on identified and specific police problems.

At first glance, the conversion to a directed patrol model seems an inoccous and simple matter. However, the process is a long and complicated one. And, as we redefined the function of patrol, so too did we have to modify the working relationship with other operations units such as Communications, Detectives, Crime Analysis, Community Resources, etc. Some of these changes did not come easy. But, the end result was worth the effort.

Directed Patrol will become the patrol model of the future. It is still, however, in its infancy of development. What we hopefully accomplished in Sacramento was to contribute to furthering the state of the art by experimenting with these concepts and documenting our experiences. As a result of MPO, our patrol operations have been markedly improved over the past two years. Yet, we are not totally satisfied and much still needs to be done. Nevertheless, we are convinced that we are on the right track and we intend to pursue MPO's development.

Finally, the direction we chose to go under the broad guidelines of the MPO Test Design should not be interpreted as expousing a mandate as to how other police departments should operate. Rather, it represents how the Sacramento Police Department, within the context of our organizational structure, philosophy, leadership and environment at a particular point in time, developed a program tailored to meet our needs.

In other words, what worked here may be totally inappropriate somewhere else. Still, we are convinced that MPO concepts should be examined by all departments from the perspective that it contains valuable ideas that can be adopted in whole, or in part, to measurably improve the delivery of police services.

John P. Kearns
Chief of Police

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CHAPTER 1

PROJECT INTRODUCTION

On September 15, 1978, the Sacramento Police Department was awarded a $175,000 discretionary grant from the National Institute of Law Enforcement and Criminal Justice, the purpose of which was to act as an experimental site in which a prototype "Managing Patrol Operation Test Design" could be tested in an operational setting.

The design called for a basic shift from a random patrol concept of mobile police units to a more directed patrol which targeted on specific crime, traffic, and community problems. The assumption underpinning the directed patrol theory being of course that random patrol is not as effective, as once believed, and that directed patrol may provide a greater opportunity for police to improve their productivity in terms of both their effectiveness and service delivery.

The approach taken in the MPO grant was to provide for an initial six month planning period during which the basic research would be performed and a detailed implementation plan drafted. NILECJ would then take two months to review the plan and offer recommended refinements where necessary. Thereafter, the Police Department would begin a twelve month time-phased implementation period in which the conversion from random patrol to directed patrol must take place.

The following document is the final report for the Sacramento Police Department. Inasmuch as the MPO project is an experimental "test", and the field results will be used to further refine the design at a later time, we have detailed as much as possible of our change process and our experiences.

The outline we have followed in presenting this report carefully follows the test design. That is, by definition, the MPO program is two separate though interactive processes. They are:

- Allocating Patrol Resources

  These processes include not only matching resource allocations to workload conditions, but further entail managing the call for service workload itself.

- Undertaking Directed Activity

  This process involves the analysis of both crime and social problems and the subsequent development of plans and strategies to address those problems.

In addition, we have emphasized the establishment of Patrol Performance Objectives that are realistic and which provide measurable guidelines to patrol managers.

Chapter Two provides basic background information and descriptions of the community and the Sacramento Police Department prior to MPO.

Chapter Three of the plan deals with one of the major objectives of the Managing Patrol Operations: SPUDS Grant which is "to enhance the capability of police departments to achieve Patrol Performance Objectives." However, such an objective is much easier stated than realized. At the broadest level, the Patrol Performance Objectives must have a direct linkage to a common and accepted department-wide definition or understanding of what is the function of patrol. In other words, if we can commonly agree as to what the job and priorities of patrol are, then we can begin to develop performance objectives that are reasonably related back to the job.

Chapter Four of the report deals with resource allocation in terms of optimizing existing resources to workload conditions. The section details data access, data collection methodology and a multi-level plan approach in dealing with the application of the computer software programs. Of particular importance is approach to accommodate a mandated contractual obligation to convert from an 8-hour day, 5-day work week to a 10-hours day, 4-day work week, and that further entails shifting from 70% two-man car operation to 70% one-man car operation.

Chapter Five outlines the police departments' approach to the "Management of the Calls for Service Workload." In Sacramento call for service management has been a long established practice. So much so that minimal change was brought about by MPO. However, this chapter will explain how it operates and the results.

Chapter Six describes the development of the Police Crime Analysis capability. Unquestionably, this was one of the difficult and controversial components of the entire grant, and as it turns out, one of our best achievements. The problem that existed was that the Police Department already had a Crime Analysis Unit prior to MPO. However, its products were all but totally ignored, and the Unit was largely discredited.

Chapter Seven will define Sacramento's approach to directed patrol. Major components include: decentralization of operational planning to the patrol team level; "Beat Profiling" as a basis of establishing base line information for directed patrol planning; replacing the traditional roll calls with team conferences; development of a Patrol Resource Information Center; and, the utilization of crime suppression teams.

In addition, we have provided Chapters Eight and Nine on the MPO training courses for supervisor and police officers. Of particular importance was the supervisor's course because, in many ways, it became the pivotal point for the entire grant.

The supervisors were allowed to critique all aspects of the proposed program, and many of their suggestions for program improvement were included in the final design.

CHAPTER 2

BACKGROUND INFORMATION

City Description

Sacramento, the capital of California, is located at the confluence of the Sacramento and American Rivers in the heart of the great Sacramento-San Joaquin Valley, which lies in the northern half of the state between the Coast Range and Sierra Nevada mountains. The terrain of the city is practically flat, and the mean elevation is 17 feet above sea level. The city comprises an area of 97 square miles and is divided into four geographical areas (North, Central, South and East) by natural and man-made boundaries. The North portion of the city is separated by the American River and the Central, South and East sections are distinctively set apart by interstate and intrastate highways. There are five major highways which intersect within the city proper at various locations; they are Insterstate 80, Interstate 5, Interstate 880, US 99 and US 50.

Population

The City of Sacramento has a population of 260,712 and is the nucleus of a metropolitan area having a population of 700,000. The ethnicity of the city is as follows:

	Population	% 260,712
Caucasian	168,256	64.6
Spanish Surname	20,653	7.9
Asian-American	14,396	5.6
Black	27,624	10.6
American Indian	1,353	0.5
Filipino	1,582	0.5
Other	26,850	10.2
Male	127,195	49.0
Female	132,392	51.0

Police Department Description

The Sacramento Police Department is organized into four offices: (1) Office of the Chief, which includes Internal Investigations, Inspections and Standards, Planning and Fiscal and Intelligence Sections; (2) Office of Investigations, which has responsibility for providing all departmental investigative services; (3) Office of Operations, which is responsible for all patrol and traffic operations; (4) Office of Admininstrative Services, which has responsibility for community service programs and inhouse technical services.

Personnel

The total personnel complement for the Department for Fiscal Year 1977/78 is:

		% of Dept. Total
Sworn personnel	490	68.1%
Civilian, full time	169	23.6%
Civilian, part time	59.9	8.3%
TOTAL	718.9	100%

With a city population of 260,713 the ratio of sworn personnel per 1,000 population is 1.88. The following is a list of sworn personnel by rank:

Chief of Police	1
Deputy Chief	3
Inspector	1
Captain	8
Lieutenant	30
Sergeant	78
Patrolman/Detective	3
Police Officer	366
TOTAL	490

Sworn personnel are assigned to the various offices as follows:

	No.	% of Total
Office of Chief	13	2.7%
Office of Investigations	108	22.0%
Office of Administrative Services	34	6.9%
Office of Operations	335	68.4%
TOTAL	490	

Budget

The current Police Department budget for FY 1977/78 is $20,342,238, allotted as follows:

		% of Total
Office of the Chief	$ 662,459	3.3%
Office of Investigations	3,406,888	16.8%
Office of Adminstrations Services	4,090,349	16.0%
Office of Operations	12,182,542	59.9%
TOTAL	$20,342,238	

Reported Crimes

Part I Offenses, 1977:

Murder & NN Manslaughter	41
Rape	205
Robbery	1,276
Felony Assault	1,393
Burglary	8,348
Larceny Theft	13,078
Motor Vehicle Theft	2,658
Negligent Manslaughter	18
Misdemeanor Assault	1,605
	28,622
All Others	12,221
Sacramento Total	40,843

Calls for Service

The Sacramento Police Department received 120,929 incoming tele-communications for the months of February, March and April 1978. This is an average of 40,310 calls per month. Reference Chapter 5, Management Calls For Service, for further calls for service volumes.

Office of Operations Description: Pre-MPO

The Office of Operations is the largest office of the Department. It is divided into one selective enforcement section and two line divisions (traffic and patrol).

1. Selective Enforcement Section consists of three specialized units:

   a. Crime Suppression Unit (CSU) consists of four crime suppression teams. A crime suppression unit is a very flexible and adaptive unit having a main objective of suppressing criminal activities such as purse snatches, armed robberies, strongarm robberies, rapes, child molests, commercial burglaries, residential burglaries and car burglaries.

   The crime suppression teams receive information for functional purposes from the Department's Crime Analysis Section, police reports, and other criminal patterns detected by officers and patrol management. Crime patterns are identified and forwarded to the CSU teams for action.

   Two crime suppression teams also perform secondary roles as Special Emergency Reaction Teams (SERT). These SERT teams consist of specially trained and disciplined police officers qualified to handle special emergency situations such as barricaded subjects, snipers and hostage situations.

b. Canine Unit/EOD Units respond to and conduct searches of businesses where burglaries have occurred and the possibility exists that the suspect(s) are within the building. They handle burglary alarm calls, prowler calls and conduct searches on bomb threat calls. Currently the canines are trained to detect explosives by scent and the handlers are being trained to handle explosive ordnance disposal.

2. Traffic Division: Pre-MPO

The Traffic Division is presently composed of 1 Captain, 2 Lieutenants, 7 Sergeants and 50 Police Officers. The Division is organized into 6 teams as follows:

Squads I and II 0800 - 1600 hours 1600 - 2400 hours	Injury accident investigation and general traffic enforcement duties
Teams A, B, and C 1000 - 1800 hours 1200 - 2000 hours	Selected traffic enforcement duties targeting on the primary collision factors of high motor vehicle accident locations and districts
Driving Under the Influence Team (DUI) 2000 - 0400 hours	Selected enforcement directed toward the drinking driver

During calendar year 1977 the Traffic Division accounted for the following statistics:

4,500	DUI arrests
2,942	Injury accidents
50,021	Citations

The Traffic Division also operates a 2-man "hit and run" detail, a traffic court liaison section, and an office management section.

In addition, the Traffic Division operates and manages the Sacramento Police Auxiliary which is a force of 60 part time paid employees who provide a wide range of ancillary police services from stationary traffic control to crowd control and some parking enforcement.

As a result of the June 6, 1978, California election relative to the limitation on property taxes, one of the consequences will be an immediate reorganization of the Traffic Division. Tentative plans call for four teams of 6 men each and a supervisor. Several service level reductions are under consideration, including taking only those accident reports that are above the minimum reporting level, limiting DUI enforcement to Friday and Saturday nights, and the possible elimination of the Police Auxiliary.

3. Patrol Division: Pre-MPO

The Patrol Division has the responsibility to maintain social order within the community through active patrol

and appropriate response calls for service.

The present authorized strength of the Patrol Division is 245 sworn personnel:

Captains	3
Lieutentants	11
Sergeants	22
Patrol	209
TOTAL	245

The Patrol Division is divided into three Watches with the following number of sworn personnel assigned to each Watch:

First Watch	Police Officers	59
	Sergeants	6
	Lieutenants	4
	Captain	1
	TOTAL	70
Second Watch	Police Officers	53
	Sergeants	7
	Lieutenants	4
	Captain	1
	TOTAL	65
Third Watch	Police Officers	97
	Sergeants	9
	Lieutenants	3
	Captain	1
	TOTAL	110
	TOTAL ALL WATCHES	245

Each Watch is assigned a specific time responsibility seven days a week:

1st Watch	2400 - 0800
2nd Watch	0800 - 1600
3rd Watch	1600 - 2400

The Office of Operations, Patrol Division, operates under a "team policing concept." Each Watch is comprised of several patrol teams made up of police officers and supervised by a team sergeant. The number of police officers assigned to a team and the number of teams on a particular Watch vary. Members of a team, including the team sergeant, work the same weekly schedule of five days on, two days off.

Note: There are two criteria which may cause a team member's hours to vary from the rest of his team:

a. A particular team member may be assigned to work an early or late patrol unit within the team's geographical area of responsibility. These so-called overlaps are utilized to stagger manpower so as to provide continuous coverage of the city and to adjust manpower to the hourly fluctuation of calls for service. The First Watch deploys the majority of its personnel complement at 2400 - 0800. However, a small

percentage report to duty at 2200-0600. Second Watch deploys the majority of its officers at 0800 to 1600; however, a small complement of personnel work 0600-1400 and 1000-1800. Third Watch deploys the majority of its officers at 1600-2400; however, a small percentage of officers work 1400-2200 and 1800-2200.

b. Team members do not have the same vacation schedule. Vacations are scheduled on a seniority basis.

When team members are deployed, they man patrol units assisgned to a specific district. The number of officers working a patrol unit (1 or 2 men) depends on the Watch and type of unit. The following information shows the actual units deployed, per daily average, for each Watch during 1977:

First Watch	1.96	1-man units
	14.95	2-man units
	16.91	Daily Total Units Deployed
Second Watch	23.51	1-man units
	1.93	2-man units
	25.08	Daily Total Units Deployed

Third Watch	10.33	1-man units
	20.73	2-man units
	31.06	Daily Total Units Deployed

Each team is assigned a specific time and geographical area of patrol responsibility when deployed.

The area for which an entire team is responsible is called a sector. The area for which a team member(s) is responsible is called a district, or beat. Several districts make up a sector. The number of sectors and districts within a sector vary from Watch to Watch. The size of a sector or district, however, depends upon several variable, such as natural and man-made obstacles, population densities, surface street accessibility, freeway access, crime rate data, etc.

First Watch has 4 Sectors and 16 Districts.
Second Watch has 4 Sectors and 16 Districts.
Third Watch has 6 Sectors and 23 Districts.

Directly above the team Sergeants in the chain of command is the area Lieutenant who has the responsibility for a large portion of the city often composed of several sectors. The area Lieutenant's immediate supervisor is the Watch Commander (Captain) who has total city policing responsibility for his Watch.

Team members are periodically assigned duties other than normal patrol function:

1. Home Alert. The Home Alert program is designed to increase the cooperation between the police and the community in a structured program directed toward the prevention of crime, particularly burglary and suspicious persons. The program organizes citizens into small neighborhood groups and familiarizes them with basic matters necessary to discourage crime. Officers from the Patrol Division attend, participate and conduct Home Alert meetings.
2. Team Meetings. An ongoing, informal planning and training session for field officers conducted by their first line supervisor. These meetings allow for tactical planning, mutual problem solution, exchange of information, and the review of current policies and procedures.
3. School Contact Program. This program provides an educational experience, in cooperation with local school systems, by an informal police contact as part of the kindergarten scholastic program.
4. Team Training. Team Training is designed to increase the proficiency and effectiveness of police officers while performing their assigned tasks by sharing information, improving understanding of department

procedures and improving specific related skills. Team Training is given at the Watch level to improve team unity and cohesiveness.

4. Supplements to the Patrol Force

The Patrol Division is responsible for handling calls for service in the city. However, due to the enormous volume of calls Traffic, Crime Suppression Units, and K-9 Units are frequently assigned to cover a patrol unit or to handle a particular call. Another supplemental entity is the group of Community Service Officers (CSO).

There are approximately 21 Community Service Officers working for the Sacramento Police Department. Twenty (20) CSO's work for Patrol and Traffic Divison--one (1) CSO assigned to Traffic, four (4) CSO's assigned to First Watch, nine (9) CSO's assigned to Second Watch, and six (6) CSO's assigned to Third Watch. These individuals go through the basic police academy, but are not sworn officers. The remaining CSO's work for the Community Resources Section.

CSO's are college students between the ages of 18 and 25. They are part-time employees (20 hours per week during the school year) and they supplement the patrol force in the

following way: Their activities include taking reports of burglaries, stolen cars, stolen car recoveries, thefts, vandalism, traffic accidents, etc. They administer first aid and assist in traffic control. CSO's also perform many other clerical and supportive functions.

5. Patrol District Realignment

In 1977, the patrol districts and sectors were redesigned. Data from the Beat Survey was manually calculated and patrol districts designed. The process was tedious and time consuming. It was later determined that the new districts and sectors were inaccurate. Since then, the districts have been adjusted to more adequately meet service demands.

CHAPTER 3

PATROL PERFORMANCE OBJECTIVES

One of the major objectives of the Managing Patrol Operations is "to enhance the capability of police departments to achieve Patrol Performance Objectives." However, such an objective is much easier stated than realized. At the broadest level, the Patrol Performance Objectives must have a direct linkage to a common and accepted department-wide definition or understanding of what is the function of patrol. In other words, if we can commonly agree as to what the job and priorities of patrol are, then we can begin to develop performance objectives that are reasonably related back to the job.

We have categorized all patrol functions into one of the following four general areas:

- Crime Prevention
- Crime Control
- Public Service
- Administrative

Taking these functions one step further, we have defined them in the language of a basic Patrol Performance Objective:

1. Crime Prevention Patrol Performance Objective (basic):

"To minimize the occurrence of crime."

2. Crime Control Patrol Performance Objective (basic): "To maximize the successful closure of reported crimes by the police; present all relevant facts to, and participate as required in, the judicial process; and to recover and return stolen property."
3. Public Service Patrol Performance Objectives (basic): "To maximize the level and quality of police service authorized or required by federal, state, and city government to the public."
4. Administration Patrol Performance Objectives (basic): "To facilitate the achievement of the Patrol Performance Objectives of crime prevention, crime control and public service."

Next, under each of the above categories, we have developed a series of specific measurable objectives, and the accompanying suggested effectiveness and productivity measures.

CRIME PREVENTION PATROL PERFORMANCE OBJECTIVES

BASIC OBJECTIVE

To minimize the occurrence of crime.

MEASURABLE OBJECTIVES: MAJOR, PERSONAL CRIME

To minimize the number of those major, violent crimes against persons:

- forcible rape
- robbery

that are preventable under the following circumstances:

- in public,
- in commercial or industrial establishments

as determined from crimes reported to the police.

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Rate of those major, violent crimes against persons referenced in the objective that are preventable under the specified circumstances, per 1,000 population, as compared to a 3 year crime index norm established by the base years of 1977-79.

MEASURABLE OBJECTIVES: MAJOR, PROPERTY CRIME

To minimize the number of those major crimes against property:

- burglary
- grand theft
- vehicle theft

as determined from crimes reported to the police.

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Rate of those major crimes against property referenced in the objective, per 1,000 population, as compared to a 3 year crime index norm established by the base years of 1977-79.

MEASURABLE OBJECTIVES: SELECTED, LESSER CRIMES

To minimize the number of each of the lesser crimes against persons and property, including:

- petty theft
- assault or battery
- arson
- stolen property; buying, receiving, possessing
- vandalism
- sex offenses (except forcible rape, prostitution, and commercialized vice)
- disorderly conduct
- all other offenses

as determined from crimes reported to the police.

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Rate of each of the lesser crimes against persons or property referenced in the objectiver, per 1,000 population, as compared to a 3 year crime index norm established by the base years of 1977-79.

CRIME CONTROL PATROL PERFORMANCE OBJECTIVES

BASIC OBJECTIVE

To maximize the successful closure of reported crimes by the police; present all relevant facts to, and participate as required in, the judicial process; and to receive and return stolen property.

MEASURABLE OBJECTIVES: MAJOR PERSONAL CRIME CASE CLOSURE

To maximize the number of reported, major crimes against persons:

- homicide
- forcible rape
- robbery
- aggravated assault

that are closed successfully by the police in any of the following manners:

- arrest
- victim refused to cooperate on and in the investigation--offender not identified,
- cleared other: no arrest--offender identity definitely established, under any of the following conditions:
  - victim refused to prosecute
  - prosecuted by another agency
  - DA refused to prosecute or file
  - offender charged in a different SPD case and will not be charged in this case.

  - justifiable homicide
  - cleared by exceptional means not already listed.

    All of the following questions must be answered "Yes" for a clearance by exceptional means:
    1. Has the investigation definitely established the identity of the offender?
    2. Is there enough information to support an arrest, charge, and turning over to the court for prosecution?
    3. Do you know the exact location of the offender so that you could take him into custody now?
    4. Is there some reason outside the police control that stops you from arresting, charging, and prosecuting the offender?

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Proportion of reported, major crimes against persons referenced in the objective that are closed successfully by the police through at least one of the specified actions as compared to a 3 year case closure index norm established by the base years of 1977-79.

MEASURABLE OBJECTIVES: MAJOR, PROPERTY CRIME CASE CLOSURE

To maximize the number of reported major crimes against property:

- burglary
- grand theft
- vehicle theft

that are closed successfully by the police in any of the following manners:

- arrest
- victim refused to cooperate on and in the investigation--offender not identified,
- cleared other: no arrest--offender identity definitely established, under any of the following conditions:
  - victim refused to prosecute
  - prosecuted by another agency
  - DA refused to prosecute or file
  - offender charged in a different SPD case and will not be charged in this case.
  - juvenile offender counseled and field released
  - restitution made
  - justifiable homicide
  - cleared by exceptional means not already listed.

All of the following questions must be answered "Yes" for a clearance by exceptional means:

1. Has the investigation definitely established the identity of the offender?
2. Is there enough information to support an arrest, charge, and turning over to the court for prosecution?
3. Do you know the exact location of the offender so that you could take him into custody now?
4. Is there some reason outside the police control that stops you from arresting, charging, and prosecuting the offender?

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Proportion of reported, major crimes against property referenced in the objective that are closed successfully by the police through at least one of the specified actions as compared to a 3 year case closure index norm established by the base years of 1977-79.

MEASURABLE OBJECTIVES: SELECTED, LESSER CRIME CASE CLOSURE

To maximize the number of each of the reported lesser personal and property crimes:

- assaults
- arson
- forgery
- fraud
- petty theft
- stolen property: buying, receiving, possessing
- vandalism
- weapons: carrying, possessing, etc.
- prostitution and commercialized vice
- sex offenses (except forcible rape, prostitution, and commercialized vice)
- narcotic drug laws
- gambling
- offenses against the family and children
- driving under the influence
- liquor laws
- drunkenness
- disorderly conduct
- all other offenses
- curfew (juveniles)

that are closed successfully by the police in any of the following manners:

- formal diversion,
- arrest,
- victim refused to cooperate on and in the investigation--offender not identified,
- cleared other: no arrest-offender identity definitely established, under any of the following conditions:
  - victim refused to prosecute
  - juvenile offender counseled and field released
  - restitution made
  - prosecuted by another agency
  - DA refused to prosecute or file
  - offender charged in a different SPD case and will not be charged in this case
  - justifiable homicide

- cleared by exceptional means not already listed.

  All of the following questions must be answered "Yes" for a clearance by exceptional means:
  1. Has the investigation definitely established the identity of the offender?
  2. Is there enough information to support an arrest, charge, and turning over to the court for prosecution?
  3. Do you know the exact location of the offender so that you could take him into custody now?
  4. Is there some reason outside the police control that stops you from arresting, charging, and prosecuting the offender?

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Proportion of each of the reported lesser personal and property crimes referenced in the objective that are closed successfully by the police through at least one of the specified actions as compared to a 3 year case closure index established by the base years of 1977-79.

MEASURABLE OBJECTIVES: CASE PREPARATION AND TESTIMONY

To maximize the quality of crime case preparation.

To maximize the quality of testimony given in legal proceedings.

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Proportion of cases in which the quality of the case preparation is rated satisfactory by both the police and prosecutor as determined by a survey.

Proportion of instances in which the quality of police testimony is rated satisfactory or better by the prosecutor as determined by a survey.

MEASURABLE OBJECTIVES: STOLEN PROPERTY RETURN

To maximize the total value of stolen property that is recovered.

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Proportion of total value of stolen property that is recovered compared to the total value of property loss reported as estimated from crimes reported to the police.

PUBLIC SERVICE PATROL PERFORMANCE OBJECTIVES

BASIC OBJECTIVE

To maximize the level and quality of police services authorized or required by federal, state, and city governments to the community.

MEASURABLE OBJECTIVES: PATROL DEPLOYMENT

To optimize the allocation of patrol resources according to workload conditions.

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Establish an accurate workload condition data base which reports:

- radio dispatch activity (CFS)
- reported crimes

by:

- type of crime/incident
- geographic reporting area
- day of week
- time of day

Develop a patrol district and sector design plan using Hypercube that best:

- equalizes workload conditions

- minimizes average response time for the entire sector
- equalizes response time among different parts of a sector
- minimizes cross-beat dispatching

Develop a patrol car allocation plan using PCAM that best:

- averages the workload for patrol units
- averages travel time to incidents by priority
- averages the percentage of calls that will have to wait in queue until a patrol unit is available to dispatch to the CFS

MEASURABLE OBJECTIVES: COMMUNICATIONS

To maximize the calls for service efficiency.

Develop and implement a dispatch prioritization plan that distinguishes between:

- true emergency needs requiring immediate police presence
- request for police service, but not amounting to an immediate emergency
- request for police service that can be alternately handled by:
  - paraprofessionals
  - non mobile response

EFFECTIVENESS AND PRODUCTIVITY MEASURES

- Dispatch delay for priority one calls as compared to the base year of 1978.
- Dispatch delay for priority two calls as compared to the base year of 1978.
- Number of requests for police service alternately handled by paraprofessionals and non mobile response as compared to the base year of 1978.
- Total number of Code 12's (no unit available each call) compared to the base year of 1978 by hour of day.

MEASURABLE OBJECTIVES: TRAFFIC SERVICES

To minimize the number of motor vehicle accidents, the number and severity of related injuries, and the amount of property damage.

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Rate of reported injury accidents, per 1,000 population.

The rate of hazardous moving violation enforcement as compared to a three-year arrest index norm established by the base years of 1976-78.

The rate of driving under the influence (DUI) arrests as compared to the three-year DUI enforcement established by the base years of 1976-78.

The rate of injury accidents by patrol sector, by watch shift, according to the primary collision factor according to submitted traffic accident reports.

The rate of citation enforcement by patrol sector, by watch shift, according to violation categories.

ADMINISTRATION PATROL PERFORMANCE OBJECTIVES

BASIC OBJECTIVE

To facilitate the achievement of the Patrol Performance Objectives of crime prevention, crime control, and public service.

MEASURABLE OBJECTIVES: DIRECTED PATROL

To commit only those resources that can be recovered from Patrol without sacrificing the defined service levels of response time, travel time, patrol interval, patrol saturation, cross beat dispatching, etc. as estimated from the radio dispatch/beat survey and officer activity data base, to the planning, training, and implementation of directed patrol activities which are in furtherance of:

- Crime Prevention Patrol Performance Objectives
- Crime Control Performance Objectives
- Public Service Patrol Performance Objectives

Directed patrol activities will be prioritized at the patrol team level in order to reflect the varying crime, traffic, and social problems by time of day and day of week, and they are subject to review and approval by police management.

EFFECTIVENESS AND PRODUCTIVITY MEASURES

The ratio of directed patrol time, by type, actually performed as compared to total recoverable patrol resource as reported by the radio dispatch/beat survey and officer activity data base.

MEASURABLE OBJECTIVES: DIRECTED PATROL - BEAT/DISTRICT PLANS

Each patrol officer having primary beat/district responsibility will prepare by March 1, 1980, an analytical report of their beat/district describing with particularity the following:

- Demographic characteristics
- Geographic characteristics
- Intelligence information
- Crimes reported to the police
- Community problems
- Resource assessment
- Traffic problems
- Strategy recommendations
- Known offenders
- Known community leaders

EFFECTIVENESS AND PRODUCTIVITY MEASURES

The number of beat/district analytical reports actually completed.

The ratio of beat/district analytical reports which are acceptable by Patrol management considering the thoroughness of the problem identification, the logical relationship to proposed strategies, and a reasonable assessment of resource needs.

The number of planned strategies actually implemented.

The proportion of patrol officers who rate the analytical report of their beat/district as useful in enhancing beat/district awareness, and as an effective tool in the planning of directed patrol strategies, as determined by a survey.

MEASURABLE OBJECTIVES: DIRECTED PATROL - SECTOR PLAN

Each sector sergeant will prepare by March 15, 1980, an analytical report of their sector describing with particularity the following:

- Demographic characteristics
- Geographic characteristics
- Intelligence information
- Crimes reported to the police
- Traffic problems
- Community problems
- Resource assessment

which will be used as base line data for the establishment of long range operational plan for the sector detailing the following:

- Sector objectives, by priority
- Resource utilization
- Intended strategies
- Evaluation
- Training needs

EFFECTIVENESS AND PRODUCTIVITY MEASURES

The number of long range operational plans for the sector actually completed.

The ratio of long range operational plans for sectors which are acceptable by Patrol management considering the thoroughness of the problem identification, the logical relationship to proposed strategies, and a reasonable assessment of resource/training needs.

The number of planned strategies actually implemented.

The proportion of sector sergeants who rate the analytical report of their sector as useful in enhancing sector awareness, and as an effective tool in the planning of directed patrol strategies, as determined by a survey.

MEASURABLE OBJECTIVES: DIRECTED PATROL - AREA PLAN

Each shift lieutenant will prepare by April 1, 1980, an analytical report of their area describing with particularity the following:

- Demographic characteristics
- Geographic characteristics
- Intelligence information
- Crimes reported to the police
- Traffic problems
- Community problems
- Resource assessment

which will be used as base line data for the establishment of the long range operational plan for the area detailing the following:

- Area objectives by priority
- Resource utilization
- Intended strategies
- Evaluation
- Training needs

EFFECTIVENESS AND PRODUCTIVITY MEASURES

The number of long range operational plans for areas actually completed.

The ratio of long range operational plans for areas that are acceptable by Patrol management.

Considering the thoroughness of problem identification, the logical relationship to proposed strategies, and a reasonable assessment of resource/training needs.

The proportion of shift lieutenants who rate the analytical report of their area as useful in enhancing area awareness, and as an effective tool in the planning of directed patrol strategies, as determined by a survey.

MEASURABLE OBJECTIVES: DIRECTED PATROL - OPERATIONAL PLANNING-SHORT RANGE

Each sector team will maximize its directed patrol activities by preparing and implementing short range operational plans, on an as-need basis, in response to:

- Identified crime patterns of:

  Burglary
  Robbery
  Indecent exposure
  Rape
  Vehicle theft

- Other identified crime and social problems:

  Traffic
  Prostitution
  Disorderly conduct
  Public intoxication
  Liquor law violations
  Gambling
  Juvenile problems
  Other social problems

that can be impacted by any of the following directed patrol strategies:

- Field contact cards
- Stakeouts
- Saturation patrol
- D-runs
- Split force
- Specialized enforcement
- Other strategies as developed by the sector teams

EFFECTIVENESS AND PRODUCTIVITY MEASURES

The number of short range operational plans submitted in response to identified police problems.

The total number of man hours engaged in directed patrol strategies in response to short range operational plans.

The number and type of directed patrol strategies engaged in by sector teams in response to short range operational plans.
Impact evaluation as determined by the sector sergeants as it relates to

- Problem dispersion
- Arrests
- Case clearances

MEASURABLE OBJECTIVES: PATROL TRAINING

To develop a 56-hour training course for Sergeants and Lieutenants that prepares them for directed patrol functions.

To train 98 Sergeants and Lieutenants in directed patrol functions.

To develop a 30-hour training course for police officers that prepares them for directed patrol functions.

To train 378 police officers in directed patrol functions.

To increase the capability of sector teams to perform patrol functions by committing 4 hours of specialized classroom training per man/per month.

Such as:

- Stakeouts
- Lineups
- Saturation patrol
- Felony stops
- Weaponless defense
- D-runs
- Recognition of narcotic violations
- ABC violation enforcement
- Traffic enforcement
- DUI recognition and enforcement
- Report writing
- Sector analysis updates
- Crime analysis updates
- Role definitions
- Evaluations
- Other subjects as needed

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Completion of the 56-hour training course by September 1, 1979.

Completion of the 30-hour training course by November 1, 1979.

Student evaluation reports on the quality and content of the training programs.

Number of Lieutenants and Sergeants actually trained.

The total number of sector team training hours completed.

The types of sector team training completed.

MEASURABLE OBJECTIVES: CRIME ANALYSIS/TARGET CRIMES

To maximize the number of identified crime patterns:

- Rape
- Robbery
- Burglary
- Indecent exposure
- Vehicle theft

that can be impacted by the following directed patrol strategies:

- community education
- property marking
- saturation patrol
- field interrogation
- decoys and stakeouts
- suspect identification
- other strategies as they are developed by the sector teams

as determined from crimes reported to the police.

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Number of identified crime pattern reports referenced in the objective.

Evaluation of crime pattern reports by patrol user groups.

Number of directed patrol strategies resulting from identified crime patterns referenced in the objective.

MEASURABLE OBJECTIVES:
CRIME ANALYSIS/LESSER CRIMES

To maximize the number of identified crime and social problems that are subject to police patrol service:

- gambling
- public intoxication
- disorderly conduct
- driving under the influence
- stolen property: buying, receiving, possessing
- vandalism
- commercial vice
- narcotic violations
- liquor law violations
- other lesser offenses

that are preventable under the following circumstances:

- in public
- in commercial or industrial establishments

as determined from crimes and information reported to the police.

EFFECTIVENESS AND PRODUCTIVITY MEASURES

Number of identified crime and/or social problems referenced in the objective.

Evaluation of crime and/or social problem reports by patrol user groups.

Number of directed patrol strategies resulting from crime and social problems referenced in the objective.

CHAPTER 4

COMPUTER ASSISTED RESOURCE ALLOCATION

I. OVERVIEW

The following chapter will detail Sacramento's approach to the allocation of resources, and the use of several computer software models. The intent is set out in a very straight forward manner -- how we approached the problem, the obstacles that were encountered, the studies that were performed, and the decision making process that followed.

Unquestionably, the computer models were of value in Sacramento. A great deal was learned, and changes were made in the Patrol deployment structure. However, there were a number of major factors in the organizational environment which limited their use.

As the following pages will show, the models cannot operate in a vacuum; and, in fact, much of their use may be limited by management values, labor contracts, or even the geographical makeup of the City. Certainly, this was true in Sacramento.

For those that are considering the future use of such models, it is essential to have a clear understanding of the assumption built into them, as well as the organizational constraints with which they may come into conflict. Hopefully, we have documented our experiences in an objective manner. It is certainly not our intent to bias prospective users as to whether they should, or should not try the models themselves.

As for the future, Sacramento plans to continue using the software on a periodic basis to monitor patrol activity, and to

make adjustments as necessary. Their more frequent usage is limited mainly by organizational factor which clearly are beyond the model's control.

II. MPO RESOURCE ALLOCATION OBJECTIVES

The MPO Test Design defines resource allocation as two separate though interacting processes:

1. Matching resource allocation to workload conditions according to a workload analysis.
2. Managing of the call for service workload based on a system of prioritization.[1]

In Sacramento, these two processes have been given a great deal of attention. As mentioned in the Management of the Call for Service Workload Section, call prioritization in Sacramento currently involves a call screening procedure that diverts all but 35% of Complaint Section emergency line calls without the dispatching of a unit; and for those calls that are dispatched, a three-level dispatched sequence which effectively segregates immediate dispatch, regular dispatch, and no officer needed dispatch (other police personnel, particularly non-sworn Community Service Officers) calls for service.

In terms of matching resource allocation to workload conditions based on workload analysis, Sacramento's achievements are equally noteworthy.

Workload analysis is accomplished primarily by data provided from: Radio Dispatch/Beat Survey System (a computerized tallying of the radio dispatch cards) which sorts calls

[1] Managing Patrol Operations Test Design

for service in the City by type, area and time; the Sacramento Traffic and Accident Reporting System (STARS) which, among other outputs, supplies accidents and enforcement information by area, day of week, and primary collision factor; and the Sacramento Crime and Arrest Reporting System (SCARS) which provides a variable extract capability for all arrest, crime and field contact reports.

Prior to MPO, all these systems provided the data which was used in the allocation of resource decision making process. While the data analysis supporting such decision making was manual in nature, it had been successful to the extent that MPO studies utilizing PATROL PLAN revealed that the Watches were staffed exactly proportional to workload.

The Resource Allocation component of the MPO project represented an attempt at systematically dealing with the resource allocation process in Sacramento. The steps in this process include:

1. Defining the objectives of resource allocation.
2. Identifying Sacramento's real world constraints that will have impact in this area.
3. Identifying the policy issues which the process will raise.
4. Defining the mechanisms for controlling the process.
5. Deciding what equipmnet (both hardware and software) to use.

6. Construction of the data base (including sources, problems and assumptions).
7. Preparation for, and operation of, software programs (including set-up, debugging and the selection of targets for analysis).
8. A post MPO project evaluation of computer assisted patrol resource allocation and beat boundary efforts and the feasibility of their continued use.

III. RESOURCE ALLOCATION: PATROL PERFORMANCE OBJECTIVES

Purpose of the Managing Patrol Operations Field Test

> "By systematically matching deployment to workload conditions and by managing demand for police service, departments will be able to free a greater portion of patrol resources which can then be devoted to directed activities, defined in response to a local crime and problem analysis."

This assumption can be translated into two operational objectives:

> "to increase the efficiency of the calls for service response and thereby increase the portion of patrol resources devoted to what has been traditionally called random patrol;" and
>
> "to replace random patrol with field service activities directed toward specific crime and service-oriented problems."

Taking this concept of directed field service activities one step further, the test design states:

> "...the efficiency of the patrol allocation strategies selected for implementation is largely dependent on the ability of police policy makers to set realistic patrol performance objectives and to design strategies consistent with those objectives."[2]

The Sacramento Police Department has decided upon a working set of four general categories of patrol performance objectives.

1. Crime Prevention
2. Crime Control
3. Public Service
4. Administration

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[2] Ibid.

The resource allocation component of the MPO grant in Sacramento speaks directly to the latter three categories.

The Public Service patrol performance basic objective is:

> "To maximize the level and quality of police services authorized or required by federal, state and city governments to the community."

The Crime Control patrol performance basic objective is:

> "To maximize the successful closure of reported crimes by the police; present all relevant facts to, and participate as required in, the judicial process; and to recover and return stolen property."

The Administrative Patrol performance basic objective is:

> "To facilitate the achievement of the patrol performance objectives of crime prevention, crime control and public service."

The computer's role in meeting these objectives was the development of a resource allocation strategy that would, to the greatest extent possible, maximize the delivery of police services while still leaving sufficient resources (in sufficient concentrations) to devote to an effective directed patrol program.

IV. COMPUTER ASSISTED RESOURCE ALLOCATION BACKGROUND

In Sacramento, the Computer Assisted Resource Allocation component of the MPO Grant involved the use of two large-frame computer programs called Patrol Car Allocation Model (PCAM) and Hypercube Queuing Program (H^3) to allocate Patrol Division manpower in proportion to the Call for Service workload (PCAM) and to develop patrol districts with balanced workloads (H^3). Two micro-computer programs, PATROL PLAN and SCHEDULE PLAN, were also used. PATROL PLAN is basically a low-powered version of PCAM, capable of being run on an inexpensive ($1,000-$3,000) micro-computer. SCHEDULE PLAN is used to develop employee work schedules (i.e., their days on and days off) on the same inexpensive equipment*. The micro-computer programs, however, were of less importance to the MPO Project, in that, PCAM and Hypercube provided the basic foundation of Computer Assisted Resource Allocation.

1. PCAM OVERVIEW

PCAM is a computer program which helps determine the optimal number of patrol units (i.e., mobile vehicles) to have on duty in each patrol area.**

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* For more information on PATROL PLAN and SCHEDULE PLAN, contact The Institute for Public Program Analysis, Clayton, Missouri.

** For a more in-depth description of the PCAM Analysis, see Patrol Car Allocation Model; Users Manual, by Chaiken & Dormont, R-1786/2 - HUD/DOJ and Patrol Car Allocation Model, Executive Summary, by Chaiken & Dormont, R-1786/1-HUD/DOJ, Sept. 1975.

Patrol unit requirements typically vary according to the season of the year, day of the week, hour of the day. The program matches allocation to these changing requirements in a way that is consistent with overall manpower resources, the hours of the day patrol officers begin work, dispatch policies and performance objectives for patrol units in responding to calls for service.

This allocation model has both descriptive and prescriptive capabilities. In its descriptive mode, PCAM generates performance data for any given allocation of patrol units assigned to an area during specified hours and thus permits the user to compare alternative allocations. The set of information provided for each alternative plan includes:

- average workload of patrol units;
- average amount of uncommitted time for patrol units;
- average travel time to incidents;
- percentage of calls that will arrive when all patrol units are busy;
- average number of minutes calls in each priority class will have to wait before a patrol unit is available to respond;
- average patrol frequency;
- patrol interval - the length of time it would take to cover the entire sector while on preventive patrol; and
- average total response time (time waiting for a unit to "free up" plus travel time)

PCAM has three basic prescriptive capabilities. The first is to determine the minimum number of patrol units that must be on duty in each geographical area during all hours of the day in order to meet performance objectives related to one or more of the data items above.

The second capability is to determine the "best" allocation across sectors and/or among different times of the day or week, based on the optimization of one of the following:

- the smallest possible percentage of calls that must be placed in queue (no patrol unit available when call arrives);
- the smallest possible average length of time calls for a given priority must wait in queue; or
- the smallest possible average total response time

PCAM's third prescriptive capability is a combination of the first two. The user is permitted to develop an allocation plan that both complies with specified performance objectives and is the "best" plan that can be achieved if those objectives are to be met.**

2. HYPERCUBE OVERVIEW

The Hypercube program is a logical complement to the Patrol Car Allocation Model.* While PCAM provides a mechanism for systematically allocating resources to

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* For more information on the Hypercube Program, read Field Evaluation of the Hypercube System for the Analysis of Police Patrol Operations, Executive Summary, The Institute for Public Program Analysis, and How To Set Up Shop for the Hypercube System, The Institute for Public Program Analysis.

** "Managing Patrol Operations Program Test Design" P-13.

major geographical patrol areas (Sectors), the Hypercube Model offers a guide to the design of individual patrol districts. Thus, it assists field commanders in deploying resources to the Districts within each patrol Sector area. The Hypercube Model does not construct district boundaries. Rather, it estimates the impact of alternative district designs on various patrol performance measures and thus makes it possible to select the design that best meets that department's performance objectives. The initial design is produced by the user; the computer then calculates the resulting values of the performance measures. The user can then accept or reject that design. If he rejects it, he goes through the same process until he produces a design that satisfies his performance objectives.

The design of district boundaries is intended to achieve four general performance objectives:

- equalize workload among patrol units;
- minimize average response time for the entire sector;
- equalize response time among different parts of a sector; and
- minimize cross-district dispatching

As in the case of the other models, all of these objectives cannot be optimized to the degree that the user might prefer. In order to reduce cross-district dispatching to 15 percent, for instance, the user might

have to settle for a less than optimal degree of disparity in response times among different parts of a sector. But this trade-off, as well as alternative trade-offs between these two performance measures, would be clearly defined by the model.*

*Ibid P-14

V. COMPUTER SUPPORT FOR PCAM AND HYPERCUBE

PCAM and Hypercube are manpower allocation software programs that must be operated on a large-frame computer. Although the City of Sacramento owns a Univac 90/70 computer capable of handling the software, there were numerous problems which prevented their being installed locally.

1. In Sacramento, all software programs are written in COBOL and the Data Processing Manager clearly identifies the Department as being a "COBOL shop". None of the programers were trained in other computer languages.

2. Hypercube is written in PL-1, which is an IBM proprietary language. Two immediate problems were, therefore, presented immediately. The first was that Sacramento did not have a PL-1 compiler available to load the programs. Secondly, Sacramento did not have Data Processing personnel skilled or knowledgeable enough to install or support it.

3. PCAM is written in FORTRAN. Although the City owns a FORTRAN compiler, there was a similar problem with the absence of programers available to install or support the program.

As a result, Sacramento was left in a posture of seeking to operate the software programs on some type of computer time-sharing service. Ultimately, the three MPO cities struck comparable agreements relative to cost sharing and, with technical assistance of Dr. Nelson Heller from TIPPA, both Hypercube and PCAM were installed on a computer time-sharing network with National CSS, Inc. The Sacramento MPO

Project utilized NCSS services from May 16, 1979 through January 15, 1980, at a total cost of $6,571.

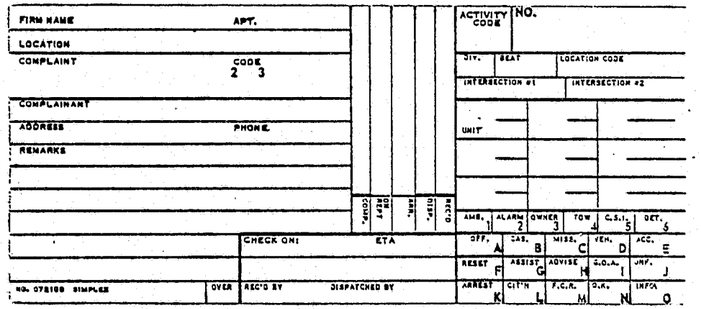
A note of caution at this point for future users of the software and computer time-sharing services is necessary. Neither PCAM nor Hypercube can operate on a computer in a complete vacuum. There has to be a solid understanding by the project staff as to which of the computer "environments" is the most efficient for the programs to operate. They must also have the technical skills to set up job logic and execution control language. Sacramento experienced numerous delays and frustrations in acquiring this level of competence. It was only after the project staff had attended several of the free customer service classes provided by the NCSS, together with the infinite patience of Customer Service Representative Vita Drucker in helping to "debug" problems, that the programs finally began to operate satisfactorily.

VI. DATA COLLECTION IN SACRAMENTO

1. The Radio Dispatch/Beat Survey System

The City of Sacramento's 96 square miles is broken up into 437 EDP subdistricts[1]. The automated tallying of the radio dispatch cards (the Radio Dispatch/Beat Survey System)[2] provides the city and MPO with call for service information by subdistrict. Because it is our most important source of call for service information, it is described in detail below:

The Beat Survey is a computerized system which provides police management with call for service summary data by (1) type, (2) location, (3) unit, (4) frequency, (5) time, and (6) priority. The radio dispatch card is the source document for the Beat Survey system (see below).



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[1] Each subdistrict is typically no more than a few City blocks in size. The EDP subdistricts provide the basis for reporting the geographical distribution of calls for service, and they are the "building blocks" for designing patrol districts.

[2] In this survey system, "Beat" is synonymous with "Patrol District".

These cards are generated by the Communications Section when police services are requested. They are later coded by a clerical staff for key data entry purposes.

NOTE:

1. Activity Code - indicates the type of call the officer is responding to, such as 459 PC (burglary), 211 PC (robbery), etc.
2. Div. - numerical digit indicating the divisional personnel who are responding to the call, such as 01 for patrol, 03 for traffic, etc.
3. Beat - numerical digit indicating in which patrol district the call is located.
4. Location Code - The location code (also referred to as "EDP subdistrict") is a four-digit numeric code which identifies a small geographical area within the City.
5. Unit - Indicates the numeric identifier of the unit assigned the call, such as Adam 34, Charles 5, etc. Note: As many as three units can be picked up by the program for each call.
6. Rec'd - Indicates the time the complaint desk received the call for services.
7. Disp. - Indicates the time the dispatcher assigned a unit to handle the call.
8. Arr.- Indicates the time the responding unit arrived at the scene.
9. Comp. - Indicates the time the officer completed the call.

The Radio Dispatch/Beat Survey System generates the following type reports:

Report #1 Activity by Location

Provides the call for service rate by hour of day, by EDP subdistrict. Includes all officer initiated activity.

Report #2 Activity by (Patrol) District

Provides the call for service rate by patrol district, by hour of day. Includes all officer initiated activity.

Report #3 Activity by (Patrol) Unit

Provides the call for service rates by patrol unit, by hour of day. Includes all officer initiated activity.

Report #4 Activity by Call Code

Provides call for service rates according to type of call, by hour of day. Includes all officer initiated activity.

Report #5 Activity of Day

Provides call for service rates by day of week, and by hour of day. Includes all officer initiated activity.

Report #6 Activity Hours Expended - or - Response Time Analysis

Provides specific response time analysis, and service time analysis information at the patrol district level, by watch. The

report segregates information by type of call, number of calls with that call type, and average response and service times within the call type. Separate reports are prepared with the above information on activity where officer initiated calls are excluded, and on activity where it is officer initiated only. Summary totals are provided by watch.

Report #7 Activity Hours Expended - or - Response Time Analysis

Provides specific response time, and service time analysis information at the watch level. This report segregates information by priority of call, by type of calls within that priority, number of calls within that call type, and the average response and service times within that call type. Separate reports are prepared with the above information on activity where officer initiated calls are excluded, and on activity where it is officer initiated only.

All reports are produced in four categories: (a) All calls; (b) One unit calls only; (c) Two unit calls only; (d) Three or more unit calls only.

While this was the type of information that PCAM and Hypercube needed, it was not in the proper format. Therefore, the Radio Dispatch/Beat Survey System was reprogrammed in the following manner:

Reports #1 through #4:

These report formats were retained except that all officer initiated activity was excluded.

Report #5: Activity by Day

This report was modified to provide for call for service rates by patrol sector, by day of week, hour of day, and by call priority. A three level call priority method was established with the capability of expanding to five.

Report #6 and #7:

This report was modified to provide for response time and service time analysis information at the patrol district level by call priority, by 2 hour intervals.

It was with considerable curiousity that we noted an increase of over 2,000 Priority One calls, with a similar reduction in Priority Two calls after these programing changes were made. In reviewing the situation, we discovered two compounding problems that resulted in our previous under-reporting of Priority One calls. Before the programing changes were made, different colored Radio Dispatch Cards were used to distinguish between Priority One calls (Salmon colored) and Priority Two (Buff colored). However, we later learned that both

the Dispatchers and the Telephone Complaint Takers were not following this practice closely. Hence, Priority One calls were actually being recorded on Buff colored cards. When the dispatch cards were later sent to Data Processing, the key punch instructions provided that only the Salmon colored cards were to be punched as Priority One calls. Ergo, we were losing all the Priority One calls that were on Buff cards.

This problem was remedied when the Radio Dispatch/Beat Survey System was modified for the MPO Project. Now the Dispatchers actually record on the card itself the call priority level. The Data Processing key punch instructions also were changed so that the call priority level is actually read from the card and entered as such.

Finally, it should be noted that all the final PCAM studies used the post-July 1979 radio dispatch data and therefore, they reflect the more accurate reporting of call level priorities.

2. Data Collection Obstacles

One of the obstacles to the collection of base line data for PCAM and Hypercube in Sacramento was the fact that Patrol Deployment changed from a 5-day week/8-hour day to a 4-day week/10-hour day. This change, which was implemented July 1, 1979, was brought about as the result of a negotiated labor-management contract between the City and the Sacramento Police Officers Association. Prior to the MPO Project, the Department had devoted six man-months to the manual development of a 4/10 deployment plan. The major components of this plan were:

- The conversion from an 8-hour day, 5-day work week to a 10-hour day, 4-day work week, for all patrol officers, sergeants and lieutenants.
- A conversion of the Patrol Division from primarily two-man cars to primarily one-man cars.
- An increase in the Patrol Division's authorized strength by 26 police officers as a result of transfers from the Traffic Division.
- An increase in the number of work shift tours from three to four.
- The construction of new patrol beat boundaries.

This radical change in the Patrol Division's deployment posture "invalidated" most of the Patrol Division call for service data history, with the exception of the call for service rate, and the locations for the service activity. Therefore, a new data base had to be constructed from post July 1, 1979 data.

A closely related problem was the yearly patrol sign-ups for shifts and days off. These sign-ups, based on seniority, commenced in November to allow police officers sufficient lead time to register for college classes which do not conflict with their work schedules. This provided a outside constraint on the time by which our new allocation strategy must be developed and approved. This means that the 1980 Patrol Division resource allocation recommendations were based on only 90 days (July through September 1979) worth of data.

Since call for service rates will not really be affected, this data limitation had minimal effect upon H^3. However, PCAM was impacted in at least the two following areas:

- It is recognized that criminal activity and social problems fluctuate on a seasonal basis. Obviously, July through September represent only the summer season so the

model cannot compensate for seasonal changes. Sacramento used Hypercube to offset this problem. The reasons are several fold. First of all, the change to a 4-10 deployment plan did not affect the call for service rates. Thus, the H^3 file could be constructed to demonstrate workload activity for any quarter of the year. And, although PCAM could have assessed the impact of seasonal changes, we clearly did not have enough 4/10 experience, or data base, in order to construct the PCAM files.*

- The second problem with using July through September 1979 data revolves around its being the first 90 days of 4/10 plan operations. It is understood that the first 30 days, or even 60 days, of data may be misleading due to confusion on the part of officers or Communications' personnel over the changes made. Specifically, all Patrol Districts had been redesigned; all Patrol District Unit radio call designators had been changed; the Communications channels for Patrol had been expanded from 2 to 4; and finally, there were more units fielded than before.

* See Study #2 "Hypercube Beat Designs with Seasonal Fluctuations in Calls for Service".

3. Hypercube Data Collection Procedures *

A. Geographic Data

1. The X & Y Coordinate of each of the 437 EDP subdistricts was determined in the following way:

A grid was taped over a Police Department EDP subdistrict map of the City of Sacramento. A manual count of the number of lines from a fixed bench mark to the center of each EDP subdistrict along both the X & Y axis was made. The resulting numbers were inputted directly into the Hypercube Region File. A D-command figure of .0625 was used to convert these numbers to the required format.

2. Road miles in each EDP subdistrict. A student intern outlined the 437 EDP subdistricts on a State of California Transportation Agency map of the scale 8 inches equals 1 mile (revised 76-78) joined together to make a large (approximately 6 foot by 12 foot) map of Sacramento.

(1) The intern determined the total road miles in each subdistrict, using a calibrated map wheel.

(2) The intern listed the road miles by subdistrict under the category of internal or peripheral road (peripheral being

* For Hypercube's data requirements, see "How to Set Up Shop for Use of the Hypercube System", October 1977, The Institute for Public Program Analysis, St. Louis, Mo.

defined as any road on the boundary of 2 or more reporting areas).

(3) The intern then estimated the total miles for the 3 reporting areas which have undergone significant development since the last map revision.

3. Square miles each subdistrict. A grid was taped upon the State of California Transportation map used to determine road miles.

(1) The intern manually counted the number of squares and partial squares in each subdistrict, and recorded the number of full and partial squares by category and subdistrict; and

(2) The Management Analyst converted these figures to square miles to determine the area of each subdistrict and of the City as a whole. The City figure of 96.3 miles is right in the middle of the 96 to 97.7 square mile figure for the City provided by other agencies. These square mile figures were inputted into the Hypercube Region Files.

B. Workload Data

Calls for Service per EDP Subdistrict

By hour and total calls for service for the Region was determined using data from the Sacramento Police Department Radio Dispatch/Beat

Survey System. This information was collected by quarter for all of 1978. The first pre-implementation Hypercube Analysis used only a quarter's worth of data. The last Hypercube Analysis (seasonal fluctuation) used winter quarter, summer quarter and yearly average workload figures.

C. Deployment Data

An EDP Subdistrict to Patrol District conversion table was used to identify the subdistricts in each patrol district by watch under 4/10. The number of units fielded was obtained by assuming that each unit assigned to a patrol district in the plan was actually fielded. With regard to the tactical units (units on 3rd watch with sector-wide responsibility that did not quite fit the Hypercube Model), computer runs were made including them as overlay units, and runs were made excluding them entirely.

The relative amount of time a patrol unit spends in each EDP subdistrict on random patrol was not obtainable. Therefore, an assumption was made that the amount of time spent in each EDP subdistrict was proportional to that subdistrict's call for service rate.

D. Operations Data

The average time to complete calls (dispatch to completed) for service was obtained from the Radio Dispatch/Beat Survey System. Currently, only first patrol unit assigned to the call and total service times are known. The overlap time on multiple unit calls, i.e., the time when more than one unit is on scene, is not known. It had been planned to estimate this figure by sampling a week's worth of multiple unit dispatch cards. However, it was found that over 60% of the multiple unit calls for radio dispatch cards did not capture each patrol unit's arrival and departure time. So, the estimate was never made. In fact, since the ratio of one-man to two-man units was already scheduled to change dramatically under 4/10, the actual rate of multiple unit calls for service could only be estimated.

Travel Speed is not captured by the Police Department. As a result of the technical assistance training, TIPPA suggested that it may be estimated by:

1. Setting travel speed to one mile per hour on our first Hypercube runs; and
2. Dividing the inflated travel time

outputs that resulted by the actual travel times as captured by the Radio Dispatch/Beat Survey System.

E. Dispatch Policy

The Dispatch policy was determined by copying the dispatch options verbatim from Hypercube literature and letting Communications' supervisorial and dispatch personnel check (by confidential questionnaire) the option they felt most closely matched the real situation.

It was clear from the survey results that many of the dispatchers did not understand the questions, and objected to many of the terms that were used. Typical of the comments, which were volunteered, are the following:

"This survey is a waste of time on our part and yours. With such phrases as: (1) Minimal Knowledge; (2) Slightly more familiar; (3) Imagines; (4) More knowledgeable; (5) Dispatcher knows. Anyone with any intelligence would not mark the lst three boxes." And, "This doesn't make sense. You cannot assume anything with dispatching." Or, "With all your vague terms this survey is not worth the paper its written on." Nevertheless, the results were tabulated and entered into the Hypercube Program.

4. PCAM Data Collection Procedures*

Each patrol sector's road and square miles was determined by the method described in the Hypercube Section.

The call rate parameter was set to one. The hourly call rate factor was the actual number of calls in that hour. As previously mentioned, this information was not available by patrol sector, by day, by hour, when the project started. The assumption was made for the first PCAM Analysis that the ratio of calls for service did not vary by hour between sectors or by the days of the week. In other words, assuming that if on a weekly average, 20% of the calls occurred between certain hours on one day, they occurred in the same proportion on other days.

The service time parameter was originally set to one with the hourly service time factor set to the actual time required to handle a call for service by hour. Unfortunately, while this technique is appropriate for the PCAM program itself (and is, in fact, promoted in program literature), it does not meet the NEWPDATA monitor program developed by TIPPA and used by Sacramento in the creation of its PCAM files. More specifically, PCAM will accept a service time of up to 99.9 minutes, while the monitor program will only accept a number up to 9.99.

* For PCAM Data Requirements, see "Patrol Car Allocation Model: Users Manual", R-1786/2-HUD/DOJ - September 1975.

When the actual service times were inputted, the monitor program deleted the first digit. (This problem was the primary shortcoming of our pre-implementation PCAM analysis).

In the post-implementation PCAM analysis, the service time parameter was set to 10 and the actual hourly service time was divided by 10 to give us the hourly service time factor.

The average number of units fielded was derived differently for the two PCAM studies. For the analysis of the manually developed 4/10 deployment plan, computer runs were made with the number of units set to that number that would supposedly be fielded according to the 4/10 plan and then re-run with 25% of the units removed. The post-implementation of the 4/10 plan analysis used the actual number of units fielded to handle calls for service as derived from the payroll sheets for the July through September quarter of actual 4/10 experience. This number did not include Community Service Officers, Crime Scene Investigations officers, or even Patrol units when they were removed from the field for training, court time, etc. So, when PCAM was functioning in its prescriptive mode, it was estimating only basic Patrol unit requirements.

The average speed in responding to calls for service was ascertained by the method described in the Hypercube section.

The average speed while on preventive patrol (as a preventive patrol interval was of little importance to the Department) was arbitrarily set at 5 miles per hour.

The fraction of calls by different priorities was obtained from the Radio Dispatch/Beat Survey system.

We did not enter suppressible crime information.

Sacramento's original plan for ascertaining the non-call for service workload, or unavailability parameters for PCAM, was to utilize the green master status radio cards as cross-checked against the officer Activity Journal, by category. The categories were: Code 7 (meals), In Records, With Detectives, In a Meeting, Gas, Roll Call/Equipment, Code 6 (Car Wash), 925 (To the Station), DA/Court and Miscellaneous. Unfortunately, our two data sources had absolutely no correlation to each other. Discrepancies by category were as high as 177%.

The second plan was to use the linear regression utilized by the Los Angeles Police Department, using the NEWRDATA program developed by TIPPA. Unfortunately, this produced B-1 and B-2 figures of zero for first, second, third and fourth sectors, day watch. The probable cause was either:

1. Use of Code 12 (No Unit Available) to represent the number of calls delayed, or

2. Possible differences between Sacramento and Los Angeles may have invalidated the linear regression model[1].

Our third strategy was based on the assumption that NEWRDATA failed due to the lack of realistic call delayed percentages (with call delay defined as any call that would have been handled by a district unit but either went Code 12 or was handled by backup). The procedure for dealing with this problem involved adding "district" unit calls handled by backup units to the Code 12 figures. The number of backup calls was determined from a manual count of 2 weeks worth of Radio Dispatch/Beat Survey Edit Error[2] listings. The product of this effort was not particularly good; however, it did provide the unavailability parameters used in our preimplementation PCAM analysis.

Plan 4 was developed by Dr. Nelson Heller during his on-site technical assistance unit in July 1979. He suggested a series of 9 PCAM runs with B-1 and B-2 set at various figures dovering the obvious range of values for each of the 3 watches. PCAM runs were then made with non-call for service workloads set at 10%, 20% and 30% of a patrol units total time. Ultimately, the 20% was selected as most nearly representing Sacramento.

1 For a more in-depth discussion of the linear regression model, see: PCAM Program Description R-1786/HUD/DOJ

2 Edit Error List: All calls processed for the Beat Survey System, both valid and rejected.

VII. SUMMARY OF RESOURCE ALLOCATION STUDIES

A total of five major computer assisted Resource Allocation studies were completed in the Sacramento MPO Project utilizing a combination of Hypercube, PCAM and PATROL PLAN. Their summary results are indicated below. Suffice it to say, these studies have had a considerable impact on the planning of change in the Patrol Division deployment posture.

Study #1 was initiated by the MPO staff to underscore the consequences of "Team Integrity" and "Sector Integrity" on the efficacy of Resource Allocation. Study #2 was requested by Patrol management to evaluate the effects of seasonal workload variations on the 1st watch (2200-0700). Study #3 was the principal study which dealt with the evaluation of the Patrol Division deployment under its 4-day week, 10-hour day posture. Studies #4 and #5 were requested by Patrol management for budgetary and planning purposes. These studies and their results have been summarized below. The detailed reports themselves are included in Section VII of this Chapter.

Study #1 - Cost of Team Policing

This was a staff report initiated by the MPO Project to underscore the implications and consequences to efficient manpower Resource Allocation of two very important management concepts in Sacramento -- Team Integrity and Sector Integrity. Team Integrity is defined as having all members of a Patrol team, including the supervisor, working the exact same hours and having the exact same

days off. This is a highly valued management concept inasmuch as it allows for consistency of supervision and training. Sector Integrity is defined as assigning the responsibility for police service delivery in a geographical area, known as a Sector, to a Patrol team. In concept, the team would not respond to calls for service in other sectors, other than in a Priority One emergency. Furthermore, team members could not be assigned to fill vacancies in other sectors. And finally, in order to provide police service delivery 7 days a week under a 4-day week, 10-hour day deployment plan, each sector of each watch has two teams assigned to it. This means that there is one working day when both teams are present. Sector Integrity complicated the efficient utilization of these extra resources by limiting them to work only within their assigned Sector, regardless of manpower shortages or problems existing in other sectors. Again, this was a valued management concept because it allowed for assigning direct responsibility for the delivery of police services, and problem resolution, to specific teams.

As it turns out, computer assisted Resource Allocation Models, such as PCAM, and Directed Patrol are the anti-thesis of Team Integrity and Sector Integrity. A major objective of computer assisted Resource Allocation is that a perfect match should exist between the call for service demand and available personnel resources. This match is

optimized under a "no team" city-wide condition and where days off are staggered. Directed Patrol implies, of course, that officers can be moved anywhere within the City to resolve specific problems.

This study then attempted to illustrate the effectiveness of different Resource Allocation strategies ranging from "no teams" to "four teams" per sector.

Study #2 - Hypercube Beat Designs with Seasonal Fluctuations in Calls for Service

This study was requested by the First Watch (2200-0700) Patrol Commander to determine what effect, if any, seasonal fluctuations had upon patrol service levels and workloads. Preliminary Hypercube studies, using a yearly average for 1978 calls for service rates, indicated that the Patrol districts were designed in such a manner that workloads were evenly balanced and that no adjustments were necessary. However, the First Watch Patrol Commander indicated that the summer workload was significantly higher than other times of the year, and he requested that the Hypercube Model be used to define the extent of these variations. The resultant study showed:

1. During the Summer Quarter (July/August/Sept.), the call for service workload is heavier than average in every Patrol Sector during the first watch (2200-0700) and the third watch (1600-0200).
2. During the Winter Quarter (January/February/March), the call for service workload is slightly lower than average in every Patrol Sector during the third watch.

CONTINUED

1 OF 4

3. The second watch (0700-1700) does not fluctuate appreciably by time of the year.

The Hypercube Model also showed that the addition of one Patrol District to every Patrol Sector on the first watch would result in service levels comparable to those experienced during the rest of the year.

Study #3 - Patrol Car Allocation Model (PCAM) Analysis of 4/10 Plan

This is the major report of the MPO Project in which both the Descriptive and Prescriptive capabilities of PCAM were utilized. Workload data for the first 3 months of actual experience under the 4-day week, 10-hour day, deployment plan were used to construct a 4-Sector, 7-Day PCAM week. Time blocks were developed to reflect workload conditions during the following periods: 0700-1559; 1600-2159; 2200-0159; and 0200-0659.

The Descriptive capabilities of PCAM identified two immediate problems:

1. Friday's and Saturdays were overstaffed compared to the other five days of the week.
2. The 2200-0159 time period was overstaffed at the expense of the 1600-2159 time period on all days of the week.

The Friday and Saturday overstaffing problem had its origins in management's commitment to, and definition of, Team Integrity and Sector Integrity (See discussion of these issues in summary of Report #1 - "Cost of Team Policing").

In its prescriptive mode, PCAM reallocated available manpower resources with such improvements as: A 5% reduction in average travel times; a 35% reduction in the probability of call delay; and a 40% reduction in average total delay. It should be noted that Sacramento did not pre-establish specific performance objectives for this study. Rather, the Program was used to maximize the deployment of existing resources.

Study #4 - Hypercube Population Growth Impact Study

This Study was requested by Patrol management to assess the impact on police service levels in three areas of marked population growth through 1982. This was accomplished by, first; modifying the call for service rates in these areas in proportion to the projected changes in population. And, secondly, by changing the proportion of calls for service arriving in the up-to-now undeveloped areas to reflect the spreading out of the CFS workload. This was done to compensate for the greater distances, on the average, that the Patrol District units in these areas would have to travel in responding to the calls for service.

Using 1978 as a base comparison year for Patrol service levels, and a management Patrol performance objective of maintaining a saturation probability level of 5%, Hypercube was used to estimate the additional Patrol units that would be needed to compensate for the population growth. The Study results demonstrated the following need for additional Patrol units.

3. The second watch (0700-1700) does not fluctuate appreciably by time of the year.

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Watch/Sector	1980	1981	1982
First Watch Sector 1	2		1
First Watch Sector 2	2		
Second Watch Sector 1	1		
Second Watch Sector 4		1	
Third Watch Sector 1		1	
Third Watch Sector 4	1		

Figure 1. Estimate of Additional Patrol Units Needed to Compensate for Population Growth

Study #5 - Hypercube Analysis of Manpower Reduction - Third Watch, Sectors 2 and 3

This rather short study was requested by Patrol management to analyze the potential impact of a budget reduction in Patrol. The loss of one tactical unit in Sector 2 would result in 2.8% increase in travel times and a 69% increase in the probability of saturation. Similarly, in Sector 3, the loss of one tactical unit would result in 1.6% increase in travel times, with a 75% increase in the probability of saturation.

VIII. RESOURCE ALLOCATION DECISIONS AND RESULTS

1. Introduction

On Wednesday, October 24, 1979, the Sacramento Police Department Patrol Planning Committee was convened for the purpose of setting the Patrol Division Manpower Allocation and Deployment Plan for 1980.

The Committee composition was designed to provide for a broad representation from all groups affected by any changes in the 4/10 Patrol Deployment Plan. All three Watch Commanders (Captains) were Committee members. Additionally, each Captain selected from his Watch a Shift Lieutenant, a Sector Sergeant, and a Police Officer to participate in the Committee. The Communications Section Commander was added due to the potential impact of changes in Sector and District designs on Communications as well as changes in Patrol staffing levels. A representative of the Sacramento Police Officers Association also was included. The Planning and Fiscal Section provided a representative to monitor the impact of deployment changes on existing data systems including the Beat Survey and Officer Activity.

Essentially, the Committee was "Advisory" in the sense that all final decisions would be made by the Deputy Chief of (Field) Operations. However, inasmuch as the Deputy Chief also sat in the Committee, decisions that were reached by democratic consensus were all approved.

Organizationally, the Committee met at 1300 hours on Wednesday and on the following two days thereafter until all decisions were reached. The MPO staff acted as a staff resource to provide the initial discussion on existing Patrol Deployment service levels, and to use the Prescriptive capabilities of the computer Software programs on different Patrol Allocation Strategies developed during the course of the Committee.

2. Committee Agenda

The agenda was prepared by the MPO staff as follows:

A. Feedback from MPO Supervisors Training Classes. This amounted to a presentation on the criticisms and suggestions of police supervisors and middle managers on the current 4/10 Deployment Plan. It should be noted that these comments were developed as a result of workshops in the MPO Supervisory Training Classes. At the time the Committee reviewed the suggestions, five of seven scheduled supervisory classes had been completed.

Although the different classes varied as to how the 4/10 Plan could be improved, there was a near unanimous agreement that some changes were necessary. Each class cited the problem of too many personnel on the Friday overlap day and not enough personnel on other days. The most frequent comment on the Friday situation was that the roll calls were

calamitous and that people were tripping over each other. Sector Sergeants, under increasing management pressure to organize and engage in Directed Patrol with the extra personnel, were scrambling for problems that they could identify and to which they could assign their teams. Among the frequent complaints cited was that the Friday overlap was the only time that sufficient manpower was available for Directed Patrol. However, as they further pointed out, there were problems occurring on the other six days of the week that were all but ignored.

Supervisors further complained that the call for service workload on other days of the week (Thursday and Sunday were most often cited) were such that many patrol teams were completely swamped with the call for service workload and that the incidence of Code 12's (No Unit Available) was believed to be as high, if not higher, than it was under the previous 5-day week, 8-hour day Patrol Deployment Plan.

The most common recommendation from the Supervisors was that the 4/10 overlap days should be spread among other days in addition to Friday. Although they recognized that this would result in some Patrol teams having days off during the middle of the week, they continued to display a surprisingly high concern for their ability to provide police service delivery during the high demand periods.

B. Data Sources and Methodology. This was a review by the MPO Management Analyst of data sources used in the analysis of the Patrol Division Manpower Deployment.

C. Hypercube Analysis Report. The MPO Management Analyst presented a report as to the efficacy of the Patrol Units District Design, or Beat Boundaries, under the 4/10 Plan. The presentation included an analysis of the Beat/Districts by Sector and by Watch. Beat Boundaries were analyzed three ways according to:

- Average 1978 Calls for Service Workload Levels
- 1st Quarter 1978 (Winter) Calls for Service Workload Levels
- 3rd Quarter 1978 (Summer) Calls for Service Workload Levels

D. Patrol Car Allocation Model (PCAM) Analysis Report. The MPO Management Analyst presented a report as to the Patrol Service Levels "Descriptively" analyzed by PCAM. Additionally, the "Prescriptive" allocation recommendations of PCAM were presented, together with the projected change in service levels.

3. Materials Presented to Committee

The Committee, during its three day course, was presented and/or requested a substantial amount of data information. The following is a list of the reports:

A. Meeting Agenda

B. Feedback comments, typed verbatim, from the MPO Supervisors Training Classes.

C. Actual 4/10 response times by Patrol District, and by 2-hour time blocks for the 3rd quarter 1979.

D. Actual 4/10 service times by Patrol District, and by 2-hour time blocks for the 3rd quarter 1979.

E. Self-initiated activity and average service times by Patrol District and by 2-hour time blocks for the 3rd quarter 1979.

F. A chart showing 1978 Call for Service workloads by day of week and by yearly quarter.

G. Report: Hypercube Beat Design Analysis with Seasonal Fluctuations in Calls for Service.

H. Report: Patrol Car Allocation Model (PCAM) Analysis of 4/10 Plan.

I. Graph Charts: Call for Service Volume and Code 12's (No Unit Available) for each Patrol Sector, for each day, by time of day for the 3rd quarter 1979.

J. Beat Survey Reports: Excerpts from the Beat Survey document displaying City-wide Call for Service workloads for Priority one, two, three and All Calls combined by day of week and by hour of day.

K. The Hypercube output tables by Patrol Sector and District for the Summer quarter, Winter quarter and Yearly average.

L. PCAM Output Descriptive Analysis Tables for Patrol Sectors by day of week for the 4/10 Plan as originally written.

M. PCAM Output Prescriptive Analysis Tables for Patrol Sectors by day of week.

N. PCAM Output Descriptive Analysis Tables for Patrol Sectors as proposed in the Prescriptive PCAM Analysis.

4. Deployment Issues Raised in Committee

A number of critical deployment issues were raised by Committee members -- some of which were resolved, and some which were not. Among those were the following:

A. The Role of the Two-Man Car Tactical Units Assigned to Each Patrol Sector. As initially conceived under the 4/10 Plan, two-man tactical units were to be backup/cover units for the one-man primary district cars. They were to be "defusers" in the sense that they would only be assigned or handle "Hot" calls requiring a multiple unit dispatch. When the situation or incident was under control, then they return back to service allowing the primary district car to handle the investigation and reports.

B. How to Count Recruit Police Officers. Currently, beat structures and overall deployment is based upon the assumption that all Patrol officers are completely trained and able to independently work on their own. In practice, however, Police Recruits after

completing a 16 week Academy, begin a year probationary period in which they are assigned to specific Training Officers in primary district cars, and they must complete a rigorous Field Training Program. With a high turnover rate in Patrol (resignations/retirements/transfers) and with an uneven number of recruits in training at any one time, "actual" Patrol manpower staffing are actually diminished by the number of two-man training units that are routinely assigned to calls normally handled by a single-officer unit. This problem was resolved, in part, by converting the two-man Sector tactical units to one-man tactical units until such time as the recruits complete their field training program and the two-man tactical units can be filled again. The number of two-man tactical units to be reduced to one-man units will be in direct proportion to the number of recruits in training.

C. Should Tactical Units be Re-Assigned as One-Man Primary Cars? This issue was decided in the negative due, in part, to the decision reached in issued "B" above.

D. Should Minimum Staffing Levels be set for Patrol? Proposals from the Supervisors MPO

Training Classes that minimum manpower staffing levels should be set for Patrol where the needed manpower was below that set, due to illnesses, IOD, vacation, holidays, military leave, etc., officers could be called back to work at time and one-half pay. Inasmuch as this is a department budgetary matter, Deputy Chief Finney deferred the issue but indicated he would explore its future feasibility.

5. Committee Decisions and Results

A. In response to the impact of seasonal fluctuations upon the workload of the First Watch, Patrol management committed a six-man Crime Suppression Team to the First Watch during the Summer Quarter to compensate for the increased workload. The Patrol district designs will remain intact with the additional manpower working "at large" within the sectors.

B. In response to both the PCAM study and the supervisors feedback comments, a number of positions were established early by the Committee:

- Directed activity should be undertaken on more than just one overlap day during a Watch; and
- Currently, there are too many officers present on the overlap days and not

enough present on other days; and
- While both Team Integrity and Sector Integrity are important, Team Integrity is more important.

Once these management positions were established, the decision was made to stagger throughout the week the overlap days of the various Patrol Sectors according to the calls for service demands. However, when a particular sector had its overlap day (i.e., both teams were present), the surplus of men could be dispersed into other sectors or engage in Directed Patrol, thus breaching Sector Integrity.

Procedurally, the method by which the overlap day for the sectors was chosen is as follows:

- PCAM was used to identify the Patrol Division's "trouble spots" by day of week, time of day and geographic area.
- The Patrol Planning Committee developed four alternative Deployment Plans to compensate for these problems.
- Patrol Plan II was used to analyze these alternatives.*

* Patrol Plan II was used to evaluate the alternative deployment plans due to the unavailability of PCAM.

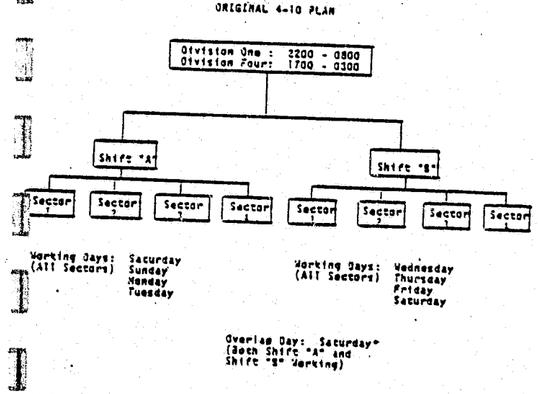
As fate would have it, NCSS was down during this critical time period. Thus, the MPO Staff had to fall back on the micro computer.

- Based upon Patrol Plan II, the Patrol Planning Committee combined portions of two plans to make a fifth allocation strategy.
- Patrol Plan II analyzed the latest configuration which proved superior to the previous four plans.
- The final plan was adopted by the Committee and implemented on February 1, 1980.

C. Further discussion was held on whether or not to modify shift start times to further compensate for staff imbalance by time of day. It was decided not to make further modifications until the results of the already agreed upon changes could be determined. Furthermore, since that period of time during the day which PCAM says were overstaffed has a greater percentage of multiple unit calls than does that period during which PCAM says were light, the Committee decided that if the previous changes seemed to control the problem, further changes could await installation of the computer-aided Dispatch System. This System will give the department the multiple dispatch service information it needs to more completely evaluate temporal workload. If these changes do not adequately compensate for time of day fluctuations in calls for service workload, the Patrol Planning Committee will reconsider MPO's offer to estimate these multiple unit calls for service resource requirements.

6. Shift Assignment Comparisons

A. The original 4-10 deployment strategy, Figures A and B, show the structure of the Original 4-10 Plan. It should be noted that the term "Division" is equivalent to a Patrol "Watch" period. Furthermore, Division 4 is under the administrative and supervisorial control of Division 3. It merely represents a small group of officers who come to work one hour later than those on Division 3.



*Note: Even though the overlap day for Division One was Saturday, it actually meant that the overlap started at 2200 hours on Friday and extended to 0800 on Saturday.

Figure A. Original 4-10 Plan: Divisions One and Four

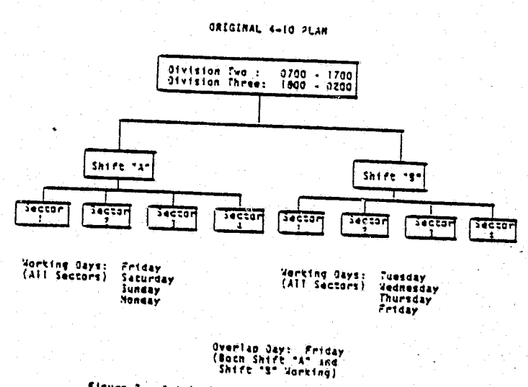
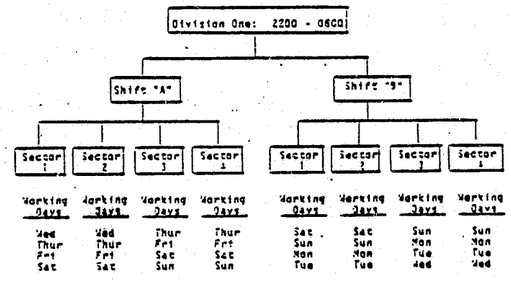


Figure B. Original 4-10 Plan: Divisions Two and Three

B. The Revised 4-10 deployment strategy, Figures C through F, demonstrate the new allocation as modified by changing the days off structure. Here it should be noted that the numbers of officers assigned to each Division was not changed.

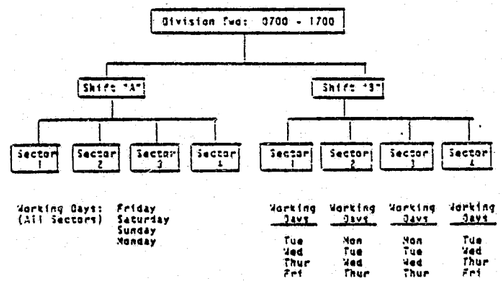
REVISED 4-10 PLAN



Overlap Days: Sector 1 - Saturday
Sector 2 - Saturday
Sector 3 - Sunday
Sector 4 - Sunday

Figure C. Revised 4-10 Plan: Division One

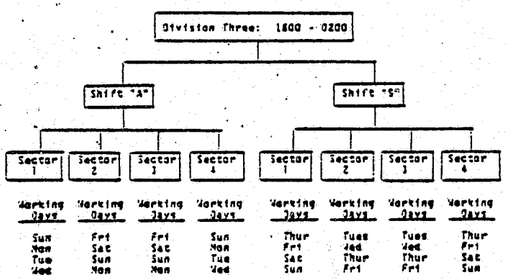
REVISED 4-10 PLAN



Overlap Days: Sector 1 - Friday
Sector 2 - Monday
Sector 3 - Monday
Sector 4 - Friday

Figure D. Revised 4-10 Plan: Division Two

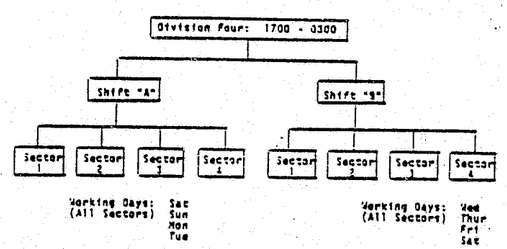
REVISED 4-10 PLAN



Overlap Days: Sector 1 - Sunday
Sector 2 - Friday
Sector 3 - Friday
Sector 4 - Sunday

Figure E. Revised 4-10 Plan: Division Three

REVISED 4-10 PLAN



Overlap Day: Saturday

Figure F. Revised 4-10 Plan: Division Four

Finally, Figures G and H show a Summary of the changes in overlap days between the original 4-10 Plan and as it was modified.

ORIGINAL 4-10 PLAN

OVERLAP DAYS SUMMARY

Division	Hours	Overlap Day
One	2200 - 0800	Saturday*
Two	0700 - 1700	Friday
Three	1600 - 0200	Friday
Four	1700 - 0300	Saturday

* Note: Saturday Overlap Day for Division One started at 2200 hours on Friday.

Figure G. Original 4-10 Plan: Overlap Days Summary

REVISED 4-10 PLAN

OVERLAP DAYS SUMMARY

Division	Hours	Sector	Overlap Day
One	2200 - 0800	1	Saturday
		2	Saturday
		3	Sunday
		4	Sunday
Two	0700 - 1700	1	Friday
		2	Monday
		3	Monday
		4	Friday
Three	1600 - 0200	1	Sunday
		2	Friday
		3	Friday
		4	Sunday
Four	1700 - 0300	All	Saturday

Figure H. Revised 4-10 Plan: Overlap Days Summary

IX. RESOURCE ALLOCATION TRAINING

1. Scheduling Methods Training, provided by TIPPA, in Clayton, Missouri.

This training was concerned with the evaluation of three micro-computer scheduling methods. They were:

A fixed bracket schedule in which each employee receives the same days off each week.

A duty cycle schedule in which all employees follow the same pattern of rotating shift assignments and days off.

A proportional rotating (PR) schedule in which each employee works a series of one-week schedule brackets in sequence and begins the sequence again after completing the final bracket.

While Sacramento is committed to, and satisfied with, its fixed bracket duty schedule, the training was still beneficial as it facilitated operation of the Micro Computer Scheduling Software Programs.

2. PATROL PLAN, PCAM and Hypercube Training, provided by TIPPA, in Clayton, Missouri.

Most of the PCAM and Hypercube material discussed was covered in the literature so not much new was learned. At this meeting, TIPPA was informed of Sacramento's decision to purchase PATROL PLAN II and Schedule Plan Software Programs. The difficulties of running Hypercube was discussed, although a final decision had not been reached as to whether or not the programs would have to be run.

The possibility of using the TRS-80 Micro Computer as a large frame computer terminal was also discussed.

3. PCAM and Hypercube Training, Provided by TIPPA, in Clayton, Missouri

This was the most relevant and well organized computer training of the project.

Preparatory reading and data collection allowed Sacramento's delegation to identify and raise many issues and obstacles that would otherwise have to be dealt with in a more piece-meal and less systematic fashion.

In terms of evaluation, the literature, training and the construction of the interactive mode program monitors, when taken together, is adequate preparation for the running of the PCAM and Hypercube programs. In this regard, it is interesting to note that some inconsistencies between the literature and training exist and that total reliance on one or the other could create difficulties.

The evaluation of the TRS-80's feasibility for use as a terminal was not completed and therefore Sacramento had to rent a Texas Instrument TI-745 terminal. This resulted in increased cost to the project and a negative impact on the City's ability to continue using the PCAM and Hypercube programs after grant termination.

In terms of project impact, the PCAM and Hypercube

training conducted in Clayton greatly enhanced the probability of MPO Project success. Further grants involving utilization of the PCAM and Hypercube programs should also include such training.

4. Introduction to VP/CSS, Provided by the NCSS Corporation

This training was very useful in teaching us how to operate on the NCSS system in the VP/CSS Environments. Since the project's training was, by budget necessity, limited to the basic PCAM and Hypercube Operations, this class filled a real void in the necessary knowledge for efficient computer use. Of particular importance in this regard was Editing operations, which were much more streamlined than those incorporated in the program Literature/Training.

5. Data Management Concepts Class Provided by the NCSS Corporation

The Data Base Management Class was not particularly relevant to MPO. It was hoped that this class would teach methods of economization through proper data base management. However, the class was devoted entirely to the NCSS-owned NOMAD Data Base Management System.

6. Executive Language Class Provided by the NCSS Corporation

This class should have significant influence on future MPO projects.

First of all, the problems encountered by one of the MPO cities which resulted in their accidental

utilization of over $2,000 worth of computer time, could have been prevented by including an appropriate SET ARULIM COMMAND in their PROFILE EXEC file prepared for them and for each of the Project cities by technical assistance personnel from TIPPA in cooperation with NCSS.

A second less dramatic change in the PROFILE file could change the BLIP value from 80 cents to $1.00. This would make the cost of on-line operation easier to determine. This training was also useful in that it allowed project personnel to query the instructor with regard to the value of the Extended Use course. It was learned that the class would cover, among other topics, the use of off-line storage devices. This could be very useful to Sacramento, particularly if the City wishes to maintain their capability for running PCAM and Hypercube after grant termination at minimum costs (i.e., paying for expensive on-line storage for only those relatively brief periods during which the programs would actually be loaded and run). However, both times the Project Analyst enrolled in this class, it was cancelled.

This class, like the first one, provided COMMAND Language training which could prove useful in running PCAM and Hypercube; and, in fact, Sacramento is recommending that future MPO cities send their Analyst/computer personnel to the following NCSS classes:

1. Introduction to VP/CSS
2. VP/CSS Extended Use: Disc, Tape, Utilities,etc.
3. VP/CSS EXEC Language

Another area of interest concerns the NCSS owned and operated Demographic Information Systems of ON SITE MARKET BASE. These programs may help future MPO cities meet their profiling needs.

7. Introduction to Basics, Provided by the Tandy Corporation (Radio Shack)

This class did not benefit MPO, per se, but if project cities plan to get maximum use out of their Micro Computer, they should plan to attend.

RESOURCE ALLOCATION LITERATURE

Literature was an invaluable training aid throughout the length of the project. It allowed Sacramento to prepare for the formal training sessions in Clayton, Missouri. It provided the bulk of the orientation with regard to computer assisted resource allocation and it became an invaluable shop manual during actual computer operation. In addition to the PCAM and Hypercube literature provided each test site, the following NCSS publications proved invaluable:

1. VP/CSS Reference Manual
2. VP/CSS Reference Card
3. EDIT Reference Card

X. RECOMMENDATIONS FOR FUTURE PROJECT CITIES

1. PCAM and Hypercube should be mounted on a time-sharing network by LEAA, instead of being mounted locally (or on a time share by each of the project cities individually). This will minimize cost and confusion as well as get computer operation off to a faster start.
2. A special category of technical assistance should be reserved for computer assisted Resource Allocation needs and should be budgeted to last through the entire period of computer use.
3. Efforts should be made to take advantage of any training available through the time share network used. If NCSS is used, the following courses should be taken:
   a. Introduction to VP/CSS
   b. VP/CSS Extended Use
   c. VP/CSS EXEC Language
4. If a time share network is used, future projects could find it very profitable to expand the role of monitor programs to allow both PCAM and Hypercube to be run in the Batch Mode.
5. Program literature should be updated and corrected. This is particularly important with regard to the dangers and problems in determining PCAM's unavailability parameters, service time parameters, and call for service rates.

The most important publications that all Project Directors should peruse, and those responsible for computer operation thoroughly understand, are:

a. Patrol Car Allocation Model; Users Manual, by Chaiken & Dormont.

b. Instructional Material for Learning to Use the Hypercube Programs, by The Institute for Public Program Analysis.

However, certain modifications should be made in the literature before future dissemination is considered. The most important of these modifications is the integration of the NEWPDATA Monitor Program developed by TIPPA into the literature.

6. The Radio Shack TRS-80 Micro Computer should be purchased with a disc system instead of the cassette system.

   The TRS-80 Level II is a much more sensitive and delicate piece of machinery than is the Level I. Perhaps most important in this regard is the fact that the Level II loads from cassette at the rate of 500 Baud (Baud is a measure of speed in bits per second) as opposed to approximately 200 Baud for the Level I. This higher speed makes the machine incredibly sensitive in terms of cassette volume setting. In fact, in conversations with Radio Shack employees, it was learned that a change of 1/12th of one number on the cassette volume setting (for example, from 4½ to 4 7/12) can stop the machine from loading properly. Nowhere in the instructions is this level of sensitivity identified, so future operators should be alerted. In this regard, after a day of experimentation, it was discovered that

by placing the number 6 on the volume control between the "m" and the "e" of the word "volume" printed on the machine, allowed the loading and copying of programs from and to cassette tapes with an approximate 50% success factor.

7. All future users of this equipment should realize that saving a program on a cassette tape involves (1) running the entire program through the machine to check its accuracy, (2) the dumping of the program onto tape using the "CSAVE" command, (3) the checking of the tape program against the original program using the "CLOAD" command, and (4) the running of the new program in its entirety before the dumped program can be assumed to be correct.

8. Even a person who is familiar with computer BASIC should skim both the USERS MANUAL FOR LEVEL I and LEVEL II BASIC REFERENCE MANUAL before attempting to use this machine since it does use its own dialect. For those inexperienced with BASIC, the careful reading of both, starting with the LEVEL I Manual, is a must. In this regard, LEVEL I BASIC is different from LEVEL II BASIC, so some of the examples and exercises in the LEVEL I Manual will not apply and/or function on the LEVEL II machine.

9. ALLOCATION PLAN would not run on the micro-computer as written when data from a department the size of Sacramento Police Department was used (it overflowed the machine's core capacity). TIPPA was contacted with

regard to this problem and they provided instructions as to how to rewrite the program. However, the rewritten program is painfully slow so it is proposed that the old program be used with smaller beats and the new program, for larger ones.

XI. DETAILED RESOURCE ALLOCATION STUDIES

STUDY #1: COST OF TEAM POLICING

Patrol Service Levels and Team Policing

The current Two Team per Sector Deployment Configuration in Sacramento under the 4/10 Plan results in a marked increase of men on the overlap days.

For example (as seen in Fig. I), if all officers appeared for the graveyard watch during the week, approximately 100% more (53 as opposed to 26 or 27) men would be on duty Saturday than on the other days of the week.

Fig. I - Staffing on Graveyard - 2 Teams (Shifts), 4/10 Plan

	M	T	W	T	F	S	S	
Team B	O	O	X	X	X	X	O	Team A = 26 men
Team A	X	X	O	O	O	X	X	Team B = 27 men
# of Men	26	26	27	27	27	53	26	X = Day On O = Day Off

Since the patrol division (or any other organization) has only a limited amount of manpower to allocate, the cost associated with having so large a number of men present on Saturday is a reduction in the number present during the rest of the week.

The Call for Service workload does not really reflect the need for this many men on Saturdays (CFS workload and manpower needs does not balance). This cost can be described in terms of reduced department effectiveness.

More specifically, the balancing of deployment with the CFS workload helps the police department in a number of ways. In general, it improves patrol division's service levels, particularly travel times and probability of saturation (i.e., the probability that no units will be free to take a CFS when it arrives).

In Sacramento's circumstance, it also increases the average uncommitted time each unit has for directed patrol activities.

To determine the reduction in effectiveness caused by this two team overlap policy, several other deployment strategies were run through the Allo Plan and Patrol Plan II programs for the graveyard shift. They were:

(1) More than two team deployment strategies (in this instance, 4 teams).

(2) "No Team" deployment strategies; and

(3) Staggered days off by sector deployment strategies.

Fig. II. Staffing on Graveyard - 4 Teams (or 2 shifts), 2 Teams Each With Separate Days Off

	M	T	W	T	F	S	S	
Team 1	0	0	X	X	X	X	0	Team=13 men
Team 2	0	0	0	X	X	X	0	0 = Day Off
Team 3	X	X	0	0	0	X	X	X = Day On
Team 4	X	X	X	0	0	0	X	
	26	26	26	26	26	39	39	

Fig. II depicts a graveyard staffing strategy developed using the ALLO Plan computer program in which there are 4 teams rather than two. It also depicts what could happen if you gave each team, i.e., Sector 1/Sector 2 A shift and Sector 1/Sector 2 B shift separate staggered days off.

Fig. III. Staffing on Graveyard,without Teams

Number of Employees	M	T	W	T	F	S	S
14	0	0	0	X	X	X	X
2	X	0	0	0	X	X	X
13	X	X	0	0	0	X	X
12	X	X	X	0	0	0	X
11	0	0	X	X	X	X	0
	27	25	23	25	27	40	41

Fig. III shows graveyard staffing with no consideration for teams at all. (Notice the word "Team" has been replaced with "Number of Employees", which differ markedly.)

Fig. IV, attached, shows a men to CFS workload comparison by day of week for 2 teams, 4 teams, staggered days off by team, and No team deployment postures. Notice the steady improvement in Sunday staffing from 2 thru 4 to No teams. Using city-wide data (sector-wide data will be available in October 1979) the Patrol Plan II computer program was used to determine the effect these different deployment strategies would have on Sacramento's patrol service levels.

Fig. IV . . Unit to CFS Workload Comparison by Day of Week
2 Teams, 4 Teams & No Teams 02-06

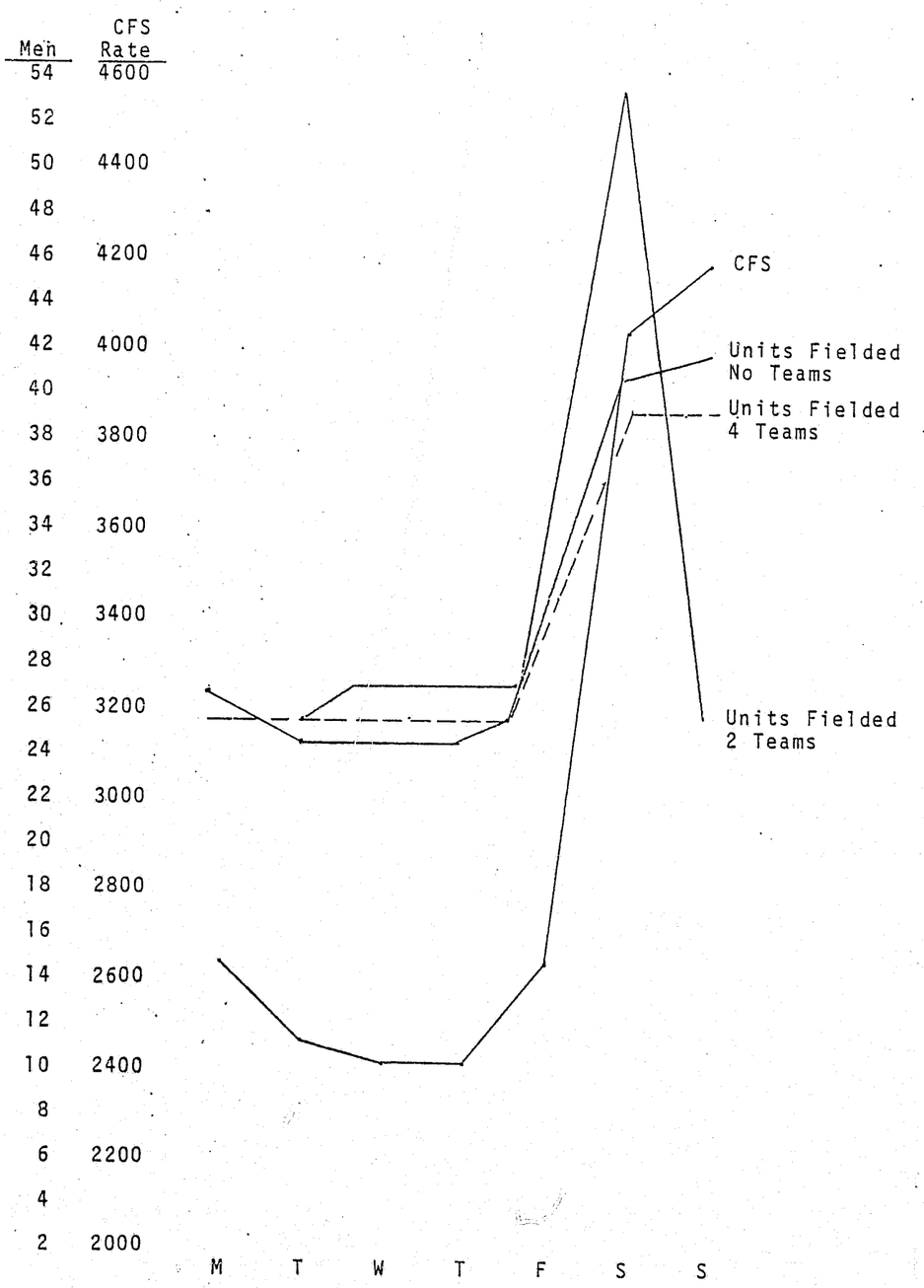


Fig. V. No Team vs. 4 Team Improvements over 4/10 Plan (Graveyard Shift)

	Graveyard 02-06	
	No Teams	4 Teams
Incoming Work Per Unit (Min/Hr)	5% Less Work per Unit	3% Less Work per Unit
Uncommitted Time/Unit	15% More Uncommitted Time per Unit	6% More Uncommitted Time per Unit
Probability of Saturation (City Wide)	67% Reduction in Probability of Saturation	52% Reduction in Probability of Saturation
Average Travel Time	22% Reduction in Travel Time	17% Reduction in Travel Time
Average Response Time	6.7% Reduction in Response Time	3% Reduction in Response Time

Fig. V depicts relative improvements in graveyard service levels (as opposed to the 4/10 two team strategy) of 4 and no team configurations. These results were obtained using the number of units actively fielded in July under the 4/10 rather than the hypothetical numbers written into the 4/10 Plan.

Fig. VI. Improvements All Shift Service Levels, Without Teams (as opposed to the 4/10 Plan, as written)

	Graveyard (02-06) No Teams	Days (07-16) No Teams	Swing (17-01) No Teams
Incoming Work per Unit (Min/Hr)	5% Less Work per Unit	.4% Less	0 No Change
Uncommitted Time/Unit	15% More	16% More	0 No Change
Probability of Saturation (City Wide)	67% Reduction	25% Less	39% Less
Average Travel Time	22% Reduction	1% Reduction	2% Less
Average Response Time	6.7% Reduction	3% Reduction	2% Reduction

Fig. VI depicts relative improvements in the aforementioned service levels by watch between the 4/10 Plan, as currently written, and the No team deployment strategy. (Note: No effort was made to allocate between shifts.) In October, when the data is available, this type of analysis will be conducted for No team staggered days off and variable number of team deployment strategies.

Advantages of the different deployment strategies

The two team configuration currently in effect:

1. Allows for training and/or directed activity on the overlap days.
2. Allows for perfect team and sector integrity.

The 3 to 6 Team Deployment Strategies:

1. Allows for a better workload to manpower fit.

2. Allows for directed activity on one to seven days a week.

Splitting days off by Team within a Shift:

1. Allows for a manpower to workload fit equal to that experienced by configuration with the number of teams equal to the number of sectors, multiplied by 2.

2. Allows for perfect team integrity.

3. Allows for directed activity on most, if not all, days of the week.

No Team Deployment Configuration:

1. Allows for best possible manpower to workload ratio.

2. Allows for directed activity seven days a week.

Disadvantages of Different Deployment Strategies

The 2 Team configuration currently in effect:

1. Reduces overall effectiveness.

2. Resources for directed activity available on overlap days only.

The 3 to 6 Team deployment strategies:

1. Does not permit perfectly matched Sergeant/Team scheduling.

2. Complicates training.

Splitting Shift Days off by Team:

1. Does not allow for perfect sector integrity.

2. Complicates training.

No Team Deployment Strategies:

1. This does not allow for team or sector integrity.

2. Complicates training.

STUDY #2: HYPERCUBE BEAT DESIGN ANALYSIS WITH SEASONAL FLUCTUATIONS IN CALLS FOR SERVICE

In the Hypercube Analysis just completed, the current District configurations by Sector, by Watch, were examined using Call for Service information for all of 1978 (yearly average), the first quarter of 1978 (Jan.-Mar., the "winter" quarter) and the third quarter of 1978 (July-Sept., the "summer" quarter).

Workload comparisons between these periods (Fig. I) reflect these differences:

1. During the summer quarter, workload is heavier than average in every sector during the first and third watches.

2. During the winter quarter, workload is slightly lower than average in every sector during the third watch.

3. The second watch does not fluctuate appreciably by time of the year.

Figure I

CFS by Hour, by Sector, by Watch, by 1978 Yearly Average, Winter and Summer Quarters

Average Calls for Service Per Hour:

First Watch Sector One			First Watch Sector Two			Second Watch Sector One		
Year	Sum.	Win.	Year	Sum.	Win.	Year	Sum.	Win.
5.7	6.7	5.5	5.5	6.2	5.6	3.8	3.7	3.9

Second Watch Sector Two			Second Watch Sector Three			Second Watch Sector Four		
Year	Sum.	Win.	Year	Sum.	Win.	Year	Sum.	Win.
5.0	5.1	4.9	4.1	3.9	4.2	4.1	3.9	4.2

Figure I (continued)

Third Watch Sector One			Third Watch Sector Two			Third Watch Sector Three		
Year	Sum.	Win.	Year	Sum.	Win.	Year	Sum.	Win.
6.6	7.1	6.2	7.9	8.1	7.6	6.5	7.0	6.4

Third Watch Sector Four		
Year	Sum.	Win.
7.3	7.7	7.1

Differences in Sector performance was also examined under these different workload levels, as shown in Figure II attached. The following definitions will be needed to interpret Figure II.

Average Calls for Service per Hour : The average number of Calls for service (officer initiated calls excluded) originating in a Sector per hour.

Utilization factor: The fraction of time, on the average, a patrol unit would be busy handling calls for service if all incoming calls were queued until a car became free to handle them. When Hypercube analyses are run assuming a zero capacity queue, the average workload will be less than the average utilization factor.

Travel time: The time required for the dispatched patrol unit to travel to the scene of the reported incident from its location when the assignment was received by the unit.

Saturation Probability: "Saturation" is said to occur when all patrol units in a sector are simultaneously busy handling calls for service.

Average Workload: This is the average fraction of time that cars are busy handling service incidents. If dispatcher queues were allowed, this figure would have equalled (within acceptable round-off error) the average utilization factor. In Sacramento, the region-wide workload will be somewhat less than the utilization factor, due to overflow incidents being assigned to backup units.

Standard Deviation of Workload: This is the standard deviation of the district car workloads (compared to the average car workload) which measures the imbalance in workloads among cars. The larger this quantity is, the greater is the imbalance. If this quantity is zero, then the workloads of all cars are equal.

Maximum Workload Imbalance: Subtracting the workload of the least busy car from the workload of the busiest car gives the maximum workload imbalance.

Figure II

Workload & Performance Levels by Sector, by Watch, Yearly Average, Summer Quarter & Winter Quarter Workload Figures

	First Watch Sector One			First Watch Sector Two		
	Year	Sum.	Win.	Year	Sum.	Win.
Average CFS per Hour	5.7	6.7	5.5	5.5	6.2	5.6
Average Utilization Factor (Unlimited Line Capacity)	.75	.88	.72	.63	.71	.64
Sector Wide Travel Time	7.2	7.7	7.1	8.6	8.9	8.8
Probability of Saturation	.18	.23	.16	.1	.13	.11
Sector Wide Average Workload	.62	.67	.60	.56	.61	.57
Standard Deviation of Workload	.06	.06	.07	.05	.04	.06
Maximum Workload Imbalance	.15	.14	.18	.13	.11	.14
Fraction of Dispatches that are Inter-District	.56	.6	.55	.52	.55	.53
Number of Districts	5	5	5	6	6	6

	Second Watch Sector One			Second Watch Sector Two			Second Watch Sector Three			Second Watch Sector Four		
	Year	Sum.	Win.	Year	Sum.	Win.	Year	Sum.	Win.	Year	Sum.	Win.
Average CFS per Hour	3.8	3.7	3.9	5	5.1	4.9	4.1	3.9	4.2	4.1	3.9	4.2
Average Utilization Factor (Unlimited Line Capacity)	.5	.49	.52	.56	.57	.55	.53	.51	.54	.51	.48	.52
Sector Wide Travel Time	9.1	9.3	9.0	6.3	6.1	6.2	9.0	9.1	9.0	11.8	11.6	11.9
Probability of Saturation	.05	.05	.06	.07	.08	.07	.06	.05	.07	.04	.03	.04
Sector Wide Average Workload	.48	.47	.49	.52	.53	.51	.5	.48	.51	.49	.46	.49
Standard Deviation of Workload	.05	.05	.05	.06	.06	.06	.03	.03	.04	.04	.04	.04
Maximum Workload Imbalance	.14	.12	.15	.14	.15	.14	.1	.08	.11	.1	.09	.1
Fraction of Dispatches that are Inter-District	.47	.46	.48	.49	.5	.48	.47	.45	.47	.46	.45	.47
Number of Districts	6	6	6	6	6	6	6	6	6	7	7	7

	Third Watch Sector One			Third Watch Sector Two			Third Watch Sector Three			Third Watch Sector Four		
	Year	Sum.	Win.	Year	Sum.	Win.	Year	Sum.	Win.	Year	Sum.	Win.
Average CFS per Hour	6.6	7.1	6.2	7.9	8.1	7.6	6.5	7.0	6.4	7.3	7.7	7.1
Average Utilization Factor (Unlimited Line Capacity)	.56	.6	.53	.64	.66	.61	.61	.66	.6	.59	.62	.57
Sector Wide Travel Time	9.2	9.6	9.1	7.0	6.9	6.8	11.8	12.1	11.8	11.9	12.3	11.7
Probability of Saturation	.04	.05	.03	.08	.08	.07	.05	.07	.05	.04	.05	.04
Sector Wide Average Workload	.54	.57	.51	.59	.6	.57	.58	.61	.57	.57	.59	.55
Standard Deviation of Workload	.12	.12	.13	.09	.09	.1	.1	.09	.1	.12	.11	.1
Maximum Workload Imbalance	.32	.29	.33	.24	.23	.25	.24	.22	.25	.29	.27	.3
Fraction of Dispatches that are Inter-District	.35	.37	.35	.4	.41	.39	.35	.36	.35	.4	.41	.4
Number of Districts	9	9	9	8	8	8	9	9	9	10	10	10

Fraction of Dispatches that are Inter-District: The percent of all dispatch assignments (including those from a queue of calls) that cause the assigned unit to travel to a reporting area not in its own district. Thus, for a randomly selected call for service in Sector 1, first watch during the summer quarter, there is a 60 percent chance that the car which responds will not be a car whose district contains the incident, the highest sector in the sample.

Number of Districts: The number of beats in each sector under the 4/10 plan.

First Watch: The time period of 02-06 in Sacramento.

Second Watch: The time period from 07-16 in Sacramento.

Third Watch: The time period of 17-01 in Sacramento.

The only appreciable difference in performance levels occur during the summer quarter of the First Watch (Figure III). During this time, significantly higher unit utilization, saturation probability, unit workload and inter-district dispatch occur.

Figure III

Workload & Performance Levels, First Watch - by Sector, by Winter, Summer and Average 1978 Yearly Workloads

	First Watch Sector One			First Watch Sector Two		
	Year	Sum.	Win.	Year	Sum.	Win.
Avg. CFS per Hour	5.7	6.7	5.5	5.5	6.2	5.6
Avg. Utilization Factor (Unlimited line capacity)	.75	.88	.72	.63	.71	.64
Sector Wide Travel Time	7.2	7.7	7.1	8.6	8.9	8.8
Probability of Saturation	.18	.23	.16	.1	.13	.11
Sector Wide Avg. Workload	.62	.67	.60	.56	.61	.57
Standard Deviation of Workload	.06	.06	.07	.05	.04	.06
Maximum Workload Imbalance	.15	.14	.18	.13	.11	.14
Fraction of Dispatches that are Inter-District	.56	.6	.55	.52	.55	.53
Number of Districts	5	5	5	6	6	6

As seen in Figure IV, adding one District to each Sector on First Watch during the summer quarter results in performance levels comparable to those experienced during the rest of the year.

Figure IV

Workload and Performance Measures, First Watch - by Winter, by Summer (with one District added per Sector) and Average 1978 Yearly Workloads

	First Watch Sector One Extra Unit			First Watch Sector Two Extra Unit		
	Year	Sum.	Win.	Year	Sum.	Win.
Avg. CFS per Hour	5.7	6.7	5.5	5.5	6.2	5.6
Avg. Utilization Factor (Unlimited line capacity)	.75	.73	.72	.63	.61	.64
Sector Wide Travel Time	7.2	7.2	7.1	8.6	8.5	8.8
Probability of Saturation	.18	.15	.16	.1	.08	.11
Sector Wide Avg. Workload	.62	.65	.6	.56	.56	.57
Standard Deviation of Workload	.06	.07	.07	.05	.07	.06
Maximum Workload Imbalance	.15	.19	.18	.13	.19	.14
Fraction of Dispatches that are Inter-District	.56	.51	.55	.52	.43	.53
Number of Districts	5	6	5	6	7	6

Referring back to Figure II (and as discussed in the initial Hypercube presentation), for 1978 winter, summer and yearly average service levels, the beats as designed are consistently excellent. So consistent in fact that, except for the previously mentioned summer quarter First Watch modifications, Hypercube does not indicate any need for change. However, continued growth in the Natomas and Pocket areas could change this. Third Quarter 1979 data will be run through Hypercube this month to determine if new beats are needed in this area and, if so, just what EDP-SD they should contain.

STUDY #3: PATROL CAR ALLOCATION MODEL (PCAM)

ANALYSIS OF 4/10 PLAN

The first three months of Sacramento's experience with the 4/10 Plan (July-September) was analyzed using the PCAM Computer Model.

The information used in this analysis came from a special every-day run of the Beat Survey, from the department's payroll sheets and from other sources. This special run provided us with Call for Service information by day, patrol district, time and priority. The payroll sheets gave us the number of units fielded by watch, and a 6 foot by 12 foot map was used to determine sector roads and square miles.

Figure I shows the number of units fielded by day, by time block.

	MON	TUES	WED	THURS	FRI	SAT	SUN
SECOND 07-1559	25.8	25.1	24.9	26.2	34.6	24.7	26.0
START 3rd 16-2159	28.2	28.9	28.9	28.1	40.8	27.2	28.3
BOTH 3+1 22-0159	44.9	42.8	42.1	42.2	55.3	58.1	46.2
END FIRST 02-0659	21.1	20.0	17.3	18.0	17.2	30.5	27.8
	120.0	116.8	113.2	114.5	147.9	140.5	128.3

Figure 1. Number of Units Fielded by Watch, 4/10 Plan

Of note here is one of the limitations of the PCAM Model. The basic unit that the PCAM Model works with is the time block. A time block is defined as that period of time over which the number of units fielded doesn't change. Since Third and First Watch overlap, this period had to become its own time block. To stop the analysis from getting too unwieldy and due to the limited worth of one hour analysis, the other time blocks (i.e., 07, 16, 02) were ignored.

Figure 2 breaks down the cars fielded (described in Figure 1) to the sector level.

SECTOR I	MON	TUES	WED	THURS	FRI	SAT	SUN
SECOND	7.4	6.2	6.1	6.2	9.1	7.4	7.8
START 3rd	7.7	7.3	7.5	7.5	10.8	7.6	7.9
BOTH 3+1	12.0	11.1	11.0	11.3	14.7	15.6	12.4
END FIRST	5.9	5.5	4.7	4.5	4.4	8.4	7.7
SECTOR II							
SECOND	5.3	6.2	6.0	6.2	9.5	5.1	5.3
START 3rd	5.6	6.9	6.8	6.3	11.0	4.8	5.3
BOTH 3+1	9.1	9.5	9.8	9.7	13.7	13.7	9.3
END FIRST	4.3	4.3	3.8	4.2	4.1	7.5	5.9
SECTOR III							
SECOND	6.8	6.4	6.3	7.1	7.9	5.9	7.0
START 3rd	6.9	6.5	6.8	6.7	8.9	7.0	6.5
BOTH 3+1	11.2	10.2	9.6	9.9	12.9	14.2	11.9
END FIRST	5.7	5.4	4.1	4.2	4.2	7.8	6.5
SECTOR IV							
SECOND	6.3	6.3	6.5	6.7	8.1	6.3	5.9
START 3rd	8.0	8.2	7.8	7.6	10.1	7.8	8.6
BOTH 3+1	12.6	12.0	11.7	11.3	14.0	14.6	12.6
END FIRST	5.2	4.8	4.7	5.1	4.5	6.8	7.7

Figure 2: Number Units Fielded by Watch, by Sector, by Day, 4/10 Plan

The most important criteria in making patrol resolve allocation decisions is the location by time and area of the patrol divisions workload. Figure 3 identifies the origins of the department's Calls for Service, by Sector, by time block.

	SECTOR 1	SECTOR 2	SECTOR 3	SECTOR 4
SECOND 07-1559	(2224) 247	(2948) 327	(2374) 263	(2339) 260
START 3rd 16-2159	(2543) 424	(2480) 413	(2454) 409	(2657) 443
BOTH 3+1 22-0159	(1831) 458	(1678) 420	(1898) 475	(2088) 522
END FIRST 02-0659	(925) 185	(989) 198	(956) 191	(964) 193

Figure 3. CFS by Sector, by Watch, by Hour.
Number in parenthesis total CFS by Sector, by Watch.

The number in parenthesis in Figure 3 is the total number of calls (officer initiated excluded) during the period in the sector during the quarter. The other number is the hourly rate of calls (quarter totals).

The last piece of information necessary in the analysis is the conversion of these Call for Service figures into workload estimates. To do this, the amount of resource, i.e. patrol unit time each call represents, must be determined.

Figure 4 depicts service time by sector, by time block. Service time equals Travel plus on scene time (officer initiated service times excluded).

Watch	Sector 1	Sector 2	Sector 3	Sector 4
Second 07-1559	48.9	42.2	49.6	53.4
Start 3rd 16-2159	58.1	44.1	60.	56.8
Both 3 + 1 22-0159	42.5	40.	44.6	43.6
End First 02-0659	48.4	38.8	46.5	45.7
Weighted Average	50.3	41.87	51.26	50.9

Figure 4. Service Time by Sector, by Time Block

The average at the bottom of Figure 4 is weighted. That is, it does not equal the service time figures in the four columns above divided by 4. It equals the number of calls in each of the time blocks multiplied by their respective service times and divided by the total number of calls in the sector. (Note: These figures are slightly under estimated as the department does not capture the overlap service times on multiple unit calls for service.)

Two significant pieces of information are apparent in Figure 4. First, the 16-2159 time period has the largest service time in all four sectors. Second, Sector 2 has the lowest service times throughout the day.

One reason for the reduced service times in Sector 2 results from its small geographic area (4.9 sq. miles). As shown in Figure 5, this results in reduced travel times.

Sector	1	2	3	4
Avg. Travel Time	8.2	6.8	8.6	8.4

Figure 5. Average Travel Time by Sector

RESULTS OF PCAM'S ANALYSIS OF FIRST 3 MONTHS UNDER THE 4/10 PLAN

PCAM was provided with the information just discussed in order to determine the models "evaluation" of Patrol Division service levels.

Figure 6 depicts actual PCAM outputs. The first three columns, Actual Cars Fielded, Call Rate and Service Time are self-explanatory and, in fact, represent only a restatement of inputed information. Column 4 and 5 represent the first actual results of PCAM's "analytical capabilities". The probability of a call being delayed (Column 4) is a reflection of the chance the call will wait in queue at the dispatch awaiting a free unit. It does not count any delay in processing the call in Communications. The last column, Average Total Delay, is the sum of average queue delay plus travel time. As will be discussed later, these last 2 columns represent the criteria by which PCAM makes its own allocation decision.

	ACT. CARS	CALL RATE	SERVICE TIME	PROB. CALL DELAYED	AVERAGE TOTAL DELAY
SECTOR I	8.4	3.4	50.6	.179	35.2
SECTOR II	.2	3.7	42.	.197	14.87
SECTOR III	7.9	3.5	51.3	.207	22.77
SECTOR IV	8.3	3.7	51	.198	22.14
GRAND AVERAGE	8.0	3.6	48.6	.195	23.55

Figure 6. 4/10 Performance Level

Figure 7 depicts the Average Utilization of an Effective Car, the Average Utilization of an Actual Car, Average Travel Times and the Average Number of Cars Available in a Sector. The definition of an Actual Car is just that, each car fielded is an Actual Car. The total number of Effective Cars is equal to the total number of Actual Cars minus the percentage of administrative work they must perform. For example, 5 Actual Cars that must each spend 20% of their time on administrative work (non-CFS work) equals 4 Effective Cars (.20 x 5 = 1 car "Lost" to administrative time). Since the department's sources for calculating administrative time were found to be unreliable, an arbitrary figure of 30% was chosen. The developers of the Model have found this figure to range from 20 to 60 percent.

WEEKLY	AVG. UTIL. (EFF)	AVG. UTIL. (ACT)	AVG. TRAVEL TIME	AVG. CARS AVAILABLE
SECTOR I	.451	.361	13.4	3.53
SECTOR II	.468	.375	8.8	2.94
SECTOR III	.499	.399	12.1	3.02
SECTOR IV	.501	.401	14.4	3.12
GRAND AVERAGE	.480	.384	12.1	3.15

Figure 7. 4/10 Performance Level

PCAM'S PRESCRIPTIVE ANALYSIS

Up to now, all that's been presented has been PCAM's Descriptive analysis of the 4/10. That is, we have used PCAM to simply describe what has been happening in Sacramento for the last three months.

PCAM also has a more powerful Prescriptive capability. In its Prescriptive Mode, PCAM can be used to prescribe or allocate your patrol resources for you by day, area and Watch (in Sacramento's case, by time block). This allocation is made using the criteria of reducing queue delay and/or travel time to their lowest possible levels city wide.

Working on this assumption, PCAM allocated Sacramento's units in the following manner.

	MON	TUES	WED	THURS	FRI	SAT	SUN
SECOND	28	27	26	26	26	27	23
START 3rd	39	39	39	39	42	38	36
BOTH 3+1	34	35	35	36	36	43	41
END FIRST	21	19	19	19	20	28	28
ADJUSTED PCAM	123.7 122	121.7 120	120.5 119	121.6 120	125.6 124	137.8 136	129.6 128

Figure 8. Number of Units Fielded by Watch PCAM Adjusted.

Note: In examining Figures 8 and 9, it immediately becomes apparent that this is an impossible allocation to have since PCAM cannot handle our current overlap period as a two watch overlap. Instead, it treats it as a separate watch and allocates units to it as such. However, this detracts only slightly from Figure 8 and 9's value for it still provides the "perfect allocation" model we are aiming for and it helps us identify problems with the current 4/10 allocation.

SECTOR I	MON	TUES	WED	THURS	FRI	SAT	SUN
SECOND	6	6	6	6	6	7	6
START 3rd	10	10	11	10	10	10	9
BOTH 3+1	9	9	9	9	9	11	10
END FIRST	6	5	4	5	5	8	7
SECTOR II							
SECOND	7	7	7	7	7	6	5
START 3rd	8	9	8	8	10	8	7
BOTH 3+1	7	7	8	8	8	9	8
END FIRST	5	4	5	4	5	6	6
SECTOR III							
SECOND	7	7	6	6	6	7	6
START 3rd	10	10	10	11	11	10	10
BOTH 3+1	9	9	8	9	9	11	11
END FIRST	4	5	5	5	5	7	7
SECTOR IV							
SECOND	8	7	7	7	7	7	6
START 3rd	11	10	10	10	11	10	10
BOTH 3+1	9	10	10	10	10	12	12
END FIRST	6	5	5	5	5	7	8

Figure 9. Number Units Fielded by Watch, by Sector, PCAM

More specifically, Figures 10 and 11 give us an idea of what types of improvements are possible through better allocation decision making.

	AVG. UTIL. (EFF)	AVG. UTIL. (ACT)	AVG. TRAVEL TIME	AVG. CARS AVAILABLE
SECTOR I	.480	.384	13.2	3.15
SECTOR II	.471	.377	8.7	2.91
SECTOR III	.489	.391	11.2	3.14
SECTOR IV	.480	.384	13.1	3.39
GRAND AVERAGE	.480	.384	11.5	3.15

Figure 10. PCAM Allocation Performance Measures

	ACT. CARS	CALL RATE	SERVICE TIME	PROD. CALL DELAYED	AVG. TOTAL DELAY
SECTOR I	7.8	3.4	50.6	.129	15.91
SECTOR II	6.9	3.7	42	.139	11.28
SECTOR III	7.9	3.5	51.3	.123	13.78
SECTOR IV	8.4	3.7	51	.116	15.37
GRAND AVERAGE	7.8	3.6	48.6	.127	14.05

Figure 11. PCAM Allocation Performance Measure

As previously mentioned, PCAM's allocation was made on the basis of reducing response time by reducing queue and travel times.

Figure 12 compares PCAM's estimates for its own allocation with its estimates of the current situation with regard to these variables. (Figure 12 compares Figures 10 and 11 with Figures 6 and 7.)

	Average Travel Time	Probability of Call Delay	Average Total Delay
4/10 Plan	12.1	.195	23.55
PCAM	11.5	.127	14.05
Improvement	5%	35%	40%

Figure 12. Improvements in Response Delay, PCAM vs Current 4/10

To summarize Figure 12, a 40% reduction in response time over the current 4/10 would result if the new PCAM allocation was adopted. That this great a reduction is possible, means that PCAM had identified some basic problems with the current 4/10 strategy.

As to be expected, PCAM reduced the number of men fielded under the 4/10 on Fridays and Saturdays while increasing the number allocated during the rest of the week. Figure 13 reflects these changes.

	MON	TUES	WED	THUR	FRI	SAT	SUN
ACTUAL	120	116.8	113.2	114.5	147.9	140.5	128.3
PCAM	123.7	121.7	120.5	121.6	125.6	137.8	129.6
DIFFERENCE	+ 3.7	+ 4.9	+ 7.3	+ 7.1	-22.3	- 2.7	+ 1.3

Figure 13. Staffing by Day of Week 4/10 vs PCAM

Now, obviously, PCAM cannot compensate for directed activity so, if Sacramento plans to utilize this abundance of resources on Friday and Saturday, then this PCAM output should be ignored. However, PCAM found another allocation of manpower that it didn't "agree with" and this time, directed patrol is not an issue. Figure 14 shows the difference between the current allocation for the 16-21 time period and PCAM's.

	Mon	Tues	Wed	Thur	Fri	Sat	Sun
Start 3rd PCAM	39	39	39	39	42	38	36
Start 3rd Current Allocation	28.2	28.9	28.9	28.1	40.8	27.2	28.3
Difference	+10.8	+10.1	+10.1	+10.9	+1.2	+10.8	+7.7

Figure 14. Difference Between PCAM & Current 4/10, 16-2159 Hours

The only other changes that are anywhere as significant is the reversal of this situation during the 22-0159 period. Figure 15 explains:

	Mon	Tues	Wed	Thur	Fri	Sat	Sun
PCAM Both 3+1	34	35	35	36	36	43	41
Current 4/10 Both 3+1	44.9	42.8	42.1	42.2	55.3	58.1	46.2
Difference	-10.9	-7.8	-7.1	-6.2	-19.3	-15.1	-5.2

Figure 15. Difference Between PCAM & Current 4/10, 22-0159 Hours

RECOMMENDATIONS:

1. Reallocate your patrol manpower so that it more closely reflects PCAM's Allocation with regard to the 16-21 and 22-1 time periods.

2. Reallocate your manpower by day of week to reflect PCAM's analysis. This would improve service levels and increase the chances for directed activity on days other than Friday and Saturday.

Note: This cannot be done without considering the issues of team integrity.

STUDY #4: IMPACT REPORT OF POPULATION GROWTH

The City of Sacramento is experiencing marked population growth in both the North (South Natomas) and South (Pocket, Valley Hi and Meadowview) areas. Hypercube was modified to evaluate the impact these increases in population would have on the delivery of police service through 1982. This was accomplished by modifying the call for service rates in these areas in proportion to the projected changes in population. (With the populations already established in these areas serving as the base in determining the population to call for service ratio.) And by changing the proportion of calls for service arriving in the up-to-now undeveloped areas to reflect the spreading out of the calls for service workload. This was done to compensate for the greater distance on the average that Beat Units in these areas would have to travel in responding to calls for service.

Figure 1 depicts Hypercube's assessment of the change in service levels from 1978 to 1982 if no additional units are found to compensate for these population increases.

Watch/Sector	Service Level	1978	1982
First Watch Sector 1	Probability of Saturation %	18	21
	Travel Time (Min.)	7.2	7.5
	CFS Workload per Unit	.62	.65
First Watch Sector 2	Prob. of Saturation %	10	15
	Travel Time (Min.)	8.6	9.7
	CFS Workload per Unit	.56	.63
Second Watch Sector 1	Prob. of Saturation %	5.3	6.7
	Travel Time (Min.)	9.1	9.5
	CFS Workload per Unit	.48	.51
Second Watch Sector 4	Prob. of Saturation %	4	7
	Travel Time (Min.)	11.8	13.3
	CFS Workload per Unit	.49	.54

(FIGURE 1 CONTINUED ON NEXT PAGE)

Watch/Sector	Service Level	1978	1982
Third Watch Sector 1	Probability of Saturation %	3.8	5.7
	Travel Time (Min.)	9.2	9.8
	CFS Workload per Unit	.54	.58
Third Watch Sector 4	Probability of Saturation %	4	7
	Travel Time (Min.)	11.9	13.6
	CFS Workload per Unit	.57	.63

Figure 1. Change in Service Levels 1978 - 1982, if no units added

To simply maintain 1978 service levels in 1982, the following additional units will be needed by watch, by sector, by year.

Watch/Sector	1980	1981	1982
First Watch Sector 1	1		
First Watch Sector 2	1		
Second Watch Sector 1	1		
Second Watch Sector 4	1		
Third Watch Sector 1	1		
Third Watch Sector 4	1		1

Figure 2. Additional Units Necessary to Provide A Minimum of 1978 Service Levels in 1982

Figure 3 depicts Hypercube's assessment of the change in service levels from 1978 to 1982 if the units described in Figure 2 are added to those already deployed.

SEE NEXT PAGE FOR FIGURE 3.

Watch/Sector	Service Level	1978	1982
First Watch Sector 1	Probability of Saturation %	18	13
	Travel Time (Min.)	7.2	7.1
	CFS Workload per Unit	.62	.60
First Watch Sector 2	Probability of Saturation %	10	9
	Travel Time (Min.)	8.6	9.3
	CFS Workload per Unit	.56	.58
Second Watch Sector 1	Probability of Saturation %	5.3	3
	Travel Time (Min.)	9.1	9.1
	CFS Workload per Unit	.48	.45
Second Watch Sector 4	Probability of Saturation %	4	3
	Travel Time (Min.)	11.8	12.6
	CFS Workload per Unit	.49	.49
Third Watch Sector 1	Probability of Saturation %	3.8	3.1
	Travel Time (Min.)	9.2	9.3
	CFS Workload per Unit	.54	.54
Third Watch Sector 4	Probability of Saturation %	4	2.3*
	Travel Time (Min.)	11.9	12.6
	CFS Workload per Unit	.57	.55

Figure 3. 1978-1982 Change in Workload if Additional Units Available in Figure 2 are Added

* If only one unit was added to this Sector instead of the two described in Figure 2, the outputs would have been Saturation 4.2%, Travel Time 13 minutes and Workload per Unit .59.

Hypercube estimates that approximately 5% of all dispatchable calls received by the Police Department arrive at a time when there is not a free unit available to handle them. To maintain this level of service (which currently

doesn't exist on the First Watch) the following number of units must be added by watch, by sector by year:

Watch/Sector	1980	1981	1982
First Watch Sector 1	2*		1
First Watch Sector 2	2		
Second Watch Sector 1	1		
Second Watch Sector 4		1	
Third Watch Sector 1		1	
Third Watch Sector 4	1		

Figure 4. Units Needed by 1982 to Reduce Saturation Probability to 5%

* Hypercube purports that these two additional units would only reduce saturation to 6%. However, rewriting the beat boundaries should reduce it to 5%.

Figure 5 depicts Hypercube's assessment of the change in service levels from 1978 to 1982 if the decision was made to limit the probability of saturation to 5%. The number of units fielded comes from Figure 4.

SEE NEXT PAGE FOR FIGURE 5.

Watch/Sector	Service Level	1978	1982
First Watch Sector 1	Probability of Saturation %	18	3*
	Travel Time (Min.)	7.2	6.6
	CFS Workload per Unit	.62	.50
First Watch Sector 2	Probability of Saturation %	10	5
	Travel Time (Min.)	8.6	9.2
	CFS Workload per Unit	.56	.53
Second Watch Sector 1	Probability of Saturation %	5.3	3
	Travel Time (Min.)	9.1	9.1
	CFS Workload per Unit	.48	.45
Second Watch Sector 4	Probability of Saturation %	4	3
	Travel Time (Min.)	11.8	12.6
	CFS Workload per Unit	.49	.49
Third Watch Sector 1	Probability of Saturation %	3.8	3.1
	Travel Time (Min.)	9.2	9.3
	CFS Workload per Unit	.54	.54
Third Watch Sector 4	Probability of Saturation %	4	4.2
	Travel Time (Min.)	11.9	13
	CFS Workload per Unit	.57	.59

Figure 5. Change in Service Levels if Additional Units Described in Figure 4 are Added

* If only 2 of the recommended 3 units are added to the sector, service levels will be Saturation 7%, Sector Travel Time 6.8 minutes, CFS Workload per Unit .55.

RECOMMENDATION:

In order to insure that Sacramento's faster growing areas receive a comparable level of police service to that found in the rest of the City and in order to bring First Watch service levels up to the norm of the other watches, I recommend that we commit sufficient additional manpower to Patrol to increase unit deployment by the number specified in Figure 4 and allocate them accordingly.

Watch/Sector	1980	1981	1982
First Watch Sector 1	2		1
First Watch Sector 2	2		
Second Watch Sector 1	1		
Second Watch Sector 4		1	
Third Watch Sector 1		1	
Third Watch Sector 4	1		

Figure 4. Units Needed by 1982 to Reduce Saturation Probability to 5%

* * * * * * * * *

Figures 6 through 11 provide the actual Hypercube output figures by Watch, by Sector, by year, for the different deployment strategies as described.

SECTOR	SERVICE LEVEL	1978	1979	1980	1981	1982
First Watch, Sector 1	Saturation Probability (%)	18	18	19	20	21
	Sector Travel Time (min)	7.2	7.3	7.4	7.5	7.5
	Work per Unit	.62	.62	.63	.64	.65
First Watch, Sector 1, plus 1 unit	Saturation Probability (%)	X	X	11	12	13
	Sector Travel Time (min)	X	X	6.9	7.0	7.1
	Work per Unit	X	X	.58	.59	.60
First Watch, Sector 1, plus 2 units	Saturation Probability(%)	X	X	6	6	7
	Sector Travel Time(min	X	X	6.7	6.7	6.8
	Work per Unit	X	X	.53	.54	.55
First Watch, Sector 1, plus 3 units	Saturation Probability					3
	Sector Travel Time					6.6
	Work per Unit					.50

Figure 6. Service Levels, Sector 1, First Watch

SECTOR	SERVICE LEVEL	1978	1979	1980	1981	1982
First Watch, Sector 2	Saturation Probability (%)	10	11	12	13	15
	Sector Travel Time (min)	8.6	9.3	9.4	9.5	9.7
	Work per Unit	.56	.58	.59	.61	.63
First Watch, Sector 2, Plus 1 unit	Saturation Probability (%)	X	X	6	7.5	9
	Sector Travel Time (min)	X	X	9	9.2	9.3
	Work per Unit	X	X	.54	.56	.58
First Watch. Sector 2, Plus 2 units	Saturation Probability (%)	X	X	3	4	5
	Sector Travel Time (min	X	X	8.9	9	9.2
	Work per Unit	X	X	.49	.51	.53
	Saturation Probability					
	Sector Travel Time					
	Work per Unit					

Figure 7. Service Levels, Sector 2, First Watch

SECTOR	SERVICE LEVEL	1978	1979	1980	1981	1982
Second Watch, Sector 1	Saturation Probability (%)	5.3	5.3	5.8	6.3	6.7
	Sector Travel Time (min)	9.1	9.3	9.4	9.4	9.5
	Work per Unit	.48	.48	.49	.51	.51
Second Watch, Sector 1	Saturation Probability (%)	X	X	2.5	2.7	3
	Sector Travel Time (min	X	X	9.0	9.1	9.1
	Work per Unit	X	X	.43	.44	.45
	Saturation Probability (%)					
	Sector Travel Time (min					
	Work per Unit					
	Saturation Probability					
	Sector Travel Time					
	Work per Unit					

Figure 8. Service Levels, Sector 1, Second Watch

SECTOR	SERVICE LEVEL	1978	1979	1980	1981	1982
Second Watch, Sector 4	Saturation Probability (%)	4	5	5	6	7
	Sector Travel Time (min)	11.8	12.27	12.9	13.2	13.3
	Work per Unit	.49	.49	.51	.53	.54
Second Watch, Sector 4, Plus 1 unit	Saturation Probability (%)	X	X	3	3	3
	Sector Travel Time (min)	X	X	12.3	12.5	12.6
	Work per Unit	X	X	.46	.48	.49
	Saturation Probability					
	Sector Travel Time					
	Work per Unit					
	Saturation Probability					
	Sector Travel Time					
	Work per Unit					

Figure 9. Service Levels, Sector 4, Second Watch

SECTOR	SERVICE LEVEL	1978	1979	1980	1981	1982
Third Watch, Sector 1	Saturation Probability (%)	3.8	4.1	4.6	5.1	5.7
	Sector Travel Time (min)	9.2	9.5	9.6	9.7	9.8
	Work per Unit	.54	.54	.56	.57	.58
Third Watch, Sector 1, plus 1 unit	Saturation Probability (%)	X	X	2.4	2.7	3.1
	Sector Travel Time (min)	X	X	9.1	9.2	9.3
	Work per Unit	X	X	.51	.53	.54
	Saturation Probability					
	Sector Travel Time					
	Work per Unit					
	Saturation Probability					
	Sector Travel Time					
	Work per Unit					

Figure 10.Service Levels, Sector 1, Third Watch

SECTOR	SERVICE LEVEL	1978	1979	1980	1981	1982
Third Watch, Sector 4	Saturation Probability (%)	4	4.5	5.3	6.1	7
	Sector Travel Time (min)	11.9	13	13.2	13.4	13.6
	Work per Unit	.57	.59	.6	.61	.63
Third Watch, Sector 4, plus 1 unit	Saturation Probability (%)	X	X	2.9	3.5	4.2
	Sector Travel Time (min)	X	X	12.6	12.8	13
	Work per Unit	X	X	.56	.57	.59
Third Watch, Sector 4, plus 2 units	Saturation Probability					2.3
	Sector Travel Time					12.6
	Work per Unit					.55
	Saturation Probability					
	Sector Travel Time					
	Work per Unit					

Figure 11 Service Levels, Sector 4, Third Watch

STUDY #5: HYPERCUBE ANALYSIS OF MANPOWER REDUCTION - 3RD WATCH, SECTORS 2 AND 3

If one tactical unit is removed from Sector 2 on the 3rd Watch, travel time will change from 7 to 7.2 minutes; an increase of .2 minutes or 2.8%. The probability of saturation will change from 7.5 to 12.7; an absolute increase of 5.2 or 69%.

If one tactical unit is removed from Sector 3 on the 3rd Watch, travel time will change from 11.8 to 12; an increase of .2 minutes or 1.6%. The probability of saturation will change from 5.3 to 9.3; an absolute increase of 4 or 75%.

CHAPTER 5

MANAGEMENT OF THE CALL FOR SERVICES WORKLOAD

I. INTRODUCTION

Management of the call for services workload is the second half of the Resource Allocation equation in the MPO Test Design. Broadly stated, its operational objective is:

> "To increase the efficiency of the call for service response and thereby increase the portion of patrol resources devoted to what has been traditionally called random patrol."[1]

This objective, based on workload management techniques of call screening, call stacking and call diversion, contrasts sharply with the traditional view in which "A patrol unit will respond to all calls for service as quickly as possible." More specifically, the test design challenges two traditional patrol concepts. "The first is that all calls for service will be handled by a patrol unit. However, analyses of the calls for service workloads in many departments have revealed that approximately 30% of the call for service workload represents incidents about which the police can do little or nothing. These include a variety of non-criminal complaints as well as reported crimes where there is neither a suspect(s) or evidence."[2]

The second notion is that all calls will be serviced as quickly as possible. Again, as the Test Design points out, "Calls for service . . . . . generally fall into three categories: Approximately 15 percent of the workload is of

[1] MPO Test Design, Page 5
[2] ibid, Page 2

an emergency nature such that rapid rasponse to the scene could make a difference in achieving the goals of police departments. At the other end of the priority continum is roughly 30 percent of the workload which is reasonably unresponsive to police intervention. The remaining 55 percent includes crime and service incidents where a police response is appropriate but it is not required to be immediate."[3]

It is patently clear that there are available alternatives to requiring a rapid mobile response to all calls for service. And, certainly, the advantages of these alternatives provide an opportunity of not only reducing the patrol officers workload, but equally, of increasing the amount of random patrol time that can be committed to directed activities. Nothing in the Test Design is intended to interfere with the delivery of essential police services, nor rapid response to the scene of "true" emergencies. The design does require a careful analysis of call for service workloads, and the establishment of policies for "call prioritization" which provide for:

1. Call Screening

   Call screening is actually composed of two elements. The first one relates to the establishing of a priority system for reviewing incoming requests for police service. Priority One calls, for example, would be of an emergency nature requiring immediate response. Priority Two may require a mobile response - but not immediately.

[3] ibid

Secondly, call screening refers to identifying those types of service requests that can be handled by alternative means. Simply put, it means making hard choices on what types of calls will a police officer no longer be dispatched.

2. Call Stacking

This provides for delaying the dispatch of non-emergency calls in an attempt to both "smooth out" the periods of peak demands, and to allow patrol units on directed activities not to be continually pulled off those assignments. This means that the citizen may be advised initially of a delay, or even going so far as to set appointments.

3. Call Diversion

This is simply the development of alternative systems of police response to service demands including, but not limited to:

- Reports taken over the telephone
- Mail-in and Station house reports
- Referrals to other agencies
- Mobile response by para-professional

II. CALL FOR SERVICE MANAGEMENT IN SACRAMENTO

Call for service management has been a long established practice in Sacramento. So much so that minimal changes were brought about as a result of the MPO Grant. The remainder of the Chapter, then, will describe not so much the processes of "How" Sacramento changed its call for service management (because there was very little), but rather how it operates and the results.

III. SCREENING CALLS FOR SERVICE

In policy and in practice, Sacramento employs a vigorous call screening system. The procedures are well documented and found in the Communications Sections' Orders. In practice, call screening in 1979 resulted in the diverting or referral of 67% of requests for police service.

Month	Total Calls Received	Calls Dispatched	Percent Dispatched
Jan	34,700	10,696	30.8
Feb	30,857	9,918	32.1
Mar	36,082	11,260	31.2
Apr	33,592	11,036	32.8
May	36,323	10,031	34.1
June	35,794	12,255	34.2
July	36,467	11,797	32.3
Aug	36,445	11,563	31.7
Sept	34,945	11,546	33.0
Oct	34,609	11,416	33.0
Nov	32,769	10,380	31.7
Dec	33,971	11,228	33.1
Total	416,554	133,126	33.0

Figure 1. Requests for Police Service to Calls Dispatched Comparison, by Month, 1979

Call Screening in 1979 was slightly improved over 1978, which was the first year that such statistics were maintained after the installation of counters on the telephone lines.*

	Total Calls Received	Calls Dispatched	Percent Dispatched
1978	363,370	127,180	35.0
1979	416,554	133,126	33.0

Figure 2. Requests for Police Service to Calls Dispatched Comparison, 1978-79

* The 67% rate of referrals is an admittedly inflated figure. The rate is established by comparing total dispatched against the total number of telephone calls to the Complaint Takers. Thus, if a citizen called only to ask a question or a Supervisor called to provide some information, both would be counted in the total of incoming calls to Communications.

Furthermore, once the decision to dispatch has been made, units other than Patrol units are called. So, from this 33% dispatch figure, some were assigned to Community Service Officers, Crime Scene Investigating Units, Crime Suppression Teams, Detectives, (Walking) Beat Officers, Paddy Wagon, and other departmental personnel, as well as to Patrol.

There are two written policies which define both the Call Screening procedures and the Call Prioritization System. The first one, Communications Order J-1, "Criteria for the Dispatch of Police Units", is as follows:

CRITERIA FOR THE DISPATCH OF POLICE UNITS

POLICY

It is the policy of the Communications Section to screen incoming telephone requests for Police service in order to conserve street manpower. The success of the screening process is contingent on having all personnel follow set criteria in determining when to dispatch a unit to the scene. However, due to the complex nature and vast variety of requests received for Police service, it is difficult to set forth steadfast rules as to when a unit should be sent.

The listings shown in this order are intended as guidelines in determining when to dispatch an officer. However, extenuating circumstances involved may alter the method of handling the request for service. Personnel assigned to the Complaint Unit should exercise prudent judgment in making a decision on a request for service that is not clearly defined in the criteria by determining from the caller the following information:

1. Is a crime in progress, or just occurred, that requires an officer's presence on the scene to preserve life and property, or to make an apprehension?

2. Is an officer needed to prevent a pending crime or injury?

3. Does a physical hazard exist that endangers life?

PROCEDURES

Officers are always dispatched on the following reported occurrences:

1. Alarms - ringer and silent. Officers do not respond to "trouble" alarms, or telephone recorded alarms from a private residence.
2. Arsons - dispatch a unit if suspects on scene. Notify Fire Department - report only.
3. Bomb threats
4. Burglaries in progress or just occurred
5. Car clouts in progress - any type of vehicle
6. Child neglect, child abuse
7. Deceased persons
8. Disturbances in progress
9. Drunks on city streets or in public areas
10. Drunk drivers when fixed location given. All-unit broadcast when moving.
11. Explosives found, or suspected found explosives
12. Forgeries - use of stolen credit card and suspects on scene.
13. Hazards immediate, all types
14. Holding suspect
15. Homicides, attempt homicides
16. Incomplete telephone calls for help
17. Kidnappings
18. Mental subject causing a disturbance, or presenting safety hazard to self and/or others
19. Missing juveniles under age of 12; all mentally retarded MP's; senile adult MP. (Reports taken at Report-Writing Area. Officers assigned to contact reporting party and check area.)
20. Mooching in public area
21. Officer assistance requests from allied agency

22. Prowlers
23. Purse snatches
24. Robberies, strongarms
25. Sex crimes
26. Suspicious persons or circumstances now
27. Suicides, attempt suicides
28. Thefts in progress or just occurred, suspects known, and responding officer can make contact
29. Traffic congestion or control (Send CSO if available
30. Vandalism in progress
31. Vehicle blocking driveway (Send CSO if officer not available
32. Vehicles, stolen (Send CSO if available)
33. Vehicles, recovered (Send CSO if available)
34. Vehicles, suspicious occupied
35. Welfare check on possible ill persons

Officers are dispatched on the following situations only if extenuating circumstances exist. The time of day may enter into the decision.

1. Ambulance Calls - If received as an incomplete call; if any degree of criminal act involved in the injury; if an attempt suicide; if an overdose; if an injury on City property; if death appears imminent.
2. Animal Calls - 0600 to 2200 hours, refer calls to Animal Control Center. After 2200 hours, advise complainant to call Animal Control during normal work hours. A unit will be dispatched if there appears to be imminent danger to a person or to an animal. (Refer to G.O. L-1)
3. Fire Alarms - If a structure fire; if Fire Department requests assistance; or if traffic or other hazard exists.
4. Firecracker Calls - If caller states the act is going on now and wishes to be contacted. If

caller states act is going on in area, does not wish to be contacted, radio card is made and an all-unit broadcast is transmitted.

5. Injury - Send an officer on any serious emergency injury, i.e., excessive bleeding, person choking, arm or leg caught in equipment, etc. Send a unit any time the officer can render immediate aid.

   a. Send an officer on an injury incurred as the result of a felonious crime.

   b. Send an officer on injuries incurred as the result of battery if the suspect is on the scene or if caller states injuries are serious. If suspect not on scene and injuries are slight, the caller should make a report by telephone. The above procedure applies to the volume of calls received regarding family disturbances.

   c. Officers are not dispatched on industrial injuries, UNLESS the officer can render immediate aid.

6. Hemmed-in Vehicle - Send a unit (CSO if available) if the caller is distraught and indicates there is no way of moving the vehicle without causing damage to other vehicles.

7. Illness - If a citizen suspects another person is ill and requests a unit be sent to check on the welfare, or if an officer could render immediate aid to a person with an acute illness. Dispatch an ambulance on any illness, if requested to do so.

8. Keep the Peace - Send a unit only if the caller states a disturbance is imminent. Do not send a unit to standby on any type of repossession circumstances UNLESS a disturbance is in progress.

9. Message Delivery - Use a CSO unit if available to deliver an emergency message when there is no other means of contact. DO NOT send any unit to deliver a death message. Refer caller to Coroner's Office.

10. Reckless Drivers - Send a unit if the caller states an immediate hazard exists, gives address, and requests the officer make contact. If the vehicle is not in area presenting any immediate hazard, complete a radio card and indicate that an all-unit broadcast be made. If the situation is chronic,

i.e., speeding in area during certain hours, neighbor speeds constantly, etc., refer to Report Writing area, where an "Observation Report" will be taken and directed to the Patrol Division.

11. Resuscitator Calls - Refer to criteria outlined under "Injury" and "Illness".

12. Stalled Motorist - Send a unit if the vehicle is causing a traffic hazard, or if a female is stalled during nighttime hours and is frightened.

13. Standby While Proprietor Secures Firm Prior to Closing - Send a unit if the person has been threatened with robbery recently, has been robbed recently, or if caller states suspicious person/ persons are loitering prior to closing.

14. Vehicle Accidents - Send a unit only if the collision meets the criteria as outlined in Section Order C-2 dated July 6, 1978.

Officers shall not be dispatched on the following type situations:

1. Any "cold" misdemeanor report
2. Any routine "cold" grand theft report (value of property taken and/or extenuating circumstances may alter decision to dispatch unit).
3. Abandoned vehicles - routine
4. Assist with vehicle or house lock-out.
5. Request for push bumper merely to start a citizen's vehicle which is not a traffic hazard.
6. Escort for valuables belonging to a citizen or business firm.
7. Routine transportation of citizens in police vehicles. This also applies to transportation of Police Department employees unless on official police business.

Sacramento's Prioritization System, as defined in Communications Order D-1, "Priority of Calls for Dispatch", is cited below. It should be noted that all calls for service are sorted into three priority levels. First

Priority Calls are those requiring immediate dispatch, and they account for approximately 19% of all dispatches. Second Priority Calls are to be dispatched "as soon as possible", and they account for approximately 45% of all dispatches. Third Priority Calls account for the remaining 36% of the calls for service and can be dispatched "as available manpower/criteria indicate".

PRIORITY OF CALLS FOR DISPATCH

FIRST PRIORITY CALLS - IMMEDIATE ASSIGNMENT

1. Officer requests COVER or BACKUP
2. Motor vehicle accidents (including trains or planes) with ambulance follow-up
3. Serious injury with ambulance follow-up involving a crime or other extenuating circumstances
4. Dead human body regardless of circumstances given by caller. If any question that person is still alive, dispatch card shall be coded "POSSIBLE 926 - 945 RESUS", not "POSSIBLE 926" with no life saving action taken or reflected on dispatch card.
5. Fire in inhabited structure
6. Felonies in progress or just occurred where suspects possibly on scene or in immediate area. Includes silent alarms, both robbery and burglary.

   *a. Ringer alarms are dealt with as first priority only if just set off and caller states a suspect is observed in or around premises.
7. Prowler calls where subject attempting entry NOW in an occupied dwelling. Dispatch card shall be coded "ATT 459 (Burglary) NOW", not "910 (Prowler) NOW".
8. Bomb threats, found explosives, suspected found explosives
9. Large violent gathering or major disturbance in progress
10. Any type of 415 (Disturbance) with weapon/s reported to be involved

11. 5150 (Mental) subject reported to be violent NOW
12. 941 - citizen holding a prisoner where felony or 415 (Disturbance) involved
13. Disasters, natural or man-made
14. Incomplete call for police assistance

SECOND PRIORITY CALLS - DISPATCH AS SOON AS POSSIBLE

1. Violence in progress, no weapons known to be involved. Includes all types of 415's, EXCEPT "noise only" complaints.
2. 910 (Prowler) or 927 (Suspicious Person) loitering on premises NOW
3. 941 (Citizen Holding Prisoner) - misdemeanor, no 415 (Disturbance) involved
4. 901's (Auto Accidents) - hit and run just occurred, unknown if injury, drunk driving or other violation involved, wrecked vehicles impeding normal flow of traffic, etc.
5. 5150 (Mental) with history of violence, no immediate threat NOW
6. Misdemeanor crimes just occurred, suspects on scene or just fled scene
7. Transportation requests from officers for transporting suspects from scene
8. Requests for traffic control
9. Welfare checks
10. Hazards NOW, any type
11. Missing person follow-up where extenuating circumstances involved

THIRD PRIORITY CALLS - DISPATCH AS AVAILABLE MANPOWER/ CRITERIA INDICATE

1. Most "cold" felony report calls
2. "415E" (Disturbance) noise only complaints
3. *Silent and ringer alarms, or ringer only alarms and card does not show suspect information
4. Routine "pick up property or evidence"
5. Cold 481 (Auto Accident - Hit and Run) reports where vehicle has been removed from scene of accident.
6. Other calls not categorized as Priority 1 or Priority 2.

IV. STACKING CALLS FOR SERVICE

Call stacking is the one component in Sacramento's call for service management that has been moderately impacted by MPO. First, Communications Order D-2, "Sequence of Unit Assignment", was modified to provide for assignment of units on Directed Patrol activities to Priority One calls. As shown in below-listed sequence, Directed Patrol units are tenth in the dispatch sequence.

SEQUENCE OF UNIT ASSIGNMENT

FIRST AND SECOND PRIORITY CALLS

1. Primary Unit in district with closest tactical unit for cover:
2. When available, a K-9 unit shall be dispatched on: Alarm calls, 459's in progress, 910's and 927's near occupied dwellings or closed businesses, bomb and bomb threat calls. K-9 unit shall be dispatched no matter where the unit is located in the city.
2. One officer tactical unit in the sector, with the closest adjoining district unit to cover regardless of sector.** (Note 3)
3. Primary unit in closest adjoining district, regardless of sector, with closest tactical unit to cover.
4. One officer tactical unit closest to call, from another sector, with closest available unit to cover, regardless of sector.** (Note 3)
5. Two officer tactical unit closest to call, regardless of sector.** (Note 3)
6. Primary unit closest to call on report writing.
7. X-Ray unit closest to call (Radar Unit).
8. MOTOR unit closest to call.

   DISPATCHER TRANSMITS A "CODE 12" BROADCAST. IF A UNIT DOES NOT "ANSWER UP", DISPATCHER CONTINUES THE SEQUENCE.

9. UNION unit closest to scene. (Crime Suppression)

10. Special Duty/Directed Patrol unit closest to location.

11. CSI unit closest to scene. (Crime Scene Investigation)

12. SAM unit. (Sector Sergeant)

13. LINCOLN unit. (Lieutenant)

14. TOM unit. (Traffic Sergeant)

15. IVY unit closest to scene. (Detective)

16. CR unit closest to scene. (Community Services sworn officer)

NOTE: 1. On multiple unit calls, dispatcher shall designate unit to handle report.

2. Dispatcher shall always assign a cover unit on any call where a one-officer unit is given a call involving violence now.

**3. When necessary to assign a tactical unit as the primary unit on a call, the unit will be responsible for the handling of the call and all related reports.

THIRD PRIORITY CALLS

1. CSO unit in sector if the call is on the list of assignments CSO can handle. (Community Service Officer)

2. CSO unit in immediate adjoining sector.

3. Primary unit in district.

4. Primary unit in closest adjoining district, same sector.

5. One officer tactical unit in sector.

6. Primary unit closest adjoining district, REGARDLESS OF SECTOR, after a report call has been pending for 60 minutes.

The second change to occur in call stacking was the development of a "Call Delay Indicator Board". The Delay Board is installed near the complaint telephone takers, and it is activated by the actual dispatchers who sit in a remote location. Based upon the amount of pending calls in a patrol

sector, the dispatcher activates the lights which best estimates the amount of expected delay before a patrol unit will be free to handle Third Priority calls. As citizens call in, they are advised of the anticipated delay. Communications Order D-16, "Delayed Calls", documents this procedure.

DELAYED CALLS

POLICY

It is the policy of the Communications Section to inform persons during the initial call when a delay is anticipated in police response on a third priority call. The Delay Indicator Board does provide an approximation of the delay in each sector due to workload. Most people accept a time lag on a non-priority call if given proper advice when the initial contact is made.

PROCEDURE

INITIAL ADVICE OF DELAY

Personnel assigned to the complaint unit shall advise callers to anticipate a delay on a third priority call for police service. The extent of the delay can be estimated by checking the Delay Indicator Board, with light status indicating approximate time lag as shown:

Lights off - No delay
Green - 15-30 minutes
Yellow - 30-60 minutes
Red - 60-plus minutes delay

CALL BACK PROCEDURE

After 60 minutes has elapsed and a third priority call has not been assigned, the dispatcher at the main channel position shall do the following:

1. Note on dispatch card that a call-back is to be made and some indication as to when the call will be assigned.

2. Route the card to the complaint unit.

If there are calls pending near the end of shift, it is the responsibility of the dispatcher going off shift to route

calls for call-back if there is a possibility that the delay will exceed 60 minutes during the shift change.

When the dispatch card is received at the "hot seat" position, the dispatcher assigned to that position (or one designated) shall make the call-back as shown:

1. Place the "CALL-BACK" stamp on dispatch card.
2. Call the complainant back and explain reason for delay.
3. Ask the person for a re-evaluation of need for police service on the scene.
4. Fill in stamp blanks, showing time of call-back, serial number and any pertinent information regarding re-evaluation of call.
5. Return card to dispatch.

CONTACT BY CITIZEN REGARDING DELAY

1. Place the caller on hold.
2. Send a buff dispatch card to radio showing the address where officer is to respond, nature of call, and request reason for delay.
3. When card is received back from dispatcher, advise the caller the reason for delay.
4. Return the status card to radio where it is filed with the original dispatch card. Under no circumstances will the card be discarded.

ADVISING SECTOR SERGEANT OF BACKLOG OF CALLS

The dispatcher shall advise the Sector Sergeant when there are a number of third priority calls "backed-up" in a sector, as the supervisor of that area may have suggestions for moving the calls.

V. DIVERTING CALL FOR SERVICE REQUESTS

A number of alternative systems are used in Sacramento for handling call for service requests. All of these systems are well institutionalized and they have been in operation for two years or more.

1. Communications Report Writing

The Communications Section has a long history of taking reports of crime and incidents over the telephone. However, in August of 1977, a special Report Writing Unit was formally created in Communications for this purpose. As a result, in 1979 this unit prepared 28,059 reports, or 39% of the total crime and other type reports taken by the entire Police Department.

Month	Reports by Officers	Reports by Communications	Percent Taken by Communications
Jan	5,796	2,338	40.3
Feb	3,364	2,118	39.4
Mar	3,535	2,548	42.0
Apr	3,423	2,296	40.1
May	3,411	2,324	40.5
June	3,325	2,198	39.8
July	3,399	2,228	40.7
Aug	3,339	2,249	40.2
Sept	3,276	2,394	42.2
Oct	3,541	2,436	40.8
Nov	3,553	2,412	40.4
Dec	3,863	2,448	38.8
Total	43,825	28,059	39.0

Figure 3. Reports Taken by Communications to Reports Taken by Officers Comparison - 1979

Intermediate Clerks do not take the following types of reports by telephone:

- Robberies
- Child neglect or abuse
- Sex crimes (other than indecent exposure when time lapse meets criteria shown above)

2. Mail-In Reports

Several attempts have been made to experiment with a "Mail-In" Report concept. The degree to which success has been achieved is varied.

A. Check Offense Reports

The most successful of the Mail-In Report programs centers around the reporting violations for both check issuance with non-sufficient funds (both felony and misdemeanor), and for check forgeries. In 1976, a crime specific form for check offenses was developed by the Police Department and distributed to Sacramento merchants. In 1979, of the 3,530 reported check offenses, nearly 99% were citizen completed. The following page contains a copy of the Check Offense Report, SPD 99 (Rev 4-78).

SACRAMENTO POLICE DEPARTMENT
CHECK OFFENSE REPORT
-- USE BLACK INK ONLY --

Page 1 of ____

Each check sent to the Police Department requires a separate report form and Boxes 2-6 must be completed. Be sure to attach the check and include all information your investigation has revealed.

REMEMBER TO USE BLACK INK ONLY.

Mail or Deliver Report to: Sacramento Police Department
Forgery Unit
813 6th Street
Sacramento, CA 95814

1 DO NOT WRITE IN THIS SPACE

FOR POLICE DEPARTMENT USE ONLY | ●REPORT NUMBER
●CRIME CODE SECTION NUMBER | CRIME DEFINITION
● CRIME CLASS CODE | ●LOCATION CODE
●DATE REPORTED | ●TIME REPORTED | DAY REPORTED

2 VICTIM INFORMATION - MUST BE COMPLETE

● VICTIM'S NAME (LAST, FIRST, MIDDLE) IF CRIME AGAINST PERSON
OR
● FIRM'S NAME, IF CRIME AGAINST BUSINESS
● ADDRESS OF VICTIM OR FIRM
NUMBER | STREET | DAY PHONE
CITY | STATE | ZIP CODE
● AMOUNT OF CHECK $ | ● ADDRESS WHERE CHECK ACCEPTED
● DATE CHECK ACCEPTED | ●TIME (APPROX) | DAY
● PERSON WHO ACTUALLY ACCEPTED CHECK (ACCEPTOR)
ADDRESS
NUMBER | STREET | DAY PHONE
CITY | STATE | ZIP CODE

3 CHECK ACCEPTANCE INFORMATION

	Yes	No
Did Acceptor see Suspect write or endorse check?		
Has partial restitution been accepted or agreed to?		
Can Acceptor identify Suspect?		
Can Acceptor identify check? (ID, initials, Etc.)		
Was Suspect previously known to Acceptor?		
Any agreement to hold the Check?		
Was the Check post dated?		
Were any pictures taken?		

4 SUSPECT - ENTER ALL KNOWN INFORMATION

● SUSPECT'S NAME (LAST, FIRST, MIDDLE)
ADDRESS
NUMBER | STREET | PHONE
CITY | STATE | ZIP CODE
●SEX | ●RACE | ● AGE | HEIGHT | WEIGHT | HAIR | EYES
IDENTIFICATION USED? (INCLUDE EXPIRATION DATES IF KNOWN)
VEHICLE USED? | MAKE | STYLE | LICENSE # | STATE OF LICENSE

5 CHECK INFORMATION (Check Must be Attached to this Report)

NAME IMPRINTED ON CHECK	ADDRESS IMPRINTED ON CHECK	DATE ON CHECK	NUMBER ON CHECK
CHECK PAYABLE TO (PAYEE)	CHECK SIGNED BY (MAKER)	CHECK ENDORSED BY	
BANK CHECK DRAWN ON	BRANCH CHECK DRAWN ON	ACCOUNT NUMBER	

REASON CHECK RETURNED (CHECK ONE) ☐ NSF ☐ REFER TO MAKER ☐ SIGNATURE IRREG ☐ ACCOUNT CLOSED

ADDITIONAL INFORMATION INCLUDE ADDITIONAL SUSPECT INFORMATION, CONVERSATIONS WITH SUSPECT, WHERE SUSPECT EMPLOYED, OTHER CONTACTS MADE, ETC.)

6 *I HEREBY AGREE TO IMMEDIATELY NOTIFY THE SACRAMENTO POLICE OF ANY RESTITUTION MADE BY THE SUBJECT OF THIS COMPLAINT, AND TO INDEMNIFY AND HOLD HARMLESS THE CITY OF SACRAMENTO FOR ANY LIABILITY INCURRED BECAUSE OF MY FAILURE TO SO NOTIFY THE POLICE DEPARTMENT FORGERY UNIT.*

SIGNATURE OF VICTIM OR FIRM REPRESENTATIVE ____ DATE REPORT PREPARED ____

7 DO NOT WRITE IN THIS SPACE

REPORT TAKEN BY OR REC'D BY | ●BADGE | ●DIV | REPORT REVIEWED BY | CONNECT UP NUMBERS

8 FOR RECORDS SECTION USE ONLY

WARRANT ISSUED	CLEARED BY	RECOVERY	UNFOUNDED	RECLASSIFIED
NO. ____	☐ ARREST ☐ OTHER			
DATE	DATE	DATE	DATE	DATE

SPD 99 (REV 4-78)

B. Supplementary Investigation Report (Burglaries)

A moderately successful Mail-In Report program deals with leaving copies of (Crime) Supplementary Investigation Report forms with victims of burglaries and having them list the property taken. Specific instructions for describing property and how to mail in the form are on the back of the Supplementary form. This has allowed patrol officers to "clear" from burglaries much earlier by not having to wait while detailed inventories are completed. Similarly, the officers do not have to return to the scene when additional items are discovered as missing. Although no specific data is available as to the hours saved by patrol officers, it is believed to be "substantial".

The following pages contain a copy of the Supplementary Investigation Report, both the front and back sides, SPD 105 (Rev 3-77).

1 ☐ CRIME REPORT SUPPLEMENT
2 ☐ INCIDENT REPORT SUPPLEMENT
3 ☐ MOTOR VEHICLE REPORT SUPPLEMENT
4 ☐ MEMORANDUM
5 ☐ OTHER:

SACRAMENTO POLICE DEPARTMENT

SUPPLEMENTARY INVESTIGATION REPORT

3 REPORT NUMBER

2 CRIME CODE SECTION OR TYPE OF INCIDENT | SOURCE

VICTIM OR COMPLAINANT

4 LAST NAME, FIRST, MIDDLE (FIRM NAME IF CRIME AGAINST BUSINESS) | 5 RESIDENCE PHONE | 6 BUSINESS PHONE

7 ADDRESS WHERE INCIDENT OCCURRED | 8 DATE INCIDENT REPORTED

9 NARRATIVE SECTION

ITEM #	PROPERTY DESCRIPTION	DOLLAR VALUE
1		
2		
3		
4		
5		
6		
7		
8		
9		
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11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		

10 REPORTING OFFICER | 11 BADGE | 12 DIV | 16 DATE | 18 APPROVED BY

13 ASSISTING OFFICER | 14 BADGE | 15 DIV | 17 TIME | 19 BADGE | 20 DATE | 21 TIME

SPD 105 (REV 3-77)

SUPPLEMENTARY INVESTIGATION REPORT PAGE OF

FORM COMPLETION INSTRUCTIONS

This form is provided for you to list information relating to the incident you have reported to the Sacramento Police Department.

It is only necessary for you to complete the Narrative Section on the front side of this form. All other sections will be completed by Police Department personnel. Type or print clearly using pencil or black pen. Please supply the required information according to the following instructions:

List any additional information available (such as brand or manufacturer's name, model name or number, serial number, etc.) for stolen or lost items which have already been reported missing to the Sacramento Police Department. List all other missing articles which were not included in the initial police report as follows:

- Item #: Number each item to be listed consecutively. This makes the report easier to read.
- Property Description: Use as many lines as necessary to describe the item as completely as possible. Give the name of the article. Where appropriate, describe the article as MAN'S, LADY'S, BOY'S, GIRL'S, CHILD'S, or INFANT'S. For each item listed include (when applicable) the number of articles missing, brand or manufacturer's name, model name or number, manufacturer's serial number, size, style, color, material, and condition. Show any initials, inscriptions, dates, engravings, or other marks of identification. List information regarding the purchase date and place of purchase if known. For bicycles: Indicate if the bicycle was licensed or not. If it was licensed, list the license number and include the name of the city (or county) where the bicycle was licensed.
- Dollar Value: List the estimated dollar value of the item. If the value is not known, write UNKNOWN in this column.

EXAMPLES:

NARRATIVE SECTION

ITEM #	PROPERTY DESCRIPTION	DOLLAR VALUE
1	Color portable television, Sony, 15" screen, "Trinitron" model,	
	serial #5257695, engraved Driver's License #F521350, dark brown wood case,	
	built-in antenna, 2 years old, left side of case was scratched.	375.00
2	Lady's dinner ring, size 7, silver setting with ¼ carat diamond. Shape of	
	setting is similar to the number "9".	650.00
3	Boy's bicycle, Schwinn, "Stingray" model, serial number S3217826, chrome	
	frame, black seat, handlebars wrapped with black tape, Sacramento City	
	license number 27612.	Unknown

After completing the list of missing property, enter your name and the other information requested below. Mail (or deliver) the completed form to the Sacramento Police Department, Public Counter, 813 6th Street, Sacramento, CA 95814.

LAST NAME, FIRST, MIDDLE | RESIDENCE PHONE | BUSINESS PHONE

RESIDENCE ADDRESS

NUMBER | STREET | CITY | STATE | ZIP CODE

Signature _____ Date _____

If you have any questions, phone 449-5476.

C. Expanded Mail-In Report Experiment

The least successful effort at mail-in reports occurred from August 27, 1978 through September 18, 1978, in which simplified crime report forms were mailed by Communications to the following categories of crime victims, and where there were no suspects or witnesses:

1. Bicycle Theft
2. Lost Property
3. Petty Theft (Less than $200)
4. Vandalism (Less than $100)
5. Auto Burglaries and Thefts from Autos of Less than $200
6. Reports made for insurance purposes of Less than $200 value
7. At the Communication Sergeant Direction

After the test period, the program was discontinued due to the low rate of useful returns, and due to citizen dissatisfaction.

3. Para Professionals (Community Service Officers)

The use of Para Professionals, or Community Service Officers (CSO's) to perform duties not requiring a police officer has been institutionalized since August 1971. CSO's are part-time students between 18 and 25 years of age. They must work a minimum of 20 hours per week and carry a minimum of 6 College units per semester. During the summer, they may work 40 hours per week. CSO's must complete the 16 week regular Police Academy before appointment to their position. Upon their reaching 21 years of age and completion of 60 units of College, they can be appointed to a Probationary Police Officer.

There are 18 authorized CSO positions, of which 15 are assigned to Patrol. They perform a variety of duties including:

- Stolen car reports
- Stolen vehicle recoveries that are not occupied
- Traffic control
- Tow truck standby
- Routine "cold" burglary reports (exclude safes)
- Missing person reports and searches
- Found property calls (except hazardous material)
- Casualty reports (exclude dead human bodies)
- Victim and witness transportation

- Non-violent crowd control
- Command Post recorder/communicator
- School contact program
- Equipment transportation
- Fire alarms
- Street hazards
- Abandoned vehicle calls and tows pursuant to the Vehicle Code
- Non-injury vehicle accident reports

Exact statistics are not available as to the percentage of their time expended in each of the above categories. However, the Police Department's Labor Distribution Reports indicates that CSO's worked a substantial number of hours as shown in Figure 4.

	Fiscal 77/78	Fiscal 78/79
1st Watch	1,144	6,270
2nd Watch	4,934	10,484
3rd Watch	10,261	13,695
Total	16,339	30,449

Figure 4. Hours Worked by CSO's Comparison by Fiscal Year

In terms of actual report writing, police records indicate that CSO's contributed 2,283 Crime and/or Incident Reports in 1979.

Year	Reports by CSO's
1978	3,850
1979	2,283

Figure 5. Crime and/or Incident Reports by CSO's, 1978-1979

VI. COMMUNICATIONS SECTION DESCRIPTION

The Communications Section is assigned to the Technical Services Division of the Office of Administrative Services of the Sacramento Police Department.

The office hierarchy and daily staffing levels by watch are depicted in Figure 6.

The Section's current authorized staffing level calls for:

1. Lieutenant (Section Commander)
2. Five Sergeants (Shift Supervisors)
3. Two Supervising Dispatchers
4. Seven Senior Dispatchers (Shift Supervisors under Sergeant's direction)
5. Forty-four Dispatchers
6. Twelve Intermediate Clerks (Report Writers)
7. Four Junior Typist Clerks (CETA)

The four main Communications' functions are telecommunications, report writing, complaints and radio dispatch.

The main telecommunications' function involves:

1. The sending and receiving of administrative messages.
2. The accessing of criminal and stolen property files.

The main report writing function involves the writing of non-priority criminal reports from information received from citizens on the telephone.

The main Complaint Section task involves the handling of citizens' calls for police service by either filling out a dispatch card (which they send to Radio Dispatch where a police unit is contacted to deal with the matter) or by some other means.

The main Radio Dispatch task involves using the radio to:

1. Assign police units to handle calls for service.
2. Keeping track of all field units.

The Dispatchers man Telecommunications, Complaints and the Radio Dispatch Units. The Intermediate Typist-Clerks man report writing; the Senior Dispatchers are first-line supervisors; the Sergeants are responsible for overall line supervision. A rather high turnover and absentee rate (particularly among the Dispatchers) forces all section personnel to man the "line" positions on occasion.

CHAPTER 6
CRIME ANALYSIS

I. INTRODUCTION

The major cornerstone of undertaking Directed Activities is,"---the process of analyzing crime and service-oriented problems and developing strategies to address those problems." The implicit assumption of the Test Design is that most, if not all, problem identification and analysis should be, and will be, the responsibility of a formal Crime Analysis Unit.

In Sacramento, the development of a "Crime and Problem Analysis" capability was unquestionably the most difficult and controversial component of the MPO Grant to implement. And, as we shall demonstrate, at least two major issues had to be overcome.

First of all, Sacramento already had a Crime Analysis Unit prior to MPO. However, its products were all but totally ignored, and it was largely discredited. The difficult task facing us was: How to turn that around? The process we followed to some may seem convoluted. Certainly it was not the classical systems approach; but, it worked. And, in the following pages, we will trace this very arduous change process. The sequence of major events involving this process is as follows:

1. Crime Analysis Study by MPO Staff.

   This was an objective review of the Crime Analysis

Unit and its products. The study was later expanded to identify all Crime Analysis information sources and functions being performed in other units with the Police Department.

2. Patrol Planning Committee:
   Crime Analysis Recommendations.
   Based upon the previous MPO Study, the Patrol Planning Committee prepared a series of recommendations to the Chief of Police. Among its major recommendations was the creation of a department-wide Crime Analysis Task Force.
3. Crime Analysis Task Force Report.
   This report contained a series of recommendations necessary for Crime Analysis to support MPO. Additionally, it developed criteria and new procedures for Crime Analysis to follow.
4. MPO Supervisors Training.
   Based upon the approved Crime Analysis Task Force Report, training materials were prepared to demonstrate and explain the "new" Crime Analysis Unit. Suggestions and criticisms from all classes were collected for later review. Over 100 Sergeants, Lieutenants and Captains participated.
5. MPO Advisory Committee.
   The "new" Crime Analysis Unit was evaluated against the numerous recommendations provided from the

Supervisors Training. Final Changes were made to the model's design and implemented on January 1, 1980.

The second major issue related to the very scope of "Crime and Problem Analysis" itself. Almost by definition, the Crime Analysis Unit focus is neither on repetitive offenses for which "Patterns" emerge, or on known offenders who have established histories of criminal behavior. Most, if not all, of these patterns and behavior are "short range" inasmuch as they have identifiable spans of time over which they are spread and fixed. Within this content, the Crime Analysis Unit can work effectively and provide timely and relevant information to support Directed Patrol. Where we fall short is on the identification and analysis of the more day-to-day recurring problems that are of an equal police importance, and requiring a "long range" approach to solving. Prositution, gambling, the public inebriate, youth activities, traffic congestion, narcotics activity and general crime magnitude are to name but a few.

From a realistic standpoint, Crime Analysis simply does not have the wherewithal to support service-oriented problem identification and analysis. And yet, these are enormous police problems, and that can be a proper subject of Directed Activities.

Sacramento's approach to resolving service-oriented problems emerged out of the Directed Patrol Model itself.

Section III will trace the change process from pre-MPO to now.

Section IV will describe Crime Analysis as it exists today and its results.

And finally, Section V will discuss lessons learned.

II. CRIME ANALYSIS BEFORE MPO

A. Unit History

Crime Analysis was started in the Sacramento Police Department in May 1971, for the purpose of supplying Crime Pattern and Series information to the then-forming Crime Suppression Unit teams. The Unit was staffed initially with a Police sergeant who read all the Crime Reports, logged and pin-mapped seven target crimes. As time passed, 30-day pin maps were put on display near the Patrol Muster Room for anybody who wanted to utilize the information. Crime Pattern Reports were issued to Patrol in much the same manner. There was minimal, if any, dialogue between Crime Analysis and Patrol. Even less was any requirement that Patrol respond to the reports issued by Crime Analysis.

B. Staffing and Organization

Prior to MPO, the Crime Analysis Unit was within the Office of Administrative Services. Its organizational placement was the result of a 1976 reorganization plan to develop a total Community Resources Division comprised of Preventive Services, Community Services, Youth Services and Crime Analysis. The Unit was then staffed with a Police Sergeant, a Police Officer, a part-time Community Services Officer and two part-time Student Trainees.

CONTINUED

2 OF 4

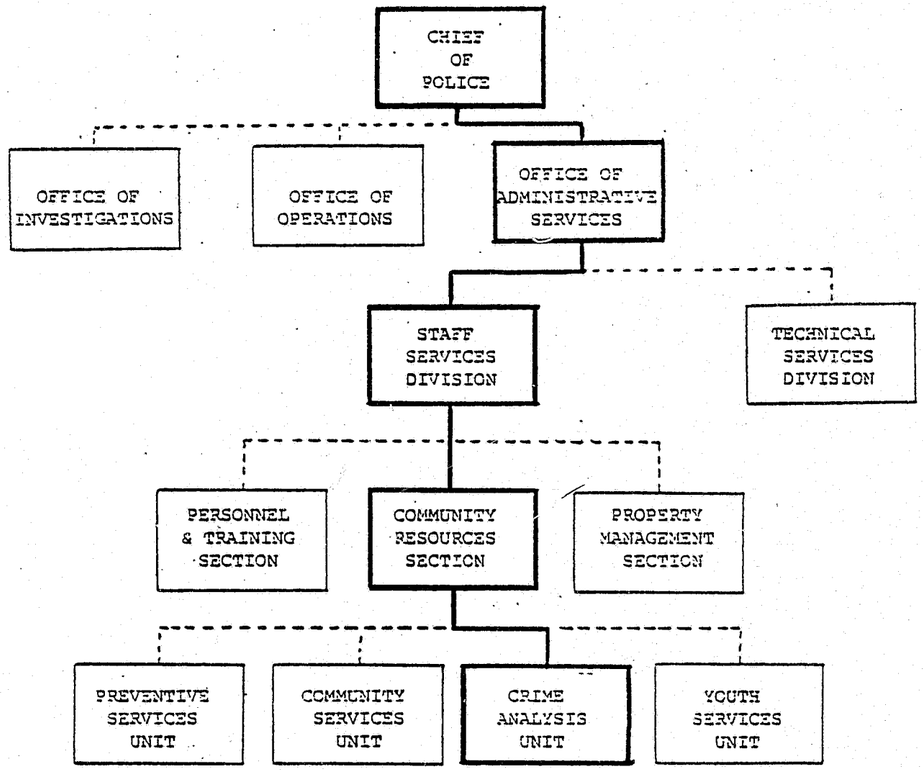


Figure 1:
Crime Analysis Organization Chart Pre-MPO

C. Duties and Responsibilities

1. The Crime Analysis Unit was responsible for monitoring seven target crimes in Sacramento (Commercial Robbery, Strongarm Robbery, Commercial Burglary, Residential Burglary, Forcible Rape, Indecent Exposure and Purse Snatch). Where Patterns were detected, a Crime Analysis Bulletin was issued to both Patrol and Detectives.
2. A secondary responsibility of the Crime Analysis Unit was the monitoring and maintenance of records relating to false alarms for commercial robbery and burglary in the City. One Student Trainee was assigned to this task and dedicated approximately 50% of his 20-hour work week to the maintenance of the alarm files. In addition, the police officer assigned to the Unit committed between 50%-70% of his time to the handling of alarm control functions, depending on the volume of false alarm activity.
3. The Unit maintained numerous 30-day pin maps near the Patrol Locker Room area for reference by officers.
4. In addition to its own set of logs, the Unit prepared a duplicate set of Sector logs which was available to Patrol officers near the Locker Room.

5. The Unit prepared numerous Crime Summary Reports, which will be described below.
6. The Unit performed numerous special studies as requested. (See Figure 2)

D. Crime Analysis Reports

A number of files, logs and reports were prepared by the Crime Analysis Unit, including:

1. The occasional preparation of Crime Analysis Bulletins, including Updates
2. Crime related Statistical Studies
3. Weekly and Monthly Crime Summary Bulletins
4. Patrol Sector Crime Log Books
5. Color Coded, 30-day Pin Maps
6. Monthly Commercial Robbery Report
7. Known Offenders File
8. Point of Entry File
9. False Alarm Reports

E. Crime Analysis Data Base

1. Sacramento Crime and Arrest Reporting System (SCARS)

SCARS performs the data capture and reporting functions for arrest, offense, and citation records submitted by the Sacramento Police Department. SCARS was designed to establish a data base of arrest and offense records for subsequent on-line use. SCARS currently serves as an indexing, record storage and retrieval system, and provides management reports as well as selective extract detail reports. The system

fulfills most Federal and State crime reporting requirements on a monthly basis. SCARS interfaces with the Arrest Report and Stolen Property Indexing sub-systems, Field Contact Reporting sub-system, and the Traffic Arrest Reporting System (see STARS). The system provides for total variable extract capability which provide broad flexibility in the selection and format of Crime Analysis M.O. information, and Offender data.

Figures 3, 4 and 5 are examples of Sacramento Police Department reports which are entered into the SCARS data base. (Only those boxes which contain a dot (•) are keypunched.)

2. Sacramento Traffic Accident Reporting System (STARS)

STARS incorporates accident, enforcement and personnel activity information along with such engineering features as street/intersection geometry and configuration, daily average travel, control status, and other relevant data. The system incorporates two separate concepts. One is the regularly scheduled production, generally monthly, of specific reports comparing accident and enforcement experience at selected intersections, street segments or traffic enforcement districts and a comparative analysis of manpower allocation and application within these areas.

Secondly, there is a variable extract capability affording flexibility in selection and format of enforcement and accident data on an as-needed basis.

NOTE: Although STARS is mentioned here as part of the Crime Analysis data base, most if not all, Traffic Analysis Reports are prepared by the Traffic Section.

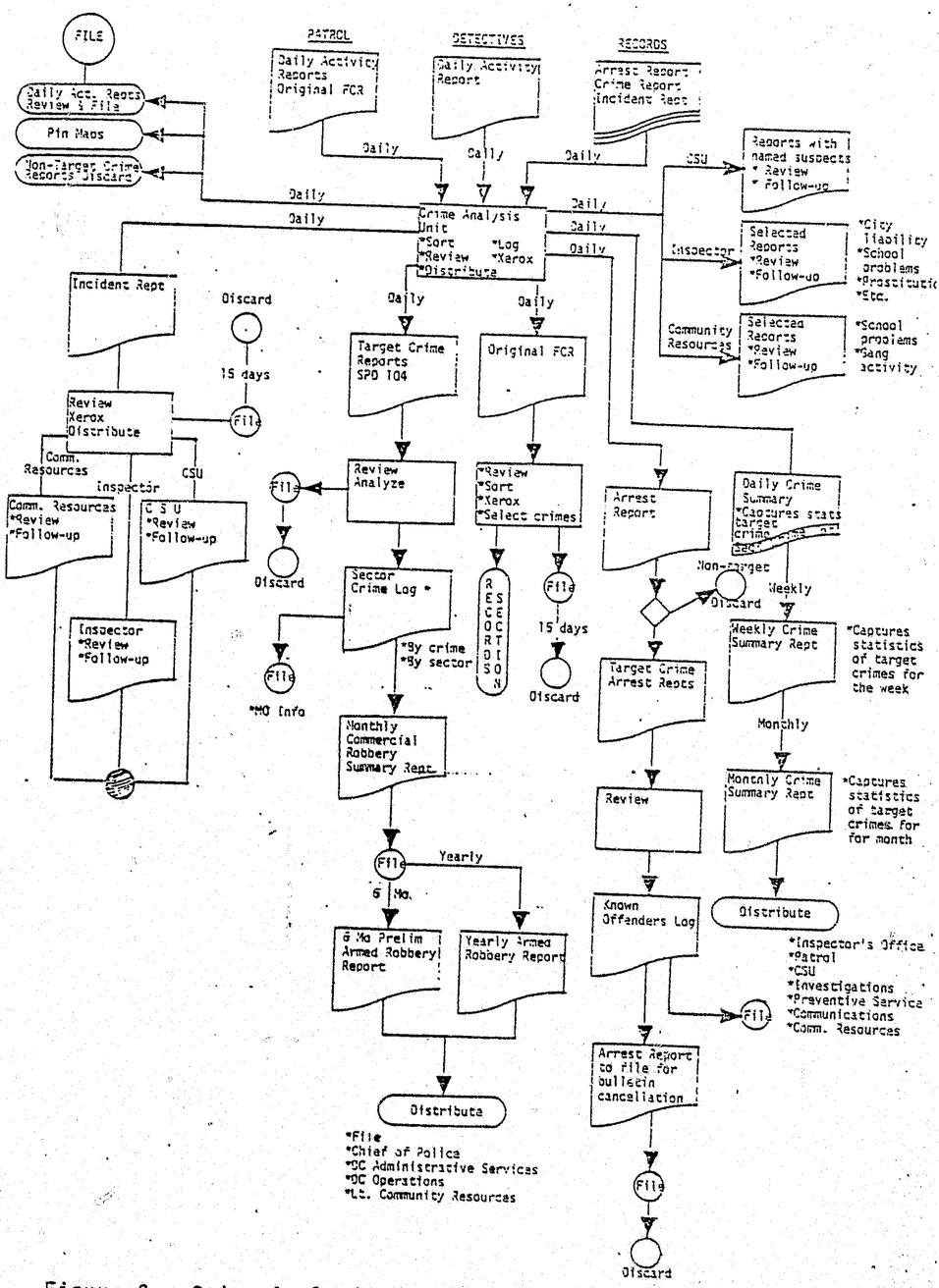


Figure 2: Crime Analysis Work Flow Chart: Pre-MPO

Figure 3

TYPE OF REPORT: 1 ☐ CRIME 2 ☐ CASUALTY 3 ☐ BOTH | 2 CSI NOTIFIED: ☐ YES ☐ NO | 3 ☐ PARTIAL RECOVERY ☐ COMPLETE RECOVERY | 4 ☐ ALL SUSPECTS ARRESTED ☐ SUSPECTS OUTSTANDING

SACRAMENTO POLICE DEPARTMENT

CRIME REPORT

✓ IF KEY REPORT | 5 REPORT NUMBER

5 CRIME CODE SECTION | SOURCE | 7 CRIME DEFINITION | 8 CRIME CLASS CODE

VICTIM

9 LAST NAME, FIRST, MIDDLE | 10 FIRM NAME IF CRIME AGAINST BUSINESS

11 RESIDENCE ADDRESS (NUMBER, STREET, CITY, STATE, ZIP CODE) | 12 RESIDENCE PHONE

13 BUSINESS ADDRESS (IF STUDENT, NAME OF SCHOOL) (NUMBER, STREET, CITY, STATE, ZIP CODE) | 14 BUSINESS PHONE

15 SEX | 16 DESC | 17 AGE | 19 IF VICTIM WAS INJURED, INDICATE CASUALTY DISPOSITION: CHECK (✓) APPROPRIATE BOX
A ☐ TAKEN TO SMC B ☐ TAKEN HOME C ☐ CORONER D ☐ REFUSED AID E ☐ OTHER: (SPECIFY)

18 DATE OF BIRTH | 20 SPECIFY EXTENT OF INJURY | 21 TRANSPORTING UNIT OR AGENCY

PERSONS

☐ CHECK (✓) IF REPORTING PERSON IS SAME AS VICTIM AND DO NOT COMPLETE THIS SECTION.

22 LAST NAME, FIRST, MIDDLE | 23 SEX | 24 DESC | 25 AGE | 26 DATE OF BIRTH | 27 RESIDENCE PHONE | 28 BUSINESS PHONE

29 RESIDENCE ADDRESS | 30 BUSINESS ADDRESS

31 LOCATION OF OCCURRENCE (INCLUDE CROSS STREETS) | 32 LOCATION CODE

33 DATE OCCURRED | 34 TIME OCCURRED | 35 DAY OCCURRED | 36 DATE REPORTED | 37 TIME REPORTED | 38 DAY REPORTED

39 ROBBERY/ASSAULTS ONLY: MEANS OF ATTACK (CHECK (✓) APPROPRIATE BOX)
A ☐ FIREARM B ☐ KNIFE C ☐ PHYSICAL/NO WEAPON D ☐ OTHER WEAPON: (SPECIFY)

WHERE OCCURRED

40 CHECK (✓) WHERE APPLICABLE

RESIDENCE
A ☐ HOUSE
B ☐ APARTMENT/CONDOMINIUM
C ☐ MOTEL/HOTEL ROOM
D ☐ DUPLEX/FOURPLEX
E ☐ MOBILE HOME
F ☐ GARAGE ATTACHED
G ☐ GARAGE DETACHED
H ☐ OTHER:

BUSINESS
A ☐ BANK/SAVINGS & LOAN/CREDIT UNION
B ☐ OFFICE BUILDING
C ☐ MEDICAL OFFICE
D ☐ DRUG STORE
E ☐ BAR
F ☐ LIQUOR STORE
G ☐ RESTAURANT/FAST FOODS
H ☐ SUPERMARKET
I ☐ CONVENIENCE STORE
J ☐ DEPARTMENT STORE
K ☐ CLOTHING STORE
L ☐ JEWELRY STORE
M ☐ SPORTING GOODS/GUNS
N ☐ TV/RADIO/APPLIANCES
O ☐ CAR, MOTORCYCLE OR BICYCLE SALES
P ☐ PAWNSHOP/SECONDHAND
Q ☐ LAUNDROMAT/CLEANERS
R ☐ COIN OPERATED MACHINES/PHONE BOOTH
S ☐ THEATER/DRIVE-IN
T ☐ GAS STATION/GARAGE
U ☐ MOTEL/HOTEL
V ☐ WAREHOUSE
W ☐ MANUFACTURING FIRM
X ☐ CONSTRUCTION SITE
Y ☐ FENCED STORAGE
Z ☐ BOX CAR
1 ☐ LONGHAUL TRAILER
2 ☐ OTHER:

PUBLIC PREMISES
A ☐ STREET/HIGHWAY/ALLEY
B ☐ SCHOOL
C ☐ PARK/PLAYGROUND
D ☐ PARKING LOT
E ☐ PUBLIC BUILDING
F ☐ CHURCH
G ☐ HOSPITAL
H ☐ DOWNTOWN MALL
I ☐ OTHER:

VEHICLE – IF CRIME AGAINST VICTIM'S VEHICLE OR INCIDENT OCCURRED IN A VEHICLE, COMPLETE THE FOLLOWING BOXES:

41 A ☐ AUTO C ☐ MOTORCYCLE B ☐ TRUCK D ☐ OTHER | 42 MAKE | 43 MODEL | 44 YEAR | 45 LICENSE NO. | 46 STATE | 47 YEAR | 48 VEHICLE COLOR(S)

PREMISES ENTERED

CHECK (✓) WHERE APPLICABLE

49 POINT OF ENTRY
WINDOW: A ☐ NONMOVABLE B ☐ SLIDING C ☐ CRANK TYPE D ☐ DOUBLE HUNG E ☐ LOUVERED OR WIND-WING
DOOR: F ☐ SINGLE SWING G ☐ DOUBLE SWING H ☐ SLIDING I ☐ OVERHEAD GARAGE J ☐ OTHER:
OTHER: K ☐ FLOOR L ☐ ROOF M ☐ WALL N ☐ ALREADY ON PREMISES O ☐ UNKNOWN

50 LOCATION OF ENTRY
A ☐ FRONT B ☐ REAR C ☐ SIDE D ☐ OTHER

51 METHOD OF ENTRY
A ☐ UNLOCKED/OPEN B ☐ PRIED C ☐ BROKE GLASS D ☐ CHANNEL LOCKS E ☐ PASS KEY/SLIPLOCK F ☐ BODY FORCE G ☐ CUT PADLOCK H ☐ REMOVED I ☐ EXPLOSIVE J ☐ VEHICLE FORCE K ☐ UNKNOWN L ☐ OTHER:

52 ALARMS
A ☐ NONE B ☐ RINGER C ☐ SILENT D ☐ SILENT/RINGER E ☐ NOT SET F ☐ BYPASSED G ☐ DISABLED

PROPERTY

A 53 CURRENCY/NOTES	B 54 JEWELRY/METALS	C 55 CLOTHING/FURS	D 56 OFFICE EQUIPMENT	E 57 TV/RADIO ETC.	F 58 FIREARMS	G 59 HOUSEHOLD GOODS	H 60 CONSUMABLE GOODS	I 61 LIVESTOCK	J 62 MISC.
STOLEN $	STOLEN $	STOLEN $	STOLEN $	STOLEN $	STOLEN $	STOLEN $	STOLEN $	STOLEN $	STOLEN $
RECOVERED $	RECOVERED $	RECOVERED $	RECOVERED $	RECOVERED $	RECOVERED $	RECOVERED $	RECOVERED $	RECOVERED $	RECOVERED $

63 ACTIONS TAKEN WHEN INCIDENT REPORTED ✓
1 ☐ CLEARED BY ARREST 2 ☐ CLEARED BY CITATION 3 ☐ MEDICAL RELEASE (BACK OF P.3) 4 ☐ VEHICLE STORED/IMPOUNDED 5 ☐ EVIDENCE BOOKED-PROPERTY RECORD NO. 6 ☐ FIELD EVIDENCE RELEASE (BACK OF P.3)

64 IF INCLUDED IN REPORT ✓
1 ☐ SUSPECT(S) 2 ☐ WITNESS(ES) 3 ☐ ADDITIONAL VICTIM(S) 4 ☐ SUSPECT VEHICLE(S) 5 ☐ PROPERTY DESCRIPTION(S) 6 ☐ PHYSICAL EVIDENCE 7 ☐ VICTIM STATEMENT(S) 8 ☐ WITNESS STATEMENT(S) 9 ☐ SUSPECT STATEMENT(S) 10 ☐ OBSERVATIONS

65 REPORT PREPARED BY | 66 BADGE | 67 DIV | 71 APPROVED BY

68 ASSISTING OFFICER | 69 BADGE | 70 DIV | 72 BADGE | 73 DATE | 74 TIME

FOR RECORDS DIVISION USE ONLY

75 CLEARED BY ARREST OTHER DATE | 76 RECOVERY DATE | 77 UNFOUNDED DATE | 78 RECLASSIFICATION DATE | 79 CONNECT-UP NUMBERS

SPD 100 (REV 9-77)

CRIME REPORT PAGE 1 OF

Figure 4

1 ☐ CRIME REPORT SUPPLEMENT ☐ MOTOR VEHICLE REPORT SUPPLEMENT | **SACRAMENTO POLICE DEPARTMENT** ADDITIONAL PERSONS / SUSPECT VEHICLE | 3 REPORT NUMBER

2 CRIME CODE SECTION OR TYPE OF INCIDENT | SOURCE

VICTIM OR COMPLAINANT

4 LAST NAME, FIRST MIDDLE (FIRM NAME IF CRIME AGAINST BUSINESS) | 5 RESIDENCE PHONE | 6 BUSINESS PHONE

7 ADDRESS WHERE INCIDENT OCCURRED | 8 DATE INCIDENT REPORTED

SPECIAL INSTRUCTIONS: If it is indicated that the person listed below was BOOKED or CITED, a Clear-Up Report (SPD 102) should NOT be filed.

ADDITIONAL PERSONS

9 ☐ SUSPECT ONLY
ARRESTED ☐ BOOKED ☐ CITED
WITNESS ☐
ADDITIONAL VICTIM ☐ INJURED ☐ NON-INJURED

10 LAST NAME, FIRST, MIDDLE | 11 ARREST REPORT/CITATION # | 12 CHARGES

13 RESIDENCE ADDRESS (NUMBER, STREET, CITY, STATE, ZIP CODE) | 14 RESIDENCE PHONE

15 BUSINESS ADDRESS (IF STUDENT, NAME OF SCHOOL) (NUMBER, STREET, CITY, STATE, ZIP CODE) | 16 BUSINESS PHONE

17 SEX | 18 DESC | 19 AGE | 20 DATE OF BIRTH | 21 HEIGHT | 22 WEIGHT | 23 BUILD | 24 EYES | 25 HAIR COLOR/STYLE

26 WEAPON DESCRIBE: A ☐ REVOLVER B ☐ AUTOMATIC C ☐ RIFLE D ☐ SHOTGUN E ☐ KNIFE F ☐ OTHER

27 OTHER PHYSICAL DESCRIPTION (INCLUDE CLOTHING, FACIAL FEATURES, ETC.) / CASUALTY INFORMATION

ADDITIONAL PERSONS / SUSPECT VEHICLE

9 ☐ SUSPECT ONLY
ARRESTED ☐ BOOKED ☐ CITED
WITNESS ☐
ADDITIONAL VICTIM ☐ INJURED ☐ NON-INJURED

10 LAST NAME, FIRST, MIDDLE | 11 ARREST REPORT/CITATION # | 12 CHARGES

13 RESIDENCE ADDRESS (NUMBER, STREET, CITY, STATE, ZIP CODE) | 14 RESIDENCE PHONE

15 BUSINESS ADDRESS (IF STUDENT, NAME OF SCHOOL) (NUMBER, STREET, CITY, STATE, ZIP CODE) | 16 BUSINESS PHONE

17 SEX | 18 DESC | 19 AGE | 20 DATE OF BIRTH | 21 HEIGHT | 22 WEIGHT | 23 BUILD | 24 EYES | 25 HAIR COLOR/STYLE

26 WEAPON DESCRIBE: A ☐ REVOLVER B ☐ AUTOMATIC C ☐ RIFLE D ☐ SHOTGUN E ☐ KNIFE F ☐ OTHER

27 OTHER PHYSICAL DESCRIPTION (INCLUDE CLOTHING, FACIAL FEATURES, ETC.) / CASUALTY INFORMATION

ADDITIONAL PERSONS / SUSPECT VEHICLE

9 ☐ SUSPECT ONLY
ARRESTED ☐ BOOKED ☐ CITED
WITNESS ☐
ADDITIONAL VICTIM ☐ INJURED ☐ NON-INJURED

10 LAST NAME, FIRST, MIDDLE | 11 ARREST REPORT/CITATION # | 12 CHARGES

13 RESIDENCE ADDRESS (NUMBER, STREET, CITY, STATE, ZIP CODE) | 14 RESIDENCE PHONE

15 BUSINESS ADDRESS (IF STUDENT, NAME OF SCHOOL) (NUMBER, STREET, CITY, STATE, ZIP CODE) | 16 BUSINESS PHONE

17 SEX | 18 DESC | 19 AGE | 20 DATE OF BIRTH | 21 HEIGHT | 22 WEIGHT | 23 BUILD | 24 EYES | 25 HAIR COLOR/STYLE

26 WEAPON DESCRIBE: A ☐ REVOLVER B ☐ AUTOMATIC C ☐ RIFLE D ☐ SHOTGUN E ☐ KNIFE F ☐ OTHER

27 OTHER PHYSICAL DESCRIPTION (INCLUDE CLOTHING, FACIAL FEATURES, ETC.) / CASUALTY INFORMATION

SUSPECT VEHICLE

28 ✓ ONE ONLY
A ☐ AUTO B ☐ TRUCK C ☐ MOTORCYCLE D ☐ OTHER:

29 MAKE | 30 MODEL | 31 YEAR | 32 BODY STYLE | 33 VEHICLE COLOR(S)

34 LICENSE NUMBER | 35 STATE | 36 YEAR | 38 DETAILS

37 LICENSE COLOR(S) (BACKGROUND / NUMBERS)

39 CHECK (✓) WHERE APPLICABLE

INTERIOR: ☐ Bucket Seats ☐ Bench Seats ☐ Custom ☐ Torn ☐ Unique Item ☐ Sticker Decal ☐ Stereo Tape ☐ Floor Shift ☐ Equip. Added or Missing*
EXTERIOR: ☐ Sticker/Decal ☐ Rust/Primer ☐ Vinyl Top ☐ Custom Paint ☐ Flocked ☐ Painted Inscription
MODIFIED: ☐ Front ☐ Rear ☐ Lowered ☐ Raised ☐ Low Rider
BODY DAMAGE: ☐ Left ☐ Right ☐ Front ☐ Rear ☐ Top
GENERAL CONDITION: ☐ Poor ☐ Fair ☐ Good ☐ Excellent
WHEELS: ☐ Mags ☐ Chrome Rims ☐ Unique Size
WINDOWS: ☐ Damage R/L Side ☐ Damage Front/Rear ☐ Tinted ☐ Covered ☐ Decal Plaque ☐ Curtains
LIGHTS OUT: ☐ R Front ☐ L Front ☐ R Rear ☐ L Rear ☐ Front ☐ Rear

*List in Details (Box 38)

40 REPORT PREPARED BY | 41 BADGE | 42 DIV | 46 DATE | 48 APPROVED BY

43 ASSISTING OFFICER | 44 BADGE | 45 DIV | 47 TIME | 49 BADGE | 50 DATE | 51 TIME

SPD 134 (9-77)

ADDITIONAL PERSONS / SUSPECT VEHICLE PAGE ____ OF ____

Figure 5

ARREST REPORT

SACRAMENTO COUNTY JAIL

[ ] CUSTODY [ ] SSD CITATION [ ] SSD CLEAR-UP

1 ARRESTING AGENCY [ ] SSD [ ] CHP [ ] SPD [ ] OTHER:

2 ARREST REPORT NO.

3 [ ] JUVENILE [ ] ADULT

4 [ ] ADDITIONAL BOOKING SUBJECT IN CUSTODY [ ] BODILESS BOOKING

5 ARRESTING AGENCY F/P NO.

6 CII NUMBER

7 FBI NUMBER

8 REGISTRY NUMBER

9 BAIL

10 COURT

11 1ST CHARGE | SOURCE | 12 TYPE CHARGE [ ] FEL [ ] MISD

13 CRIME DEFINITION | 14 CLASS CODE

15 WARRANT BOOKING
1 [ ] ARRESTING AGENCY-BENCH WARRANT NO
2 [ ] ARRESTING AGENCY 40508 VC
3 [ ] ARRESTING AGENCY-PARKING ORIGINAL CITATION CHARGES
4 [ ] ARRESTING AGENCY ALL OTHER
5 [ ] OUTSIDE AGENCY WARRANT NAME OF AGENCY

16 OTHER BOOKING ENROUTE (NO WARRANT)
6 [ ] ARRESTING AGENCY A B
7 [ ] FEDERAL ARREST 8 [ ] TO

17 2ND CHARGE | SOURCE | 18 TYPE CHARGE [ ] FEL [ ] MISD

19 CRIME DEFINITION | 20 CLASS CODE

21 WARRANT BOOKING
1 [ ] ARRESTING AGENCY-BENCH WARRANT NO
2 [ ] ARRESTING AGENCY 40508 VC
3 [ ] ARRESTING AGENCY-PARKING ORIGINAL CITATION CHARGES
4 [ ] ARRESTING AGENCY-ALL OTHER
5 [ ] OUTSIDE AGENCY WARRANT NAME OF AGENCY

22 OTHER BOOKING ENROUTE (NO WARRANT)
6 [ ] ARRESTING AGENCY A B
7 [ ] FEDERAL ARREST 8 [ ] TO

23 WARRANT CHECK RUN [ ] SSD [ ] SPD [ ] CLETS

24 LOCATION OF CRIME

25 CRIME REPORT NO.

26 VICTIM/COMPLAINANT'S NAME

27 DATE/TIME OF CRIME

28 VICTIM/COMPLAINANT'S ADDRESS - STREET | 29 SEX | 30 RACE | 31 AGE

CITY | STATE | 32 HOME PHONE

33 LOCATION OF ARREST (INCLUDE CROSS STREETS)

34 LOCATION CODE | 35 DATE ARRESTED | 36 TIME | 37 DAY

38 ARRESTED BY [ ] OFFICER [ ] PRIVATE PERSON | 39 DATE BOOKED | 40 TIME | 41 DAY

42 ARRESTEE'S NAME (LAST, FIRST, MIDDLE) | 43 NICKNAME | 44 ALIAS (LAST, FIRST, MIDDLE)

45 ARRESTEE'S ADDRESS (NUMBER STREET) | 46 CITY | 47 STATE | 48 ZIP CODE | 49 HOME PHONE

50 SEX | 51 RACE | 52 AGE | 53 DATE OF BIRTH | 54 PLACE OF BIRTH | 55 HEIGHT | 56 WEIGHT | 57 HAIR | 58 EYES | 59 MARKS SCARS ETC

60 DRIVER'S LICENSE NO | 61 STATE | 62 SOCIAL SECURITY NO | 63 OCCUPATION NAME OF EMPLOYER | 64 BUSINESS PHONE

65 ARREST RESULTING FROM TRAFFIC ACCIDENT [ ] YES [ ] NO

66 ARRESTEE SOBRIETY [ ] SOBER [ ] DRINKING [ ] UNDER INFLUENCE [ ] DRUNK [ ] NARCOTIC

67 SOBRIETY TEST [ ] NO [ ] REFUSED

68 SOBRIETY TEST GIVEN [ ] BLOOD [ ] URINE [ ] BREATH

69 NAME OF PARENT/GUARDIAN

70 ADDRESS | 71 PHONE

72 NOTIFIED? [ ] YES [ ] NO | 73 HOW NOTIFIED? | 74 BY WHOM?

75 SIGNATURE OF DEPUTY PROBATION OFFICER ACCEPTING CUSTODY
X

76
01 [ ] UNFOUNDED
02 [ ] ARREST
03 [ ] EXCEPTIONAL
11 [ ] IN CUSTODY
12 [ ] PROBATION
13 [ ] COUNSEL/RELEASE
14 [ ] CANCEL BY PARENT

VEHICLE: 77 LICENSE NO | 78 STATE | 79 MAKE | 80 YEAR | 81 MODEL | 82 BODY STYLE | 83 COLOR | 84 VEHICLE DISPOSITION [ ] STORED [ ] IMPOUNDED LOCATION

FINGERPRINT

85 MISDEMEANOR ARRESTS INDICATE REASON FOR NON-RELEASE BY CITATION PURSUANT TO 853.6 (J) P.C.
1 [ ] INTOXICATION-DANGER TO SELF OR OTHERS
2 [ ] MEDICAL AID-UNABLE TO CARE FOR OWN SAFETY
3 [ ] ARREST FOR ONE OR MORE CRIMES UNDER 40302 VC
4 [ ] OUTSTANDING WARRANT(S)
5 [ ] UNSATISFACTORY IDENTIFICATION
6 [ ] RELEASE WOULD JEOPARDIZE PROSECUTION
7 [ ] LIKELIHOOD CRIME WILL CONTINUE OR SAFETY OF PERSONS OR PROPERTY WOULD BE ENDANGERED
8 [ ] DEMANDS TO SEE MAGISTRATE OR REFUSES TO SIGN CITATION
9 [ ] OTHER REASON(S)

86 SYNOPSIS OF CORPUS DELICTI FOR ADULT ARREST (FULL DETAILS REQUIRED FOR ADULT WITH NO CRIME REPORT OR JUVENILE CUSTODY) ALSO INCLUDE ALL ADDITIONAL CHARGES FOR WARRANT SERVED OR HELD IN ABEYANCE. LIST NUMBER, COURT, CHARGE, DATE ISSUED, JUDGE AND AMOUNT OF BAIL

87 REPORTING OFFICER | 88 BADGE | 89 DIV | 90 SHIFT 1 2 3 | 91 VACATION DATES TO

92 ASSISTING OFFICER | 93 BADGE | 94 DIV | 95 SHIFT 1 2 3 | 96 VACATION DATES TO

7401 FORM 015 1/79

SSD ADULT 1 RECORDS 2 D.A. DETAIL/OTHER AGEN 3 FD SECTION | JUVENILE 1 RECORDS 2 SECURITY 3 PROBATION | SPD ADULT 1 COUNTY JAIL 2 PUBLIC (COUNTER) 3 OFFICER COPY | JUVENILE 1 IDENTIFICATION 2 JUVENILE HALL 3 OFFICER COPY

PAGE 1 OF ____

III. CRIME ANALYSIS: THE CHANGE PROCESS

A. MPO Study

During the 6 month planning phase for the MPO Project, a detailed study was undertaken of the Crime Analysis Unit in Sacramento. It quickly became apparent that the Crime Analysis function was widely decentralized. That is, bits and pieces were being performed in numerous units throughout the Police Department, none of which were coordinating or communicating between each other. The Crime Analysis study was later expanded to identify all sources of Crime Analysis information throughout the Department, as well as what units were performing what Crime Analysis functions. The completed study was submitted to a sub-committee of the Patrol Planning Committee for review. Both the positive and negative aspects of the functions were summarized as follows:

Crime Analysis Unit

The Crime Analysis Unit has developed various methods of documenting crime information from various police reports, particularly the Police Department Crime Report. There are certain tasks accomplished meant to offer the patrol officer information helpful to his street responsibilities and duties.

1. The Crime Analysis Bulletin is by far the most useful document presented to Patrol, however, it is not currently structured in a format acceptable to the Patrol officer or team sergeant. The communications

function of the Bulletin breaks down after distribution in most cases.

When discussing the inadequacies of the Bulletin, patrol officers and sergeants were vague as to what format was desirable. One item did stand out, in terms of format, and it dealt with a desire to have all common denominators of the series documented instead of making the information available on the report. For instance, instead of listing the occurrence information as it is currently listed, a preferred method would be to list most probable location, day, and time that the pattern will be continued. All sworn officers contacted indicated they had not offered the Crime Analysis Unit any feedback.

2. The Crime Analysis Update Bulletin serves a functional purpose of updating the original Crime Analysis Bulletin and it is relevant. However, it suffers from the same problems listed above.
3. The pinning of the maps in the Patrol Reference Station is a proper visual aid for patrol officers who wish to maintain a certain degree of awareness of crime in their district. The pinning is timely and locations of crime occurrences are pinned within a 24-hour period after being reported.
4. The maintenance of the Sector Crime Logs in the Patrol Reference Station affords the patrol officer an opportunity to review the target crimes perpetrated in his sector and district. However, practically

speaking, they are not being used.

5. The Weekly Crime Pattern Report offers the reader an opportunity to monitor the status of target Crime Patterns and other interesting data regarding arrests and crime in Sacramento.
6. The Known Offenders File is a reference point that can be useful in identifying those possibly responsible for current crime patterns. It could be a valuable source of information to an officer concerned about the criminal element in his sector or beat. However, it is not being used by the patrol officer. Currently, the Selective Enforcement Section is the only unit in the Department utilizing the file. Their use is slight. For the most part, there is no universal knowledge of its availability and utility.
7. The review of the Crime Reports, the Incident Reports, the Arrest Reports, the Field Contact Reports and Daily Activity Reports is necessary in order for the Crime Analysis Unit to prepare any documents and perform any crime analysis. However, the unit currently reviews, sorts and sometimes duplicates reports for Crime Suppression Unit, Community Resources and the office of the Inspector.
8. The annual Armed Robbery Report is a valuable report describing the armed robbery situation in the City of Sacramento. It is a logical approach to forecasting crime occurrence and other crime variables. It offers a usable profile of armed robberies in Sacramento.

However, its distribution has been limited to high-ranking administrators and not used in any manner to facilitate the street operation. As indicated by the Crime Analysis Unit commander, the document would be a valuable aid if processed in a more timely fashion and distributed further down the line of command. At this time, it is not being used at the operational level.

9. Generally speaking, the patrol officer does not understand the relationship between the Crime Analysis Unit and the Patrol Division. The value of the Crime Analysis Unit output documents has not been adequately reinforced to the patrol officers. The Unit commander is aware of the lack of enthusiastic use of the output documents and is planning some changes.

Investigations

The Detective Division has developed many informal modes of crime information. Due to the nature of investigation, many resources have been discovered and utilized that are not commonly used by the patrol officer. As a result, many processes have been developed within the division to facilitate an investigation and identification of criminals. Some have been formalized.

1. The Control Desk serves as a central location for information for the Detective Division. This has also served as an information base for patrol officers because of its central location.

2. The use of the Operational Outline Plan is a positive process of informing the other departmental units of a pending or impending tactical situation planned by the Detectives.
3. The various sections and units of the Detective Division contributes to the compilation of the Criminal Intelligence Report. This report is a useful communications vehicle between sub-units of the Division. However,
4. the Detective Division lacks a systematic method of communicating with the Patrol Division on a daily basis in terms of major crime information and street crime follow-up information. For the most part, many informal processes are used by a majority of the detectives and patrol officers (particularly Crime Suppression Units).
5. The Narcotics Section is privy to much information that could be useful to the patrol officer. Due to the sensitive nature of the work, Narcotics is hesitant to share information with patrol officers. However, narcotic (known offenders) files are useful and, for the most part, current.
6. The file on probationees and parolees is a profitable source of information.
7. In terms of coordination of efforts, there are some concerns, i.e., the method of distributing caseloads are not based on common M.O. or Crime Pattern, with the exception of forgery and auto theft. Thus, the distribution of workload has no relationship with the

current method of crime analysis in the Department.

8. The preparation of the Arrest and Information Bulletins are a useful tool for detectives and patrol officers. However, they are not prepared and distributed in a timely manner and lack complete information available.

9. The Mug Room has a wealth of resources and is currently maintained by one officer. The officer in charge of the Mug Room has indicated that its use should be monitored more closely as personnel using it will take photos and not replace or return them. For the most part, the patrol officer has no knowledge of its availability and utility. Moreover, the Mug Room and other resources in the Detective Division are not available to patrol on a 24-hour basis.

Traffic Section

The Traffic Section has valuable traffic information captured in the Sacramento Traffic Accident Reporting System (STARS). Currently, some of the computerized information is being used for manpower allocation and to prepare the monthly statistical report which serves as an administrative report reviewing the traffic situations in Sacramento and the situation in the Traffic Section. The computerized information can be useful to the Patrol Division in terms of developing specific strategies to combat traffic problems.

1. STARS provides a variety of valuable monthly reports, including:
   - High Accident Locations and Collision Factors
   - Enforcement Data
   - Individual and Team Productivity
   - Comparisons and Correlations of Accidents to Enforcement by Location, Time and Day.
2. STARS reports are sorted according to Traffic Districts, but not to Patrol Districts or Patrol Sectors. Thus, the majority of information is not transmitted to, or shared with, Patrol.

Warrants and Transportation Unit

The Warrants and Transportation Unit maintains control of all warrants sent to the Sacramento Police Department. Systems have been developed to monitor the status of warrants in the Department warrant system. Incoming warrants are researched by a warrant clerk assigned to the unit from the Records Section. Patrol officers have direct communications with the Warrant Unit via the police radio and the telephone.

The position of Warrant Liaison Officer has been established to process specific warrants and deliver a comprehensive warrant package to patrol officers. The package contains a copy of the warrant, a criminal history profile, a photo, a due diligence form, and any other information of use to the officer to apprehend the subject and offer officer safety.

1. The immediate preparation and filing of a warrant jacket allows for up-to-date information on warrants. However, once warrants are received by the Warrant Unit, there is a delay of up to two weeks before the jacket research is complete. Although the warrant is on file, many times the warrant is not "worked" because it sits in a suspense file pending follow-up research. The end result is a "hot" warrant is not "hot" by the time the warrant information is distributed to Patrol.
2. A current complaint by field officers on the First Watch (midnight to eight) is that they do not receive warrant packages or warrant information.
3. The mailing of traffic notices and methods of avoiding an arrest on the warrant by offering bail; OR a promise to appear alternatives has allowed for the capturing of time to handle administrative functions in the Warrant Unit and attack the more serious warrant wants.
4. The statistical reports from the Warrant and Transportation Unit are a useful administrative gauge but is not useful to the street operations.
5. The Warrant Unit's use of the bulletin board in the Patrol Reference Station for posting hot wants from outside agencies, is useful to the patrol officer.
6. The Warrant Liaison Officer is one of the most useful and innovative recent changes made. The process of monitoring warrants and distributing warrants by

geographic areas makes the process meaningful to the patrol officer.

7. The Due Diligence Report is an administrative and legal tool. It protects the Department by documenting attempts to serve the warrant and serves as a productivity gauge for an officer attempting to serve a warrant and the team sergeant.
8. The priority system developed for processing the warrants by the Warrant Liaison Officer has focused on the more serious warrants and again serves a more meaningful purpose to the patrol officer. The use of the Warrant Records Logs by the Warrant Unit offers a quick review of all new warrants on a daily basis. However, the Warrant Records Logs are maintained by the Warrant Unit and not shared with Patrol. At one time, patrol officers had access to the Warrant Unit office. However, patrol officers are not currently allowed access to the office. It was a common practice for many officers to peruse the log.

Selective Enforcement Section

The Selective Enforcement Section is the specialized patrol arm of the Patrol Division. The separate units partake of directed patrol strategies as an everyday activity. The individual team leaders and members have developed informal communication vehicles with the Detective Division and Warrant Unit to develop cases and

arrests. The units currently have time to follow up and research cases and patterns that are not available to the patrol officer.

1. The section members have time to develop cases and currently do some follow-up work on about 10% of all Crime Analysis Bulletins prepared by the Crime Analysis Unit.
2. The section commander maintains pin maps for selected target crimes that indicate a longer period of time for the monitoring of crime patterns.
3. The development of specific strategies to combat target crime problems has proven positive in terms of productivity.
4. The information developed by the section is not formally shared with Patrol; and, with the advent of Directed Patrol by the Patrol Division, the problem of overlapping strategies and duplication of efforts is unavoidable.
5. The strategies developed and successfully used by the section have not been documented and are a loss to the total performance of Operations.

Intelligence Section

The Intelligence Section is currently reviewing its relationship to the other sections in the Police Department. The section commander has exhibited concern that the needs of the Department are not being met by the Intelligence Section. A survey will shortly be undertaken

to assess the value of the current output products of the section and determine the needs of Patrol and Investigations.

1. The self analysis survey being developed by the Intelligence Section will offer direction to the Section in the future.
2. Currently, the section has little, if any, impact on Operations.
3. The Section maintains good files, and would be valuable to Patrol.

Records Section

The Records Section maintains files of unquestionable value in terms of crime information. The Section has developed a request form that allows officers to pull specific crime information from Records files. However, the Records Section does not compare, correlate or analyze any of the information maintained in the files. It also maintains the microfiche files for the Department and the timeliness of the updating system is valuable to patrol officers.

1. Quick delivery to patrol officers of requested Crime and Arrest Reports.
2. Crime Analysis does not receive all crime reports on a timely basis.
3. Crime reports originating from the Detective Division are not distributed to the Crime Analysis Unit.
4. Duplicating procedures precludes timely return on requests and curtail the effectiveness of the Crime Analysis Unit.

Planning and Fiscal Section

The Planning and Fiscal Section of the Department is the liaison with the City's EDP Center. All computerized inquiries are directed to the Planning and Fiscal Section. The Section also prepares the programs that are to be used by the Department. Forms have been developed by the Section describing the needs of an inquiry. The computerized Sacramento Crime and Arrest Reporting System (SCARS) information is useful for the Patrol operation.

1. The SCARS programs are helpful in identifying suspects of crimes, doing crime correlations and comparisons, pulling specific crime information by location, day, time and type of crime.
2. The SCARS information is currently beneficial to Patrol administrators for administrative purposes, the detectives for investigative purposes, and the call for statistical reports and crime correlation crime profile reports.

   The planning that went into the SCARS program was sufficient to allow for the proper data output for purposes of (most) crime analysis. POE file inadequate.
3. Patrol officers and line supervisors do not utilize the special variable extract capabilities of SCARS.
4. The current computerized program does not offer adequate information through the special variable extract system in the area of M.O. and,specifically, the point of entry in burglaries.

Communications Section

In terms of patrol officer needs, the Communications Section offers access to many different computerized information banks throughout the State and country. The method for getting the information is via the police radio, telephone, request form or, in some cases, verbal request over the counter.

1. The turn-around time for delivery of requested information is efficient.
2. The training received by Communications personnel in the use of the CLETS terminal is extensive and allows for efficient use of the system.

B. Patrol Planning Committee

The Patrol Planning Committee, after thorough review of the Crime Analysis Study, recommended the following to the Chief of Police:

1. Upgrade the information input from the Detective Division to the Crime Analysis Unit. The Crime Analysis Unit currently does not receive either crime reports originating from the Detective Division or case clear-up reports. Thus, the Unit cannot correlate case clear-ups with identified crime patterns.
2. Before any internal or external changes can be contemplated in terms of the work processes of the Crime Analysis Unit, it is necessary to determine what the output product of the Unit should consist of, based upon a Users Need Survey. The Survey should concentrate on the Crime Analysis needs of Patrol and the Detectives, but should not ignore other departmental components. The MPO/SPUDS staff should conduct the Survey during the first two weeks of April.
3. A Crime Analysis Task Force should be formed to assess the necessary changes that have to take place in the Crime Analysis Unit, and to develop a master plan. The Task Force should report directly to the Administrative Advisory Committee to facilitate the policy decisions that have to be made. The Task Force should

be composed of representatives from the Selective Enforcement Section (Chairman), Planning and Fiscal, Intelligence, Detective Division, Crime Analysis and Patrol. A preliminary report should be due May 1, 1979, and the final report due the first week in June 1979. The AAC should review the Task Force Report and make recommendations to the Chief by no later than July 1, 1979. The Task Force must consider the following:

1. Determine what internal processes must be changed or incorporated into the every day operation of the Unit to meet the needs of the users.
2. Identify and document responsibilities of the Crime Analysis Unit to the users of the output products.
3. Evaluate the feasibility of utilizing the micro-computer for in-house Crime Analysis programs.
4. Consider and develop a feedback mechanism whereby users of the Crime Analysis product can offer an evaluation of the effectiveness of the product. In addition, develop a feedback mechanism that will address the effectiveness of the strategies being practiced by Patrol which are based on Crime Analysis information.
5. Develop new forms, or re-format currently used forms, from the Crime Analysis Unit based on the Users Needs Assessment. Other forms to be

considered could include Mandatory Feedback report on the use of the Crime Pattern Bulletin, Strategies Outline Report, Officers Request for Beat/Sector Evaluation Report, monitoring of Strategies Report, etc. The Task Force will also consider changes in the pinning of maps, i. e., pinning only Crime Patterns, pinning by Sector, etc.

6. Once the Task Force has developed a reasonable Crime Analysis Plan, it will have to determine resource needs of the Crime Analysis Unit.
7. At this point, the costs of the new operation will have to be considered for purposes of budget and resource allocations.
8. The Task Force will also have to consider an ongoing evaluation system of the crime analysis situation in the Department and the Crime Analysis Unit itself, considering the usability, relevancy and timeliness of the output product of the Unit.
9. Conduct a study to determine the proper organizational location of the Crime Analysis Unit as it relates to the entire Police Department.
10. Consider the feasibility of upgrading Crime Analysis to a Section to better relate to its new responsibilities.
11. Ideally, in order to have a proper relationship with Patrol, the Crime Analysis Unit should be

physically located in an area within the proximity of Patrol and the Patrol Reference Station. However, given the current constraints of both available space and post-Prop. 13 monies, such a move may not be feasible immediately. However, the Task Force will examine various alternatives and prepare recommendations.

12. Perform a feasibility study for the further expansion of the role, responsibilities and duties of the Crime Analysis Unit.
13. Consider the feasibility of expanding the working hours of the Crime Analysis Unit to match any organizational changes and expanded duties of the Unit.

C. The Crime Analysis Users Survey

Pursuant to the recommendations of the Patrol Planning Committee, the MPO staff developed and administered a Crime Analysis Users Survey of Sacramento Patrol Officers on April 20, 1979.

Approximately 350 questionnaires were sent to all supervisors and officers in the Patrol Division, Traffic Division and Special Enforcement Section. A total of 108 were returned, or 32.8%. Two of the returned questionnaires were rejected from the group because of the obvious manner in which all answers were given.

The attached survey indicates the results of the hand tally. There are several interesting points that begin to emerge. Questions 1, 2 and 4 are variations on the theme of how much Crime Pattern information the officers want by Sector, by Watch. It appears that there is a rather consistent desire by the officers that Crime Pattern information should be limited to the sector, but for all watches. For example, on question #1, a combined total of 60 respondents, or 56%, either agreed or strongly agreed with the statement that they "----want only Crime Pattern information that is occurring on my watch and in my sector". When the question was restated in number 4 as "I want Crime Pattern information that is occurring in my sector for all watches", a combined total of 74, or 69%, indicated agreement or strong agreement. Question #2 was intended to test the officers desire for Crime Pattern information during their watch but on a City-wide basis. A combined total of 61, or 56%, either disagreed

or strongly disagreed with the statement.

On Question #5 as to whether they wanted Crime Pattern information occurring in the County, a combined total of 59, or 55%, disagreed or strongly disagreed. However, there were several hand-written comments indicating an affirmative want for this information if such patterns bordered their sector.

Question #6 provided the second strongest affirmative agreement of the questionnaire. A combined 93 respondents, or 87%, either agreed or strongly agreed that they want to know, prior to going on duty "---what crimes occurred yesterday in my Beat/District". The second half of Question #6 was open-ended and requested that the officers respond as to "How" they would use this information.

Two of the survey questions dealt with the desire for wanted person information. On Question #7, which dealt with the statement "---I want a listing of warrants issued yesterday for persons living in my sector", a combined 82 respondents, or 77%, indicated that they either agreed or strongly agreed with the statement. Similarly, on Question #10, which dealt with the issue "I want a listing of outstanding arrest bulleting", a combined total of 94 respondents, or 88%, either agreed or strongly agreed with the statement.

Question #8 and #9 determined the desire by the officers for information regarding either recently

released parolees who were living in their sector or a listing of searchable probationers living in the sector. The respondents answers were fairly identical for both questions. On Question #8, a combined 93 officers, or 87%, indicated they either agreed or strongly agreed with the statement. Question #9 regarding the searchable probationers had a combined 92, or 86%, of the officers and supervisors either agreed or strongly agreed with the statement.

Question #11 was an open-ended question which requested information as to what changes, either in format or informational content, the officers would like on Crime Pattern reports.

The issue was recently raised by some officers indicating a desire or interest in recreating the stolen vehicle hot sheet. Question #12 dealt with this issue as to whether or not they would like to have it. A combined total of 72 respondents, or 67%, indicated they either agreed or strongly agreed with this statement.

Question #13 was again an open-ended question and asked the officers to list any information that they would like to receive on a regular or request basis from the Crime Analysis Unit.

One of the most surprising discoveries of the survey related to Question #14 as to how often the officers check pin maps. A total of 64 officers, or 60%, indicated

that they rarely look at the pin maps. The reason for such non-use may come out of the answers to Questions #15 and #16. #15 dealt with the statement "Pin maps are useful to me because I can identify Crime Patterns". A combined total of 54 officers, or 51%, either disagreed or strongly disagreed with this statement. As to the value of pin maps, Question #16 proposed that "Pin maps would be more useful if only active Crime Patterns were pinned". A combined total of 62 officers, or 58%, either agreed or strongly agreed with this statement.

Finally, on Question #17, the open-ended answers to the request for any suggestions as to how pin maps should be organized or displayed.

D. The Crime Analysis Task Force

As a result of reports and recommendations submitted by the Patrol Planning Committee, the Chief of Police created a Crime Analysis Task Force. The selection of Task Force members was designed to include representatives from all units which could be impacted by any recommendations or changes that may be proposed.

On May 11, 1979, the Task Force submitted the following report:

In order for the patrol officer on the street to benefit from crime analysis or crime information, the informational turn around must be timely and concise. In order to do this, we must first recognize that there is a difference between crime analysis and crime information. Crime information is what most patrol officers want when they say they want current information on what happened yesterday or the last shift within their sector. They also want to know who the suspects are in current crimes and who is arrestable for what crimes. This, along with lists of persons who are searchable, on probation or parole, etc. Crime analysis is when a series of criminal activities are occurring in a particular location by selective individuals and those activities can reasonably be predicted.

With both objectives in mind, this Task Force recommends the following changes take place within this Department:

1. That Crime Analysis Unit produce on a daily basis

for each sector, the sector's activity for the past 24 hours. This sector activity report would contain the listing of crimes by type, location, time, description, and M.O. It would contain updated case information from the investigative sections with the latest suspect information, identifying them as either suspect or arrestable. This sector report should be completed and available by the 1600 hour roll call, seven days a week. These reports would be routed as follows: one copy to the Sector book and extra copies for each Sector Sergeant (3 copies).

2. In order that this report be completed, it would be necessary that all Sergeants' Activity Reports and all Crime Reports generated within the whole Department be received by Crime Analysis Unit by 1000 hours each day. (In order to assist in routing the original reports generated by the Office of Investigations, the reports should be stamped minimally for routing to Records and Crime Analysis Unit.)
3. The Crime Analysis Unit establish liaison with the investigative sections for pusposes of information flow on updated suspect information.
4. The Crime Analysis Unit provide a person who would maintain the Patrol Reference Station within the Office of Operations. This Reference Station would contain lists of parolees, persons on searchable

probation or parole, persons on the 647b probation list, AB's, IB's, and other information identified by the Reference Station Committee.

5. There should be required feedback from the Patrol Division and/or Selective Enforcement Section on particular Crime Patterns. The required feedback system would work like this:

   A. A Crime Pattern Notification would be directed to the sector sergeant(s) who work during the time period identified on the Pattern. No feedback required.

   B. The first update of that Crime Pattern will be directed to the same sector sergeants. This updated CPN will contain the information listed on the original CPN along with the newer updated information. No feedback required on normal CPN's. However, feedback may be required on serious criminal activities.

   C. The second update on the Crime Pattern will cause a Crime Pattern Incident Report to be directed to the watch commander concerned. This incident report will contain all crime analysis information for that pattern, i.e., type of crime, day, hours, M.O. (in burglaries, type of items taken), type of entry, possible suspects, and projection of expected activity

related to that crime pattern. Crime Analysis will not tell how to deploy officers. They will only notify the watch commander of the problem.

   D. This Crime Pattern Incident Report will require feedback from the Patrol Division as to what action (if any) was taken relating to that report. This feedback would be on a Crime Pattern Incident Feedback Report. This report would contain a due date that would be realistic to the particular Pattern.

   E. The Crime Analysis Unit will, upon receiving the feedback information, within 24 hours make an updated Crime Pattern Incident Report stating the effectiveness of the strategies employed and the current status of that activity.

By giving the Patrol Division updated and current crime information and when necessary good indepth crime analysis, it is projected that their efforts can be better directed toward a common objective.

The Office of Investigations can also benefit from these suggestions. First, the Office of Investigations produces five days a week a listing of offenses and arrests. This would be done on a 7 day a week basis from Crime Analysis eliminating that duplication. Crime Analysis would be the tool for providing good informational flow between the Office of Investigations and the Office of Operations.

This information flow is essential to good crime analysis, and the effective operation of each office. Without this exchange of information, each office operates on their own. There are a number of incidents in which the two offices were attempting to attack a particular problem and neither office knew of information developed by the other offices.

In order that the offices of this department fully realize the emphasis on crime analysis and in order to enhance its status with other sections of this Department, the Crime Analysis Unit should be upgraded and placed within a section of this Department.

It has been recommended that the Crime Analysis Unit be moved to within the Office of the Chief. It is felt that it could then best interact with the other segments of the Department.

If Crime Analysis was placed with the Office of Operations or the Office of Investigations, it would tend to be looked upon by others as a segment of that office and lose some of its ability to interact between those offices. The Office of Administration would also appear to be the wrong place as types of activities already with that office are different than those expected of Crime Analysis. The Office of the Chief would appear to be a proper location for the Crime Analysis Unit. The Office of the Chief already contains segments that are consistent with the nature of Crime Analysis, i.e., Planning & Fiscal, Special Investigations and Inspections and Standards.

In order for Crime Analysis to operate within the Department and to obtain all the data and cooperation needed from every segment of this Department, the Chief of Police must make it known that he has a total commitment to the Crime Analysis Program and that that Unit does operate with his full authority. It is essential to realize that Crime Analysis does not tell people what to do or how to do it. Crime Analysis collects data, then analyzes that data. After that data is analyzed, a report is submitted to those sections for their information and/or action. If this is understood by all segments of the Department, then and only then will crime analysis work.

Along with making crime analysis work, we must address the expected workload of that section. For crime analysis to be effective, it must be current (no more than 24 hours old). The information on most Crime Patterns now published is at least 3 to 4 days old when distributed. This is not acceptable because it has already lost its credibility. So, the Crime Analysis Unit must have the personnel available to work 7 days a week and at least from 0700 hours through 2200 hours. The Crime Analysis Unit can be staffed by non-sworn personnel for the most part, but it should contain some sworn personnel in order to maintain credibility with the other sections within the Department.

With this criteria in mind, it necessarily follows that the manpower of that Unit be increased. Other than

the Lieutenant in charge of the Unit, the staffing would be as follows: one sergeant, three police officers, three civilian employees, and two part-time employees. This is in addition to the alarm technician and secretary assigned to the Alarm Program.

The most identifiable problem that is incurred by this change in line of authority is the physical location of the Crime Analysis Unit itself. It is the majority of opinion that its physical location should be as close as possible to the Patrol Division.

By physically locating near the Patrol Division, we expect that there would be a freer interchange of information between Patrol and Crime Analysis. This would allow easy access to any patrol officers wishing to discuss occurrences within their sector with Crime Analysis.

We realize that there will be an interchange of information between other segments of this Department. However, the use of two buildings by this Department already provides us with a physical barrier. If we expect to interact on a one to one basis, it would be better to have a Crime Analysis officer contact each section of this Department than it would be to have each district officer go across the street to Crime Analysis. With this in mind, we suggest that the physical location of the Crime Analysis Unit remain as close as possible to the Patrol Division, while its staff authority be placed within the Office of the Chief.

The Crime Analysis survey indicated that the street officers want a listing by sector of parolees and searchable probation/parolees. This information is not now available in that form. However, with arrest index search through the (SCARS) fiche, each subject is identified by the code 91 (CYA Parolee) and 92 (State Parolee). The Field Contact Card search will reveal a listing of parolees by crime classification and description. The listing of addresses of parolees is impractical because of the number of persons involved and the nomad tendencies of those persons. The list of searchable probationers is no longer produced by the County (as of January 1, 1979). The only way a person can be identified as searchable or not is contact with the parole authorities or contact with the court in the case of probationers.

The direction given to the Task Force was to study the possibility of using the mini computer for crime analysis. This Task Force recommends that, when we have a manual system we consider to be working to our satisfaction, we then introduce that system to the computer programmers. It would be projected at this point that the mini computer could store lists of information for the hot sheet, crime patterns, etc.

The users survey also indicated a request for a "hot sheet" of stolen vehicles. Crime Analysis should provide such a list and then evaluate its use by the patrol officers in order to determine if it is a usable item.

The users survey also indicated that the pin maps showing crime locations are not used, or wanted. The officers did indicate that a pin map by crime pattern would be helpful and this will be included within each CPN.

It is further recommended by this Task Force that the implementation of the Crime Analysis Program include the centralization of all analysis activity within one section. There is currently a fragmentation of the analysis functions throughout this Department, i.e., an analysis in the Traffic Section and an Analyst (Police Statistician) within the Planning & Fiscal Section. By bringing the functions to one location, it would be easier to give both short-time analysis (CPN's) and a log with long-term analysis (crime or criminal trends). It would be a natural extension of the Crime Analysis function to project criminal trends, make called for service projections for future manpower and budgetary needs for this Department.

By building a complete section within the Office of the Chief and staffing that section with necessary manpower, then and only then will Crime Analysis work within this Department. If any portion is removed from these recommendations, the total program would suffer in direct relationship to that portion which is removed. In other words, in order to produce a good Crime Analysis Program that program must receive the total support of the Office Chief and receive the necessary equipment to carry out its intended functions.

E. Results of Crime Analysis Task Force

All the recommendations set forth in the Crime Analysis Task Force were approved, with the following exceptions:

1. The Crime Analysis Unit was organizationally transferred from the Office of Administrative Services to the Office of (Field) Operations - Selective Enforcement Section. This move was accomplished July 1, 1979. Nor were the functions of analysis centralized within one section; the Traffic Section still does traffic and Planning and Fiscal still does the Departmental analysis.
2. The Police Statistician remained in the Planning and Fiscal Section.
3. Traffic Analysis remained in the Traffic Section. However, Traffic Analysis Reports were to be redesigned to provide Traffic Accident and Enforcement Reports according to patrol sectors.

Based upon the Task Force recommendations, Crime Analysis training materials were prepared by the MPO Staff for inclusion in the MPO Supervisors Training Program.

For a detailed description of the Training Program, see the Chapter "MPO Training for Supervisors".

F. MPO Advisory Committee

On November 15-16, 1979, an MPO Advisory Committee was formed to review the feedback and comments from the seven MPO Supervisors Training Classes. The Committee was charged with examining all the MPO components, including the proposed Crime Analysis Model, and to prepare the final program recommendations.

The MPO Advisory Committee developed three information reports to be provided to Patrol teams. The first report is a daily Sector Crime Summary, which will be a listing of the major cases that occurred within the previous 24-hour period. This will keep the Sector Teams aware of the activity on a daily basis. A copy of the Sector Crime Summary will be placed on the bulletin board inside each team conference area. Additionally, there will be a copy placed in the Patrol Reference Station and a copy in the Sergeant's conference package.

The second report recommended by the Committee will be a Crime Pattern Notice (information only). This report serves to provide information regarding a possible pattern of which the Patrol teams should be aware. The CPN will be similar to the one already being used by the Crime Analysis Unit. No followup or feedback to Crime Analysis is required at this point.

In the event additional crimes are reported, Crime Analysis will check with the detail in the Detective Division handling the cases to confirm if, in fact, it is a pattern. If the Detectives agree with Crime Analysis

and a consensus is reached that there is a pattern, a CPN Update report will be prepared containing all available information. The CPN Update will indicate, minimally, if there are fingerprints, eye witnesses, the name of the investigator and list all suspects and suspect vehicles with the reason as to why these persons are listed as suspects.

In the event that a crime "series" is detected rather than a pattern, a Crime Series Notice will be sent to the Sector Team which will contain all available information. A crime series is generally defined as repeating crimes occurring within a relatively short period of time and committed by a specific person, or group of persons.

Where an identified series is one in which the crime is of a violent, or potentially violent, nature--such as rapes, armed robberies, or where physical injury has been inflicted, the CSN first Update Report will be stamped with "Feedback Required". The Sector Sergeant shall prepare a report describing what steps, if any, have been taken to address the problem.

In the event the series continues, and Crime Analysis issues a second CSN Update Report, with "Feedback Required" stamped on it, copies will be routed to the Deputy Chief of Operations, the Watch Commanders, as well as the Sector Sergeant. The Watch Commander is then required to formally notify the Deputy Chief and Crime

Analysis what steps are being taken to address the problem. This process shall continue until such time as the problem is solved.

All recommendations were approved by Patrol Management and implemented by January 1, 1980.

IV. CRIME ANALYSIS TODAY

A. Overview

From even a cursory reading of the Crime Analysis change process (Section III), it is obvious that it was a long and arduous undertaking. It involved substantial numbers of people, enormous criticism, and many, many suggestions. Through it all, a working Crime Analysis Model emerged that was based on negotiations and compromise. The critical question that follows then is: Does it work?

The measure of success in such a program can be rather elusive. Certainly, we can, and will, quantify the number of Crime Patterns and Series that have been identified. So, too, can we quantify the numbers of arrests. But the more intangible factors, which are equally as important, relate to the credibility that the Crime Analysis activities and reports have in the minds of the Patrol and Detective user groups.

We are convinced that we are on the right track. By no means, however, are we completely satisfied. But, as a result of MPO, Crime Analysis has turned into a well-functioning and creditable Unit; and, from its earlier days of being totally ignored, its products are now being used, and more being demanded. That, in itself, is remarkable.

The remainder of this Section will describe Crime Analysis as it is organized today. And we will attempt to quantify where possible Crime Analysis' production

measurements, and to provide examples which indirectly reflect the qualitative dimension.

B. Organization and Structure

The Crime Analysis Unit is an operational component of the Selective Enforcement Section, within the Office of (Field) Operations. It is staffed by one Police Sergeant, one Police Officer, one Community Service Officer, two Student Trainees, and one CETA employee. In addition to these employees, there is one Alarm Technician, and one Clerk Typist assigned to this Unit.

The CAU now operates 7-days a week and usually 11 hours a day. On a daily basis, this Unit produces a crime summary for each of the four patrol sectors. This is a listing and a short narrative of offenses committed, persons arrested, community programs, and other special information relating to that sector. In order to assist the informational and analysis function, this unit maintains hand-written logs for burglary (commercial and residential), robbery (commercial and private person), purse snatch, rape, and auto burglary; along with a vehicle information file.

A major function of the CAU is liaison with the different segments of the Police Department. This is performed by the Police Officer assigned to the Unit. On a daily basis, he makes personal contact with the sections of the Office of Investigations often talking with the investigators about a particular crime problem. By maintaining this liaison, he is able to exchange information between the investigators and the patrol officers. This

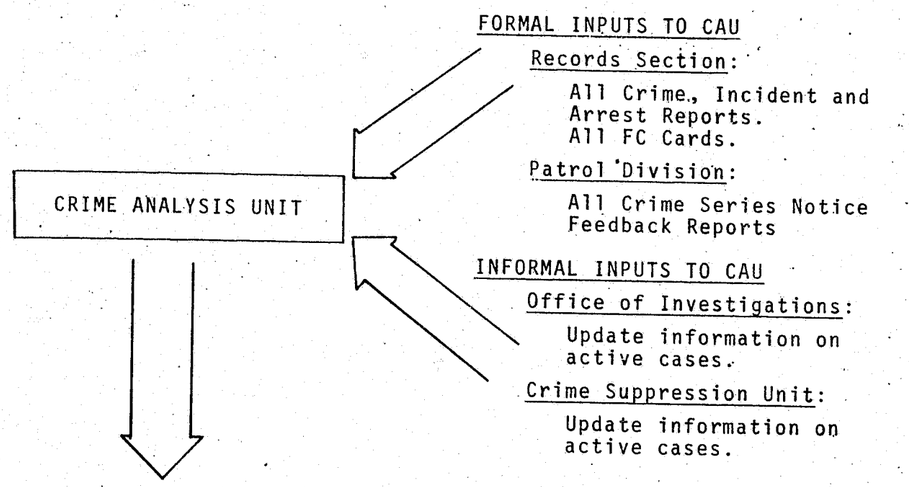
officer also meets with the CAU of the Sheriff's Department on a regular basis. As a result, we have interchanged information on three crime pattersn that were common to both agencies. This same information is used in conjunction with the issuance of crime pattern/series notices.

This unit receives on a daily basis copies of all offenses, arrests and information reports received by this Department. Each report is scrutinized for its content and then forwarded to interested parties, i.e., Deputy Chief, Crime Suppression Units, Special Investigations Section, or Community Resources Section. This unit keeps in file for 30 days reports relating to those offenses that are analyzed. This is done for two reasons; first, to provide information for the Analyst when issuing a crime pattern/series notice, and secondly, as a ready reference for the officers in the event of a directed patrol activity.

As a result of receiving these reports, the CAU is able to produce weekly and monthly crime summaries, crime pattern/series notices, crime pattern/series update reports, special bulletins, and profiles on crime trends, such as rape, commercial robbery, and auto burglary.

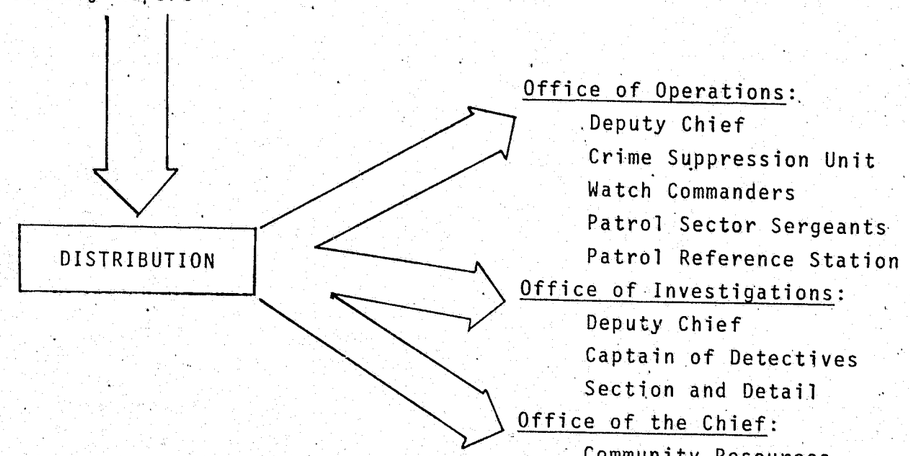
The CAU also has the responsibility for enforcement of the new "Alarm Ordinance". There is one Alarm Technician and one Clerk Typist assigned to this function. The objective of this ordinance is to reduce the number of false alarms responded to by patrol officers. Last

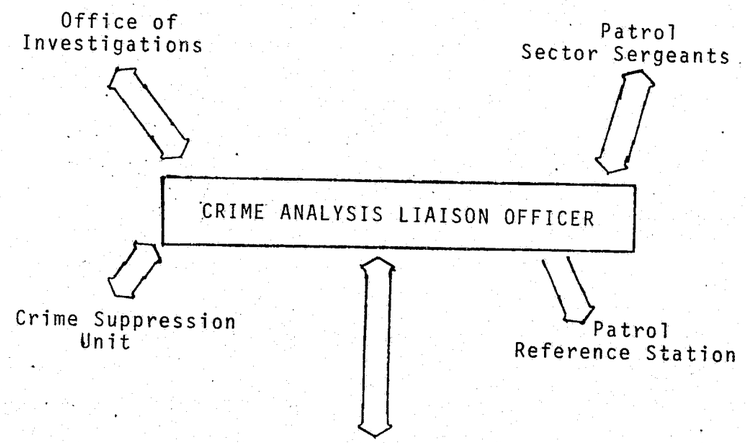
year we responded to over 10,000 alarms which were 95% false. Through this ordinance, we will only respond to licensed alarms and those places that have an inordinate number of false alarms will have their license suspended or revoked. It is expected that by reducing the number of false alarms, more patrol time will be freed for other activities.



PRODUCTS OF CRIME ANALYSIS UNIT:

1. Daily Sector Reports
2. Crime Pattern/Series Notices
3. Crime Pattern/Series Updates
4. Special Crime Bulletins
5. Weekly Crime Statistical Summary Report
6. Monthly Crime Statistical Summary Report





C. Crime Patterns/Series Issued

For the six month period of January 1, 1980, through June 30, 1980, the Crime Analysis Unit detected and issued a total of 93 reports on Crime Patterns and/or Series. The following chart breaks down the CPN's by crime category.

Type Crime	Number
Burglary (Commercial)	14
Burglary (Residential)	64
Burglary (Auto)	4
Rape	1
Robbery (Commercial)	6
Robbery (Residential)	1
Grand Theft Person (Purse Snatch)	1
Parking Meter Thefts	2
Total	93

D. Crime Pattern and/or Series Updates

After a Crime Pattern and/or Series Bulletin has been issued, it may be updated if the activity continues. The general criteria for updates is that three or more similar events have occurred since the Bulletin was issued. There is no limit on the number of times a Pattern/Series may be updated.

Of the 93 Patterns/Series detected by Crime Analysis, 28 had to be updated. A total of 36 actual update reports were prepared. Only 5 Series/Patterns had to be updated more than once; of these, two were updated three times, one was updated three times, and one was updated four times.

E. Crime Pattern/Series Feedback

Under the criteria established by the MPO Advisory Committee, a system of "feedback" was required when an identified crime series was one in which the crime was of a "violent or potentially violent nature, such as robbery, rape, or where physical injury has been inflicted." The purpose of feedback, of course, is to achieve two objectives. First, it insures that patrol is attempting to resolve the problem, and second, that Crime Analysis can monitor the results of the applied patrol tactics. Unfortunately, this rather narrow criteria has resulted in a minimum flow of information back to Crime Analysis as to the tactics and strategies being employed by Patrol teams. Of the 93 Crime Patterns/Series detected, feedback was achieved on only two.

The feedback form itself will undoubtedly be changed in the future. In its current format, the information needed by Crime Analysis is not there, including what are you going to do about the problems? And, what was accomplished, if anything?

CRIME PATTERN-SERIES FEEDBACK REPORT

TO: DEPUTY CHIEF_____ WATCH COMMANDER_____ SECTOR SERGEANT_____ CSU_____

Under the MPO Program, a certain criteria was set up that requires feedback to Crime Analysis regarding certain crime problems. Crime Pattern-Series No. _____ falls into that category and we would request the following information filled out and returned to Crime Analysis by _____.

Type of Crime_____ Sector _____ Dates _____

Was the information contained in the CPN used to attack the problem?

Yes _____ No _____

Is there further information that you would like to have to further attack this problem?

Yes _____ No _____

If so, what information would you like to have?

If the information contained in the CPN was used to attack the problem, what tactics were used?

Was a tactical plan made?

Yes _____ No _____

If a tactical plan was used, please forward a copy of your plan to Crime Analysis along with this feedback report.

ADDITIONAL COMMENTS:

F. Crime Analysis Results

The following successes have been scored by the Crime Analysis Unit during the months of February 1, 1980, through June 30, 1980.

February

1. Series 80-24, the Oak Park Rapist. This series had originally been spotted by the Crime Analysis Unit in November, 1979. However, due to saturation by Crime Suppression Unit teams and Patrol, this series stopped. The series began again in February and was detected initially by Crime Analysis as having the same MO and the same suspect description. Through projections from Crime Analysis as to the location and time of attack, Crime Suppression teams were deployed and one arrest made. The defendant was charged with a total of 14 counts of rape, including the 4 from the current series.

2. Series 80-030, Commercial Armed Robberies. Projections were made by Crime Analysis as to the area, time, and date of future robberies. Two arrests were made clearing a total of 19 robberies in this series.

3. Pattern number 80-036, Residential Burglaries. The defendant in this pattern was identified by the Crime Analysis Unit from a previous burglary arrest in this area involving the same MO. The defendant was subsequently matched on fingerprints.

March

1. Series 80-038, Commerical Armed Robberies. Crime Suppression teams and Detectives working together identified two suspects in this series, resulting in the arrest of one woman and a warrant issued for her male companion. A total of five robberies were cleared in this series.

2. Pattern number 80-045, Commercial Burglaries. This pattern involved over twenty-three burglaries in the City of Sacramento and an unknown number of additional burglaries in the unincorporated area of Sacramento, in the City of Davis, and in Woodland. A regional task force was created to work this pattern and ultimately six arrests were made on related charges ranging from robbery to grand theft auto to possession of stolen property, thus breaking up the pattern.

3. Series 80-047, Commercial Armed Robberies. This series was identified by Crime Analysis and ultimately resulted in one arrest. Four of the five robberies in this series were cleared.

April

1. Pattern number 80-049, Residential Burglaries. Information was received from the Detectives and passed on through to Patrol as to a special MO used by the suspect. One arrest was made clearing eight burglaries in this pattern.

2. Pattern number 80-057, Commercial Burglaries. This pattern was identified on April 23 and updated for the

first time on April 22, 1980. One arrest was made by Patrol, clearing 16 burglaries in this series.

3. Pattern 80-059, Residential Burglaries. Suspect and vehicle description supplied on the CPN resulted in an arrest by Patrol, clearing eleven burglaries in this pattern.

4. Series 80-061, Parking Meter Thefts. This series involved over 120 parking meters that were broken into. The series was first issued on April 18, with updates on April 22 and April 30. Based upon information from the CPN, one arrest was made by Patrol clearing this series.

5. Pattern number 80-062, Residential Burglary Series in Sector 4. The suspect was apprehended fourteen days after the first update report by officers on Patrol, 1st Watch.

6. Pattern 80-063, Residential Burglary Series in Sector 4. The pattern was issued on April 23rd, the first update was issued on May 9th, and the pattern was closed on May 27th with the arrest by Detectives of one individual. The arrest cleared fourteen burglaries on that pattern.

<u>May</u>

1. Pattern 80-068, Residential Burglary Pattern in Sector 3. Issued on May 8th and the first update on May 16th. The pattern was closed on May 22nd with the arrest of one individual by Patrol and clearing sixteen burglaries.

2. Pattern 80-070, Commercial Burglary Pattern in Sector 4. The pattern was issued on May 12th and cleared on May 27th with one arrest and clearing seven commercial burglaries.

3. Series 80-072, Commercial Armed Robbery Series in Sectors 3 and 4. This series was issued on May 20th and closed on May 22nd with an arrest of one individual. This was a combined Crime Suppression and Patrol operation and the defendant was charged with five out of the six robberies identified by Crime Analysis.

4. Pattern 80-075, Business Burglary Pattern in Sector 4. The pattern was issued on May 20th and cleared on June 6th with the arrest of one defendant by Patrol officers on the 1st Watch and cleared seven burglaries.

5. Pattern 80-076, Residential Burglary Pattern in Sector 2. The pattern was issued on May 22nd with the first update on June 3rd. The pattern was closed on July 1st with the arrest of one individual by the Crime Suppression team and clearing twenty-nine residential burglaries.

6. Pattern 80-078, Residential Burglary Pattern in Sector 4. The pattern was issued on May 29th, the first update was on June 10th, and the pattern was closed on June 24th with the arrest of one person for possession of stolen property. Although there were fifteen burglaries in this pattern, the defendant was charged only with possession of stolen property.

June

1. Pattern 80-080, Auto Burglary Pattern in Sectors 2 and in the Sacramento unincorporated area. The pattern was issued by Crime Analysis on June 3rd and it was closed on June 19th by an arrest by the Sheriff's Office of one individual and the identification of a second suspect. There were six cases cleared by the City in this pattern and an unknown number by the Sacramento Sheriff's Office.

2. Series 80-081, Commercial Robbery Series in all sectors of the City. Crime Analysis issued a series report on June 5th and the case was closed on June 30th with the arrest of two suspects on weapons charges. This series was distinctive in that the MO patterns were very precise and a distinctive vehicle description had been obtained. The two defendants arrested by Patrol were ex-convicts recently paroled for armed robbery. The arrest of these two individuals on the weapons charges brought about a cessation of all the robberies associated with this series. The defendants were not charged with robbery, but both Crime Analysis and Detectives feel certain that these were the individuals responsible.

3. Crime Pattern 80-082, Residential Burglary Pattern in Sector 3. The pattern was issued on June 9th and closed on June 19, 1980, with the arrest of two defendants. A total of eight burglaries were cleared. The arrests were made by Detectives and Crime Suppression Units.

4. Pattern 80-085, Residential Burglary Pattern in Sector 4. The pattern was issued on June 12th and closed on June 19, 1980, with the arrest of one defendant. The arrest was accomplished by the Crime Suppression teams and cleared five burglaries.

5. Pattern 80-087, Residential Burglary Pattern in Sector 1. The pattern was issued on June 12th and closed on June 30th with the arrest of one female defendant. The arrest was performed by Detectives and a total of seven burglaries were cleared in this pattern.

6. Pattern 80-091, Residential Burglary Pattern in Sector 4. Issued by Crime Analysis on June 24th and closed on July 2nd with the arrest of one juvenile defendant. The arrests were made by Crime Suppression and Detectives, and a total of eleven burglaries were cleared in this pattern.

G. Attitude Changes Towards Crime Analysis

In assessing attitude changes toward Crime Analysis and its products, we have to rely on indirect indicators. A number of them, however, are revealing:

1. Prior to MPO, the issuance of a Crime Pattern Notice generated no activity from Patrol. Since MPO, Crime Pattern/Series Notices are generating substantial and increasing Patrol activity. In the month of June, 1980, fourteen Crime Patterns were issued. In response, seven Field Contact Cards were submitted

directly to Crime Analysis, specifically referencing the Crime Pattern Number. Furthermore, three Information Reports were submitted where more detailed information had been developed by Patrol against the Patterns.

2. In a minor mix-up, clerks from the Crime Analysis Unit had placed the Daily Sector Crime Summaries and other reports in the wrong Patrol sector books (these books are used daily at each team conference). The complaints were loud, immediate, and resulted in a memo to Crime Analysis from the Watch Commander. Although the problem was quickly remedied, it, at the least, demonstrated that attention was being paid to the information and that they wanted it.

3. The Crime Analysis Liaison Officer, who attends the Patrol Team Conferences, reports enthusiastic reception of Crime Analysis information -- particularly by the officers. This, at least in part, is due to a belief by the officers that the crime information is "hot" and that they are getting it at the same time, if not before, as the Detectives. He further reports that Patrol Sergeants who previously scoffed at the Crime Pattern Notices are now asking for Patterns and Series on which to work Directed Patrol activities.

4. Since February 12, 1980, seven Special Crime Analysis Bulletins have been issued at the request of individual

detectives. Of these, two were for auto thefts; two were for thefts from autos; two were for larceny/thefts; and one for vandalism.

V. LESSONS LEARNED

Sacramento's experience in developing a viable Crime Analysis Unit may be somewhat unique because of the organizational environment in which we began. Certainly we had some initial advantages.

1. There was a Crime Analysis Unit already staffed and in existence.
2. A Crime Analysis data base was fully automated with a total variable extract capability.
3. There was a generally accepted recognition throughout the Department as to the value of Crime Analysis information.

On the negative side, there were many problems that had to be overcome.

1. Crime Analysis Credibility

   The products produced by the unit were not believed by the user groups. The information was perceived as either being erroneous, not relevant, or untimely.

2. Crime Analysis Staffing Level

   Simply put, there just was not enough staff in the Unit to support it.

3. Information Blockages Between Crime Analysis and Detectives

   A working relationship and information sharing between the two simply was not in existence.

4. Information Blockages Between Crime Analysis and Patrol

   There was no personal contact or dialogue between these two units. The activities and products of Crime Analysis were not what Patrol wanted.

5. No Required Action on Crime Analysis Pattern Report

   The products of Crime Analysis were discarded as there was not any formal requirement by Patrol to act upon them. And because there was not any requirement, there was not a feedback mechanism.

6. Crime Analysis Was Not Organizationally Responsible to Patrol.

   Prior to MPO, the Crime Analysis Unit was organizationally placed in the Community Resources Division, Office of Administrative Services. There it competed against other Administrative staff functions for its programs and priorities.

Out of all this, we have drawn some lessons learned. Certainly, we do not propose these lessons as absolute tenants that other agencies must follow in order to insure Crime Analysis success. And in fact, some of the problems experienced in Sacramento may be totally inappropriate in another agency. Nevertheless, there seems to be certain themes, or issues, that may be universal. With that in mind, we suggest the following:

1. Personal Contact or Liaison is absolutely essential between Crime Analysis and the user groups.

   Patrol team members cannot ask questions of Crime Pattern/Series Notices that are merely handed to them. There has to be some dialogue capability. At least at the beginning, Crime Analysis should make regular schedule appearances at Patrol roll calls. Furthermore, for the purposes of establishing credibility, it probably should be done by a sworn officer.

   The same applies between Crime Analysis and Detectives. Crime Pattern/Series Notices should have the absolute latest Detective information before they are issued. Nothing will destroy Crime Analysis credibility quicker than the issuance of reports with suspect information that has already been eliminated by Detectives. In this regard, we recommend that the Pattern/Series Notices not only be dated, but also indicate the name of the principal investigator assigned to it.

2. Operational definitions should be established in Crime Analysis.

   Distinctions should be drawn between a "Crime Pattern" and a "Crime Series". Throughout the literature, the terms are used interchangeably. We feel that there is, and should be, a distinction between the

two. Crime "Patterns" are somewhat more general in nature, while "Series" are much more specific. It also allows to make distinctions in priorities.

3. User groups should be surveyed to determine what Crime Analysis products they want and when.

   Nothing is more frustrating than producing work products that nobody wants or reads. It is just as frustrating, as a user, to not get what you want or need -- and when you want it!

4. Not all Crime Patterns are workable.

   The time span, or area, over which a Crime Pattern occurs may be so great as to make directed patrol activities prohibitive and ineffective. Residential burglaries are a good example. The crimes almost always occur when the victims are gone -- either at work, visiting, vacation, or just away for the weekend. Hence, their discovery may only limitedly isolate or narrow the possibilities of when it actually occurred. However, there is justification for issuing a pattern, even though one team of officers may find it "unworkable due to unknown time span". By issuing this to all watches, then officers on all watches will be aware of the problem and then they can use Directed Patrol during their free time.

   In all probability, Crime Analysis cannot continually identify enough Crime Patterns/Series to totally support a 100% dedicated directed patrol program.

Sacramento monitors eight target crimes. Within that, we cannot provide enough to keep four Patrol Sectors (25 patrol districts) busy around the clock.

6. Some formal method of identifying and analyzing service-oriented problems needs to be established.

   Crime Analysis capabilities are limited to Crime and Traffic problems as documented through police reports. Ongoing community problems are not similarly documented. Some means, therefore, needs to be established to address problems outside the scope of Crime Analysis. In Sacramento, we used beat profiling for this purpose.

7. Crime Analysis should be organizationally placed close to its principal users.

   If Directed Patrol is to succeed, Crime Analysis and the Patrol teams must work together very closely. In the final analysis, the Crime Analysis Unit is nothing more than a staff function supporting line, and Patrol should not have to compete with other organizational units for its attention.

   If placed near Patrol, organizational delays and conflicts are minimized. Crime Analysis priorities are clearly established and, overall, the unit can be more adaptive and responsive.

CHAPTER 7

DIRECTED PATROL

INTRODUCTION

One of the basic tenets of the traditional police patrol model is that random and self-initiated activities will be performed during non-committed time. This belief relied upon the premise that visible patrol affects the level of crime in any given area. Yet, studies conclude that random patrol and self-initiated activities are not systematically related to police problems.

The manner in which an officer patrols his beat is highly individualized and is controlled in part by a variety of reasons. The officer's own perception of the problems may be faulty, largely due to a lack of information. In Sacramento, thirty-nine percent of all crime reports are handled by someone other than a police officer. As a result, the officer is insulated from reported levels of criminal activity in his district. The beat officer may feel that residential burglary is a problem, when, in fact, auto thefts (taken over the phone) have a rate several times higher. A second determinant of an officer's field activities relate to meeting organizational expectations. Many officers, and supervisors alike, feel that promotions and transfers are predicated upon a healthy mix of citations, arrests and FC (Field Contact) cards. Ambitious officers, feeling the need to compete for transfers (rewards), find themselves having to leave their district and

saturate the "duck ponds" in other districts where the activity is highly visible. A third factor encountered by random patrol is largely due to field supervision. Officers are not required by field sergeants to deal with problems in their own district. An informal survey revealed that many officers didn't even know their district boundaries. The officers did not feel a sense of beat accountability. Often an officer's perception of a problem reflected his own biases rather than an actual problem.

From a management perspective random patrol had several serious drawbacks. Since there was no systematic approach to problem solving, there could be little coordination between districts, shifts, and watches. For all practical purposes, each officer acted as a free agent, with enforcement activities often dependent upon officer days off. Supervisors, more often than not, did not know what the priorities of enforcement in each district were, nor was there any review of tactics.

Because the level of enforcement and priorities changed between districts, shifts, and watches, efforts did not support long range problem solving. In short, random patrol is an inefficient utilization of precious resources.

CONCEPTS OF DIRECTED PATROL

Directed Patrol, for our purposes, is defined as "the process of analyzing crime and service oriented problems and developing strategies to address those problems." Directed

patrol has a dual emphasis of dealing with both crime (largely) supported by crime analysis) and service oriented problems. The approach for each is different.

Crime analysis can provide timely and relevant information to support directed activities as it relates to repeating offenses and/or known offenders, occurring over definable time periods. Crime analysis has two major shortcomings. First, the Crime Analysis Unit cannot produce enough workable crime patterns or series to fully support the entire Patrol Division. Secondly, Crime Analysis does not have the resources to support service oriented problem identification and analysis.

Many service oriented problems, e.g., prostitiution, traffic, public inebriation and youth activities are of equal police importance as crime series. However, service problems generally require long range problem solving. And yet, there is an untapped wealth of information on the community and service problems. Sacramento's automated variable extract records system is a major source of information. But, the most valuable source of information is the officer himself.

The challenge posed by the field test is, how will Sacramento change its field operations to integrate directed activities? Currently, Sacramento uses a modified split force. Uniformed patrol is supplemented by five Crime Suppression teams. Patrol officers expend the greatest portion of their time dealing with call for service oriented problems and a lesser amount on crime series. Crime Suppression, however,

has the resources to expend long periods of time on decoy, surveillance and other covert operations. Since the teams have flexible hours, they can react to virtually any crime series.

Figure A shows the dual relationship between Patrol and Crime Suppression.

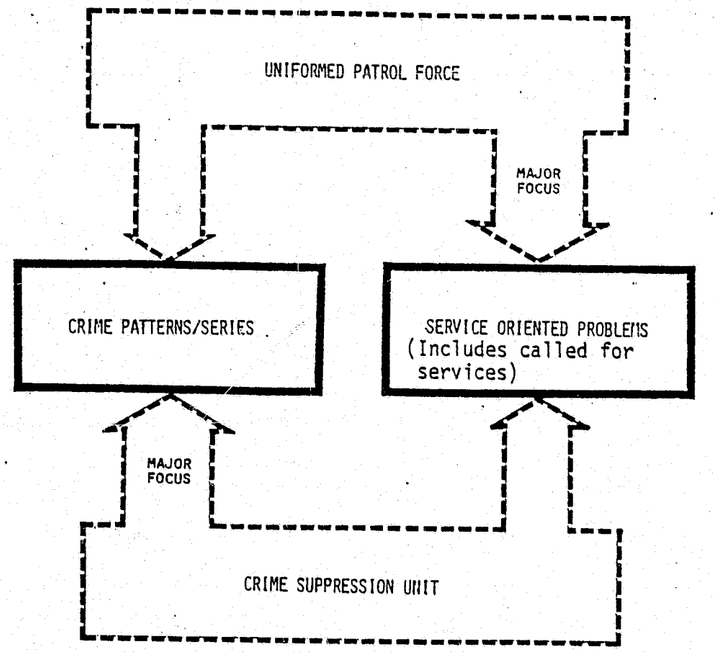


Figure A.

Since Crime Suppression has been engaged in directed activities for several years, no measurable increase in efficiency could be expected. The greatest potential rested with patrol. The primary goal of Directed Patrol is "to decentralize both the authority and responsibility for operational planning to the patrol team level for the resolution of crime, traffic and community problems".

Figure B shows the process of team level planning as it relates to the field test.

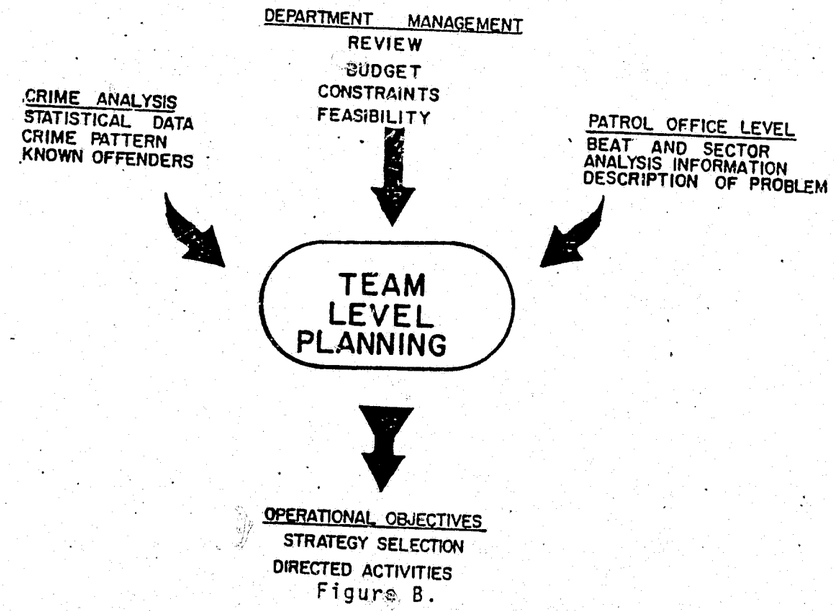


Figure B.

ORGANIZATIONAL ASSESSMENT

During the six month planning stage, the MPO staff conducted an assessment of the Police Department. The assessment included discussions with management and an opinion survey. The goals of the assessment was to identify the organizational needs and philosophies as well as the needs and desires of the rank and file.

Management identified the following assumptions and beliefs about patrol officers:

- The average patrol officer is intelligent and well educated, having more than three years of college.
- The average patrol officer desires greater input over the decisions affecting the manner in which police patrolling is done.
- The officer is well motivated, but for a lack of information, lacks sufficient direction.
- Crime Analysis information is considered to be worthless by Patrol Division. The daily flow of paper generated by Crime Analysis is all but ignored by the officer.
- Decentralizing the decision-making process to the operational unit would develop team building and enhance job satisfaction.

Patrol sergeants and officers held the same basic beliefs as management, but viewed from a different perspective:

- Low morale was a key factor. Low morale is the result of several conditions; lack of cooperation between Investigations and Patrol, little or no recognition of

patrol officers, poor chance for promotion and a generally poor department image of patrol.

- Inefficient patrol operations were inhibiting the total effort. At least 25% of all calls were considered a waste of an officer's time. Officers did not feel they were part of a well functioning team and current preventive patrol efforts yielded poor results.
- Insufficient support and information hampered patrol efforts. Crime Analysis information had no credibility and was not used. Officers were not appraised of changes in criminal activities in a timely fashion.
- Management is too far removed from the actual problems to dictate solutions. Officers felt they could develop better solutions if involved in the planning process.

Based upon the opinion surveys, management established the following goals for Patrol Division:

- Increase productivity of the patrol force.
- Increase officer participation in the decision-making process.
- Increase officer's beat awareness.
- Increase the image and importance of Patrol Division.
- Upgrade the quality and credibility of Crime Analysis.
- Improve morale and job satisfaction.

As a concept, directed patrol appeared to be the vehicle that would redirect the organizational focus back onto patrol. Decentralized decision making would add needed variety and

challenge to both officers and sergeants. Maintaining team integrity, a highly valued management concept, would insure greater continuity in both problem identification and problem resolution. Early directed patrol successes would develop a joint commitment and closer intermember ties in a team building process.

OTHER MODEL PROGRAMS

During the planning stage, the MPO staff evaluated three operational models; New Haven's "D" Run, Wilmington's Splitforce, and San Diego's "COPS". All of the programs had advantages and disadvantages, but none would fit in the Sacramento environment. The main drawback to both New Haven and Wilmington was all decisions came from management. Literature indicated that officers felt hamstrung and were not enthusiastic about either program.

Sacramento opted to develop a modified San Diego program. The main feature in San Diego's program was district profiling. Profiling is defined as "a descriptive analysis of the significant features of a patrol district". San Diego had two major drawbacks; a community oriented approach instead of a legalistic approach, and an inordinate amount of profile reports. Profiling in San Diego was a continual process where information was added weekly. The process became so time consuming that it was revised to monthly reports. It should be pointed out that the original Sacramento design suggested a one-time profile with quarterly updates. The hue and cry was so great the updates occur on an annual basis with additions as needed.

PARTICIPATIVE MANAGEMENT

Early on, upper management made a decision to commit the program design to the department's supervisors. Management issued three constraints:

1. Officers will engage in some form of profiling.
2. Officers will use and understand crime analysis information.
3. Patrol teams will engage in directed patrol activities.

The MPO Project staff was tasked with developing a preliminary program design. The preliminary design would be presented to all sworn supervisors below the rank of Deputy Chief and all Communications supervisors. During the forty-hour MPO Supervisors training course, each supervisor would be permitted input. All of the criticisms and suggestions were recorded verbatim and presented to the MPO Advisory Committee. The MPO Advisory Committee had representatives from all parts of the Department. The Committee developed the final design by ballot. The MPO Project staff sat on the Committee as non-voting members.

SACRAMENTO FLEXIBLE DIRECTED PATROL PROGRAM - MPO STAFF DESIGN

A modified profiling process was chosen as the foundation for both problem identification and problem resolution. Three reports were suggested by the MPO staff; District Analysis Report, Sector Analysis Report, and the Area Plan Report. District Analysis Reports are jointly prepared by the "A" shift and "B" shift officer assigned to each district. The Sector and Area Reports are also jointly prepared by "A" and "B" shift sergeants and lieutenants.

Figure 1 illustrates team policing in Sector 3. In the example, Officer Biederman ("A" team) would meet with Officer MacDonald ("B" team) on the overlap day, Monday, and would jointly prepare a District Analysis Report for Second Watch, District 7.

District Analysis Report

A series of ten profiles comprise the District Analysis Report. The profiles are designed to enhance beat awareness and draw the officer closer to the community he serves. Once the officer develops a greater understanding of his clients, he is ready to identify police problems, establish priorities and evaluate possible solutions.

The first three profiles, Geographic, Demographic and Community Leaders, are designed to increase understanding of the district. The next five profiles, Intelligence, Known Offender, Crime Problem, Traffic Problem and Community Problem, deal with problem identification. The remaining two profiles, Strategies and Needs Assessment, deal with problem resolution and resource allocation.

Geographic Profile

The geographic profile of the District Analysis Report will offer a narrative describing selective geographic features of each police district. Natural barriers, hazards and main thoroughfares will be included. Other items such as parks, schools, apartment complexes, shopping centers, etc., can be included at the officers discretion. Rough free-hand maps are acceptable as well as xeroxed city maps.

Demographic Profile

This profile is an informational profile supplied by the MPO Project Staff which will consist of data deemed pertinent to understanding the district. Typical information could include: population, ethnicity, income, etc.

Community Leaders Profile

This profile contains information about influential citizens who may be of assistance to the police in the district. This profile will usually include school principals and government officials. Basic information will be provided by Community Relations Section.

Intelligence Profile

The Intelligence Profile will address those locations of strategic importance in terms of potential hazards to the police and citizens. This will include potential criminal or terrorist targets. Examples would be: outlaw motorcycle gang hangouts, public utilities, parole halfway houses, etc.

Known Offenders Profile

This profile provides a means for district officers to catalog active offenders for quick reference. The profile can include mug shots, rap sheets, field contact cards, and arrest reports. The profile can be as elaborate as the officer desires. This is an optional profile which does not require any input by the district officer.

Crime Problem Profile

The Crime Problem Profile addresses the crime problems experienced in each district by watch. The officer will analyze

each major crime which poses ongoing or seasonal police problems. Personal opinions must be substantiated by empirical data. Acceptable data sources are as follows:

Crime Analysis Reports

Daily Activity Journals

Arrest Reports

SCARS Extracts

Daily Activity Sheets

Research Data located in the Patrol Reference Station

Traffic Problem Profile

This profile, like the Crime Problem Profile, analyzes the traffic problems in each district. Acceptable data sources are as follows:

STARS Extracts

Traffic Section Reports

Daily Activity Reports

Collision Reports

Community Problem Profile

This profile will analyze police problems which can be categorized as being more societal in nature than criminal. Ongoing neighborhood disturbances, juvenile disturbances, and related activity are examples of community police problems. Chronic complaints arising from emotional/mental instability, alcoholism, and senility should also be addressed.

Each of the three "Problem" Profiles should provide a short descriptive narrative outlining the scope and nature of each identified problem. Descriptions will minimally define spacial

and temporal limitations. The analysis should examine the underlying sources of the problem, not simply identify symptoms.

Strategies Profile

This profile deals with problem resolution. Each identified problem will be prioritized and a strategy will be developed. The strategy may be short or long range in nature, but the overall objective is to reduce or eliminate the identified problem. The theory behind this profile is basically simple. Each district officer is asked to describe what enforcement actions he will take to resolve his problems. The officer may describe a tactic he has used for years. If the strategy is not effective, then it should be evaluated and the tactics changed.

This profile is an important management tool. In theory, management (specifically the team sergeant and shift lieutenant) will know what each district unit is concentrating on when not on a CFS. Additionally, the district officer is given greater freedom to experiment a variety of tactics. Once an officer has a list of problems and solutions, he can manage his patrol time more effectively. Formalizing the process of problem resolution will reinforce beat accountability.

Needs Assessment Profile

The Needs Assessment Profile enumerates those resources needed to implement directed patrol activities. Specific needs would normally fall into one of four categories: equipment, training, interdepartmental assistance, and outside agency assistance.

Sector Analysis Report

The Sector Analysis Report is divided into four sections: Introduction, Problem Identification, Problem Solving, and Needs Assessment. The emphasis of the Sector Analysis Report is the development of a sector plan. First, the sergeant evaluates the problems identified in the District Analysis Reports for his sector. The sergeant determines if the identified problems are district or sector in scope. Sector problems are prioritized and dealt with on a team level. District problems are handled on a unit level. Once the problems are prioritized, the sergeant assists in the development of strategies and coordinates implementation. The Sector Analysis Report communicates the team's problems, goals and tactics to the field commanders (lieutenants) for their review.

Area Plan Report

The Area Plan Report is submitted by the area lieutenant. The report offers an intelligible description of the area plan of action. An important consideration is the management of resources, manpower, equipment and time. The Area Plan also addresses coordination of efforts on specific problems which spill into other watches, and offers a review of all strategies submitted. In the event any given strategy is impractical because of resource constraints or organizational policy, it becomes the lieutenant's responsibility to identify the reasons for rejection.

The Area Plan is also used as a basis for input into the team training schedule, the annual patrol budget request, and patrol policy decisions.

FINAL MODEL - MPO ADVISORY COMMITTEE DESIGN

The preliminary model (MPO staff design) went under considerable scrutiny during the forty-hour supervisors course. The issues were clearly defined on each component part. Each session generally brought up the same issues as the classes before them. All of the comments were reproduced and collated verbatim and presented to the MPO Advisory Committee.

Under the Committee's recommendation, the District Analysis Report came out virtually unchanged in content. The following is an outline of the District Analysis Report:

Geographic Profile

a. Natural and Man-Made Barriers
b. Major Streets and Thoroughfares
c. Schools
d. Parks
e. Public Facilities (formerly in the Intelligence Profile)

Demographic Profile

a. Total Population
b. Ethnicity by Percentage of Population
c. Percentage of Non-English Speaking Households
d. Median Income
e. Percentage Below Federal Poverty Level
f. Percentage of Renters
g. Number and Type of Housing Units

Community Leaders Profile

a. Generally persons listed in the Community Services Planning Council Director who are deemed to be appropriate by Community Relations Section.

b. All others by permission only.
c. Entire list is subject to public review.

High Interest Profile

a. Areas frequented by known offender (formerly in the Intelligence Profile)
    1. Information to include type of offender and activity.
b. Group activity (formerly in the Intelligence Profile).
    1. Includes two sub-headings.
        (a) Criminal groups - includes individuals who are organized and involved in criminal behavior. Examples include the Hells' Angels, Misfits, Mexican Varrios, and criminal youth groups.
        (b) Activists groups - includes individuals who are organized into political groups which may create special police problems (demonstrations, traffic and crowd control). Examples could include the Nazi's, Gay Power, and the Ku Klux Klan.
c. Halfway Houses (formerly in the Intelligence Profile).
d. Juvenile problems (formerly in the Community Leaders Profile)
e. High Risk businesses (new category).
    1. Includes name and address of business as well as identifying the type of risk, e.g., robbery, disturbances, window smash, etc.

f. Neighborhood/Family disturbances (formerly in Community Problem Profile).

g. Hazardous Persons (formerly in Known Offenders Profile).

1. Two sub-headings: Emotionally Impaired and Criminal.

(a) Widest latitude permitted. Entries in either column left to discretion of each officer.

Crime Problem Profile

a. Eight targeted crimes.

1. Residential Burglary
2. Commercial Burglary
3. Auto Burglary/Car Clout
4. Auto Theft
5. Robbery on Business Premise
6. Robbery - Person
7. Purse Snatch
8. Rape

b. Each crime type has three years base line data for each district and watch by month. Data presented in matrix format on the "Monthly Crime Summary".

c. Trends may be identified from the graphic charting of each years data on "Crime Magnitude Charts".

d. The intent of the profile is to increase awareness of the actual reported level of crime in each district by watch. Secondly, to identify seasonal trends which may be proactively impacted upon.

Traffic Problem Profile

a. Three sub-headings: High Accident Locations, Citizen's Traffic Complaints, and Special Events Involving Traffic Control.

Strategies Profile

a. Two levels of strategies: Formal and Informal.

1. Formal requires operational outline.
2. Informal requires a brief outline on page 18 of District Analysis Report.

Needs Assessment Profile

a. Unchanged.

The Sector Plan

The Sector Analysis Report was changed basically in name only. The Sector Plan has five sections: Introduction, Problem Identification, Problem Solving, Needs Assessment, and Evaluation of Operation. The new section, Evaluation of Operation, offers promise in developing new team management techniques. The sergeant establishes the criteria to be used in evaluating the success or failure of directed activities.

The Watch Report

The change in days off altered the area commands of the lieutenants. Lieutenants now have city-wide responsibility. This change necessitated revising the Area Plan. The new report is called the Watch Report. The basic intent is unchanged.

TEAM CONFERENCES

One of the basic components of the Sacramento MPO model was the decentralization of the decision making process to the operational or team level. The concept of decentralized decision making requires a team conference in which information is exchanged and operational plans are developed. The pre-MPO roll call was a unilateral exchange that did not permit autonomous team conferences.

Before MPO, each Watch began its tour of duty by attending a traditional police roll call. A Watch Lieutenant presided over the fifteen minute roll call, dispensing information deemed important to patrol officers. Often the information would include changes in department policy, laws of arrest and seizure. Most of the information, however, dealt with specific police problems in the various sectors. Since all patrol officers attended the briefing, much of the information did not affect them. The objective was to shift from a generalized group roll call to individual team conferences.

Replacing the group roll call substantially increased the role of the Sector Sergeants. Each sergeant would preside over the Team Conference and act to facilitate inter-group participation. Ideally, the conference would serve as a forum for the discussion of team problems. The Sector Sergeant, as the team leader, would assist the team in preparing strategies designed to resolve those problems. Since the Team Conference model altered the role of the sergeants, four hours of Conference Leading training was provided during the Supervisors MPO Training Sessions.

This change in philosophy necessitated some structural modifications in the existing Muster Room. Under the traditional approach, the Muster Room had eight rows of stationary tables bolted together with twelve chairs each. The tables were bolted to the floor, facing a podium at the front of the room. The fixed tables could not be rearranged into settings more conducive for group communications. The Team Conference model virtually requires a circular spatial arrangement which permits a full intermember communication network. A second major distractant caused by the spatial arrangement was lack of both audio and visual privacy. Four teams would meet in the same room and conduct simultaneous conferences. The noise and activity levels effectively prevented meaningful Team Conferences. MPO grant funds authorized the purchase of nine acoustical panels and the removal of five rows of tables. The panels separated the room into individual Team Conference areas. Free-standing chairs with side desks were provided as alternatives to the tables.

Changing the spatial relationship by itself does not necessarily alter group dynamics, but merely provides the setting in which growth can take place. The transition of officers and sergeants was not an easy one. Most sergeants did not exploit the change to develop group dynamics; instead, they conducted a smaller (team) version of the traditional roll call. As time passed, increasingly more sergeants engaged in team building activities and now officers are beginning to emerge as

full participants. This is an important point: introducing new programs and role expectations does not implicitly alter behavior. The new behavioral expectations must be monitored and reinforced.

A final change brought about by the Team Conference model was the development of a "Sector Book". The Sector Book is a looseleaf binder containing information germane to each particular sector. The Crime Analysis Unit inserts daily Crime Summaries and current Crime Pattern/Series Notices. The Patrol Division Administrative Sergeant inserts special memos, Weekly Activity calendars, Watch Rosters, Roll Call Bulletins and other miscellaneous information. The Sector Sergeant posts copies of the Sector Daily Activity Log in the book. Each day, the Sergeant brings the Sector Book to the Team Conference. The Sector Book provides most of the information needed for discussion.

THE PATROL REFERENCE STATION

The day to day planning of Directed Patrol requires a constant need of current information on the crime, traffic and social problems occurring in the community. Before MPO, the information on these problems was scattered in various locations throughout the Department.

It became apparent in the early planning stages that some centralized location of available information, including SPD Data Bases, needed to be established; and, that someone or some unit needed to be assigned the responsibility to assemble and maintain it.

The Sacramento Police Department was heavily influenced by the design of the San Diego Police Department's Patrol Resource Center. San Diego has a Resource Center located in each of the five Patrol

Division squad rooms. The Resource Center is a centralized library of reference materials available to all officers. The Center also contains a computer terminal that allows access to certain crime files.

Sacramento's Patrol Division is housed on the second floor of the Police Annex building, located across the street from the main Police building. A Patrol Reference Station (PRS) was built into the reception area of the squad room. The reception area is approximately 30' x 29' and it contains vending machines and tables. An area measuring approximately 11' x 26' was designated as the PRS.

MPO Grant funds were used to build a partition five and one-half feet tall. MPO Grant funds also purchased a series of open bin files and several standard file cabinets. The open bin files house the District Analysis Reports. In addition to the District Analysis Reports, the PRS includes a computer terminal, micro-fiche reader and a multitude of textual resources needed for the completion of the District Analysis Reports.

In addition to information required for the District Analysis Reports, the PRS has become the central repository of police-related information. Arrest Bulletins (AB's), Information Bulletins (IB's), memos and recent court decisions are posted on the bulletin boards. The PRS even contains a variety of police-related journals.

The Selective Enforcement Section has the overall responsibility for the upkeep of the PRS. A student intern attached to Crime Analysis (a Unit of the Selective Enforcement Section) spends approximately one hour a day maintaining the area.

LESSONS LEARNED

1. Directed Patrol has proven itself as an effective means of dealing with crime and service-oriented problems. Crime Suppression Units have been the most successful in terms of arrests and clear-ups. Major service-oriented problems have been diminished by directed activities of uniformed officers.
2. The support systems, i.e., Crime Analysis, SCARS and STARS, District Profiles, etc., are still relatively new to the team level and are expected to have a greater impact in the future.
3. A sharp distinction needs to be made between "Formal" and "Informal" Directed Patrol concepts. In Sacramento, Formal Directed Patrol occurred when a specific problem was defined, strategies developed and an Operational Outline prepared. On the other hand, Informal Patrol can occur in many ways. For example, an officer sitting in a marked unit at a high accident intersection; or in a shopping center parking lot experiencing auto thefts, while writing his reports is an informal activity. Similarly, concentrating individual patrol in problem neighborhoods between calls for service also is informal in nature. What is important here is the level of officer awareness as to existence of district problems, and how the officer maximizes the use of his time in relationship to those problems.
4. We have not developed a data collection system for reporting informal activities. Candidly, if such a system were to be

installed, it is our opinion that it would be cumbersome, time consuming, and contain a high degree of error. In short, the data produced by it would not be worth the effort required to produce it. And yet, we know informal directed patrol does occur. Field Contact Cards and Information Reports are being generated by field units and directed to the Crime Analysis Unit referencing specific patterns and series. What is difficult to measure is whether the origin of these reports is the result of accidental contact with suspects, or whether the officer during uncommitted time was actually patrolling an area with the specific intent of looking for a particular activity. Therefore, the casual relationship becomes very tenuous and highly subjective.

Certainly, for evaluation purposes, a sampling method could be developed using followup interviews with officers to get approximations as to informal directed patrol activities. However, the development of an on-going accurate management reporting system for this purpose seems to be unrealistic at this time.

5. Many supervisors and officers do not completely understand the intent of the Strategies Profile, District Analysis Report, and will require some follow-up training.

RESULTS

The bulk of directed activities is currently undertaken on the overlap day, when an additional team is available. Under the current 4-10 configuration, each Sector on all Watches has one overlap day per week. During some months, the first two

overlap days in each sector are used for training. Training sessions generally do not last longer than four hours. Under this plan, the "A" shift would train on the first overlap day for their sector and engage in some form of directed activities during the remainder of the shift. The "B" shift team would fill the primary districts and handle CFS. On the following overlap, the roles would be reversed.

Maintaining team integrity and establishing overlap days on the basis of the CFS workload per sector enhances and restricts directed patrolling efforts. Having an extra (tactical) team available on the peak CFS day in the sector permits a more cooperative effort. The primary units can be freed from chronic service-oriented problems, i.e., juvenile disturbances in parks, which would otherwise be handled as a CFS. Problems which occur during the remainder of the week must compete with the CFS workload. The volume and nature of CFS, for the most part, determines the relative level of directed activities. Sector teams frequently do not have the available manpower to engage in any directed activities. However, between the combined effort of patrol and the Crime Suppression units, we have worked all documented crime series and a high percentage of the crime patterns.

Directed Patrol, as a practical concept, is the next logical, evolutionary step in the utilization of field services. Directed Patrol in Sacramento is still in its infancy. Officers and supervisors are still learning how to use the information

systems effectively and engage in team planning. Sergeants are beginning to use Direct Patrol as a management tool by monitoring information directed activities of their subordinates.

The following series of tables are presented to give the reader a sense of the environment in Sacramento. The tables reflect raw data only. No attempt was made to analyze the variance or interpret causual effects. The Sacramento Police Department underwent several changes during the SPUDS/MPO Grant period which compounded any efforts to analyze the data. During this period, the uniformed patrol force shifted to a 4/10 Plan from a 5/8 Plan. Accompanying that change, thirty-three Traffic officers were transferred to the Patrol Division and Patrol went from 70% two-officer units to 70% single-officer units.

The first set of tables reflect the total number of hours attributed to "Patrol Time" and "Directed Patrol" on the officer's daily journal. The daily journals are not considered to be reliable because each officer fills it out differently. Presently, there is no uniform method for reporting Directed Patrol time. Most of the hours listed as Directed Patrol are the result of formal directed activities only.

The last set of tables reflects the number of reports taken and the number of arrests made. These statistics are derived from the SCARS system.

1ST WATCH

PATROL TIME (HOURS)

	JAN	FEB	MAR	APR	MAY
1979	2790.3	2496.9	3044.2	2598.6	2640.5
1980	2701.1	2509.5	2241.6	2341.2	2195.6

DIRECTED PATROL (HOURS)

	JAN	FEB	MAR	APR	MAY
1979	30.2	32.4	60.1	117.2	67.7
1980	34	58.5	275.9	337.1	381.2

2ND WATCH

PATROL TIME (HOURS)

	JAN	FEB	MAR	APR	MAY
1979	2144.4	2310.7	2479.8	2064.9	2343.2
1980	3337.9	2697.3	2653.7	2507.4	2817.3

DIRECTED PATROL (HOURS)

	JAN	FEB	MAR	APR	MAY
1979	142.1	181.4	150	216	284
1980	646.4	539.4	631.2	602.4	714.4

3RD WATCH

PATROL TIME (HOURS)

	JAN	FEB	MAR	APR	MAY
1979	2676	2755.3	2537.6	2046	2523.2
1980	2984.2	2121.7	2535.3	2341.4	2739.8

DIRECTED PATROL (HOURS)

	JAN	FEB	MAR	APR	MAY
1979	118.5	163.9	323.9	219	255.3
1980	516	233.1	323.5	194.8	243.3

1ST WATCH

STATISTICS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FELONY ARRESTS												
1978	85	67	81	71	70	64	83	71	66	100	80	78
1979	87	63	94	86	83	88	78	89	86	68	64	100
1980	79	73	103	69	69	88						
MISD. ARRESTS												
1978	127	95	126	123	97	96	157	110	142	132	130	117
1979	113	136	168	138	123	136	141	141	141	151	153	127
1980	145	152	150	140	136	144						
MISD. CITATIONS												
1978	25	31	41	28	18	35	94	112	73	67	34	25
1979	23	44	53	30	68	44	52	28	38	19	21	25
1980	20	26	23	27	40	69						
CLEAR-UP BY ARREST												
1978	85	75	93	85	76	66	110	96	86	90	79	94
1979	100	88	133	91	109	110	96	89	113	97	85	118
1980	83	81	102	82	90	112						
CRIME REPORTS TAKEN												
1978	397	342	381	377	361	368	452	427	394	398	395	440
1979	457	430	510	472	484	462	454	370	394	401	354	425
1980	361	365	363	338	375	468						

2ND WATCH

STATISTICS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FELONY ARRESTS												
1978	45	39	55	50	61	44	36	33	34	48	35	39
1979	32	47	36	52	54	56	47	66	69	52	52	58
1980	56	41	69	63	67	62						
MISD. ARRESTS												
1978	61	48	50	71	62	83	45	54	80	69	57	60
1979	59	80	118	111	108	78	94	83	84	94	109	120
1980	91	99	142	148	142	91						
MISD. CITIATIONS												
1978	37	54	62	44	66	59	45	57	29	50	73	55
1979	74	65	65	53	72	37	49	53	54	67	63	95
1980	103	81	89	75	87	60						
CLEAR-UP BY ARREST												
1978	80	84	103	116	126	97	68	82	63	88	109	108
1979	114	106	105	109	120	75	93	112	112	108	119	130
1980	153	122	166	135	154	128						
CRIME REPORTS TAKEN												
1978	720	595	663	699	679	629	614	623	624	612	689	672
1979	717	652	703	710	685	624	639	673	625	715	663	774
1980	805	773	755	746	747	643						

3RD WATCH

STATISTICS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FELONY ARRESTS												
1978	138	123	148	160	163	127	148	135	139	134	114	117
1979	107	122	157	128	135	147	146	168	128	123	100	149
1980	128	136	144	126	147	159						
MISD. ARRESTS												
1978	246	227	265	283	294	226	262	291	296	280	298	266
1979	255	300	347	305	294	307	330	338	345	291	327	311
1980	357	320	335	321	379	333						
MISD. CITATIONS												
1978	77	87	108	77	142	134	106	131	93	94	113	127
1979	128	153	143	126	141	130	144	189	157	138	122	123
1980	116	204	176	156	159	152						
CLEAR-UP BY ARREST												
1978	197	186	235	262	255	218	275	265	243	223	217	247
1979	243	276	289	230	259	245	250	273	234	246	212	240
1980	250	247	260	218	268	243						
CRIME REPORTS TAKEN												
1978	800	748	850	784	754	738	852	739	761	838	833	947
1979	863	835	907	817	812	746	789	804	771	785	896	939
1980	947	885	861	787	834	781						

CONTINUED

3 OF 4

CRIME SUPPRESSION UNIT

STATISTICS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FELONY ARRESTS												
1978	51	39	57	63	52	38	51	46	47	88	91	77
1979	73	37	61	50	54	38	34	22	28	35	36	32
1980	28	63	67	61	96	74						
MISD. ARRESTS												
1978	26	34	26	35	52	49	49	49	27	41	57	23
1979	38	21	41	36	21	15	19	12	16	30	156	16
1980	18	41	20	30	25	15						
MISD. CITATIONS												
1978	2	6	12	22	20	19	17	9	3	16	11	4
1979	4	5	15	16	4	8	7	4	5	8	10	0
1980	2	2	4	5	6	1						
CLEAR-UP BY ARREST												
1978	20	30	42	48	48	43	47	37	43	67	58	36
1979	39	26	51	34	29	27	19	16	17	33	25	22
1980	16	33	31	40	42	24						
CRIME REPORTS TAKEN												
1978	11	27	22	39	48	48	43	37	32	56	45	24
1979	22	30	45	33	25	25	19	28	12	26	18	25
1980	12	33	23	23	33	19						

Figure A shows the dual relationship between Patrol and Crime Suppression.

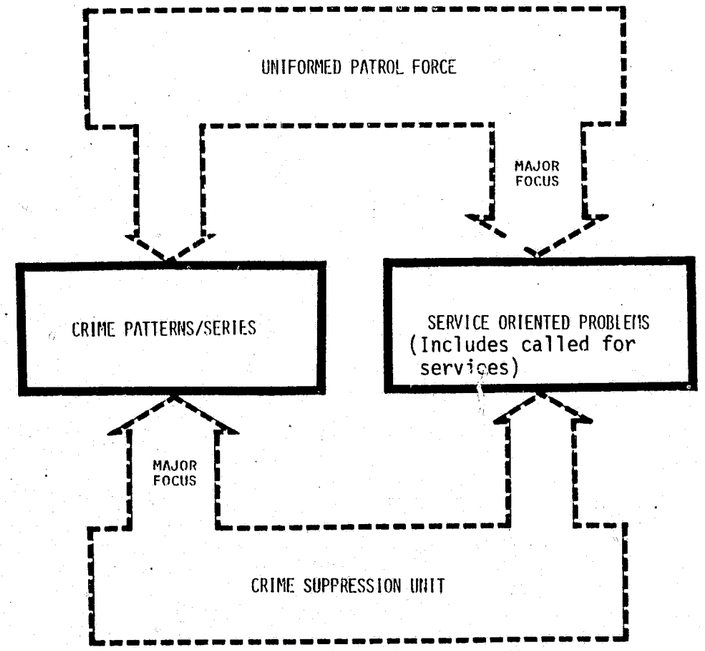


Figure A.

Since Crime Suppression has been engaged in directed activities for several years, no measurable increase in efficiency could be expected. The greatest potential rested with patrol. The primary goal of Directed Patrol is "to decentralize both the authority and responsibility for operational planning to the patrol team level for the resolution of crime, traffic and community problems".

Figure B shows the process of team level planning as it relates to the field test.

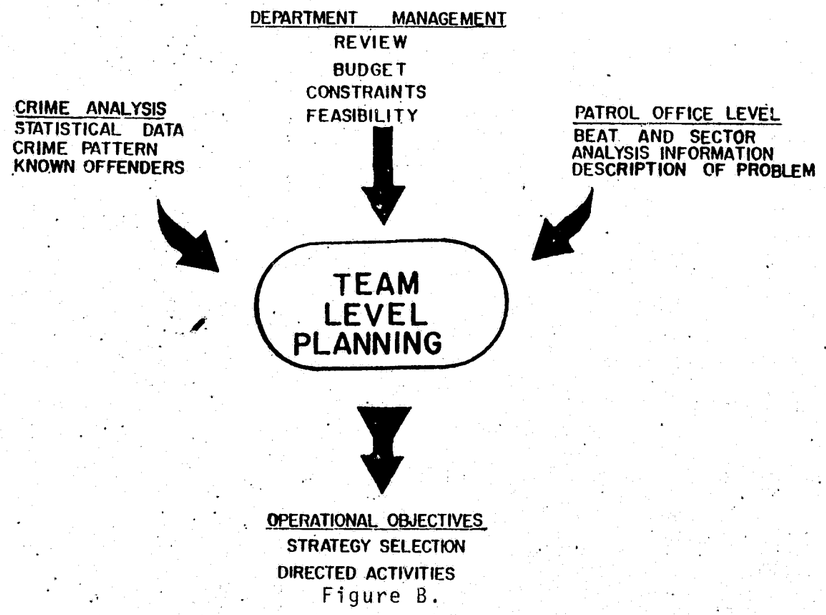


Figure B.

CHAPTER 8

MPO TRAINING FOR SUPERVISORS

I. INTRODUCTION

The MPO Supervisors Training was intended to accomplish several objectives. First, it was the principal vehicle whereby supervisors would be informed in detail as to both the Directed Patrol Model planned for implementation in Sacramento, and as to the expanded Crime Analysis delivery system which was to support Directed Patrol. A second training objective was to provide patrol supervisors with new skills in problem identification and in the planning of appropriate Directed Patrol strategies. The last objective was to gain a program committment by supervisors to the MPO concept. This objective, although difficult to measure, was a major concern to the MPO project staff. The first line supervision was viewed as the critical factor in the entire MPN equation. If they were not clearly convinced as to the need and value of the Directed Patrol program, then the chances were good that ultimately MPO would fail.

It is important to note also that, early in the MPO project, the Chief of Police had made the decision that all 96 Police Sergeants and Lieutenants would receive the MPO training. This contrasted with the original Grant Budget which provided $25,489 for salary reimbursement of 36 Patrol supervisors and managers while they attended 56 hours of projected MPO training. The supervisors course, as ultimately developed, was reduced to 40 hours; and, because

all sergeants and lieutenants were now scheduled for MPO training, a further decision was made that the Department would absorb all salary and fringe benefit costs for the trainees. The $25,489 was transferred to other lines in the Grant budget.

II. LEARNING OBJECTIVES FOR SUPERVISOR TRAINING

The broad objectives for the Supervisor Training was to inform them of the program itself and to develop the specific skills necessary to carry out the program. To this extent, training objectives can be cataloged as follows:

1. MPO/SPUDS Program Introduction
2. Team Level Planning Introduction
   a. Decision making responsibility
   b. Decision making authority
3. Enhancing "Beat Awareness" through profiling
   a. Demographic Profiles
   b. Geographic Profiles
   c. Intelligence Profiles
   d. Community Leaders Profile
   e. Problem Profile
      1) Crime
      2) Traffic
      3) Community
   f. Strategies Profile
   g. Resource Needs Profile

4. Crime Analysis
   a. Role
   b. Reports and Products
   c. Feedback Requirements
5. Directed Patrol Introduction
   a. Strategy Types
      1) Crime Prevention
      2) Crime Deterrent
      3) Criminal Apprehension
   b. Directed Patrol Planning
      1) Long Range Problems
      2) Short Range Problems
6. Facilitating Team Conferences
7. "Obligations and Rights" for Job Incumbents Under Directed Patrol
   a. Police Officer
   b. Sergeant
   c. Lieutenant

III. TRAINING STRUCTURE

The Directed Patrol Program as developed by the MPO/SPUDS Staff had passed through several management staffing levels and stood ready for implementation. However, in preliminary planning sessions regarding training curriculum, one of the principal trainers, Sgt. Fred Arthur, put forth the idea of dividing the training classes into lecture sessions followed by hands-on workshops wherein the supervisors would not only work

with the materials presented but also would be allowed to critique all aspects of the program and to suggest "How" to implement it. The trainers and MPO Staff would collect all class comment regarding implementation problems identified by the supervisors together with their recommendations as to where the program should be changed. At the end of seven weeks, or when all the supervisors had been trained, the class critiques would be merged together and, where possible, the program would be modified to reasonably accommodate those who were actually responsible for its implementation. Moreover, each class was promised feedback to them as to what program changes would be made, those that would not be made, and the reason why. Thus, as a spinoff benefit, the MPO Program not only received extensive input from over 100 supervisors, but gave them a sense of their "owning" the program by permitting changes that were of their creation.

In order to set some reasonable parameters on how far the supervisors could reasonably impact the program design, and at the same time insure that the department would be able to fulfill its Grant obligations, an additional concept of "Negotiable" vs. "Non-negotiable" issues was developed. Patrol management identified specific program concepts which must be incorporated, and which were non-negotiable:

- The Patrol Division will engage in Directed Patrol
- The Patrol Division will engage in some form of profiling as a means of acquiring beat awareness and understanding.
- The Patrol Division will use and understand Crime Analysis information and reports.

However, within those concepts there was wide negotiable flexibility as to not only what we would do, but how much would be done, how it would be done and when. Patrol management and the MPO Staff recognized that such a training design was a high risk--high payoff approach. If we were successful in selling the program, the benefit would be a commitment by the supervisors because the final design would actually be theirs. Similarly, the Program would undergo an extensive "de-bugging". On the other hand, if the supervisors reacted negatively to the design, or if they presented too many suggestions that we could not accommodate, then management could be faced with disgruntled supervisors who could justifiably claim that "Nobody really wanted their input"; or "Nobody listened to them"; or even that "It was all a big show and that no matter what they said, it was going to be shoved down their throats anyway". Thus, a serious credibility problem could emerge, as well as supervisor resistance to the program.

To set the tone for each class as they began their 40-hour training week on Monday, Deputy Chief Finney presented the first instructional hour to use as a program overview and to introduce the negotiable/non-negotiable concept. As a training wrap up, on Friday afternoon,

Chief of Police John Kearns and Deputy Chief Finney would spend the last two training hours in a round circle discussion with the supervisors. Chief Kearns introductory comments covered the following points:

- He supported MPO
- The Police Department would always be changing in order to be responsive to both the community needs and new technology.
- The MPO Program was not "locked in concrete", that he personally, patrol management and the MPO Staff would indeed listen to the suggestions solicited from the supervisors in training.
- The Department adopted a modified San Diego COPS Plan because it allowed for the greatest participation by patrol officers and supervisors in the day-to-day operational planning of Directed Patrol activities.
- All supervisors throughout the Department were being trained in MPO not only because they some day may be transferred to Patrol, but also because Patrol is the center of the Police Department and that all other units must be knowledgeable of Patrol's programs so that they can properly support it.

IV. TRAINING SITE

The MPO Supervisors Training was conducted through the Los Rios Junior College District and all students received

two units of lower division college credit. The actual classroom training site was the Northern California Criminal Justice Training and Education Center, 530 Bercut Drive, Sacramento.

Due to the training arrangement worked out with the College District, the MPO instructional staff, with the exception of the Project Director, performed all instructional duties during their off-duty time and they were paid by the College District at the prevailing instructor rate.

V. MPO TRAINING INSTRUCTORS

Four sergeants from the Office of (Field) Operations were selected to be the actual classroom instructors. The criteria by which potential instructors were evaluated included:

- Peer Level Credibility
- Job Expertise
- Training Experience
- Minimum Rank of Sergeant
- Must be currently assigned to the Office of (Field) Operations.

All the instructors possessed California Community College teaching credentials. In addition, they were given a brief refresher on team teaching techniques. The personnel selected as instructors were:

Sgt. Fred Arthur - Patrol, Third Watch

Sgt. Gary Youngblood - Traffic Section

Sgt. Robert Kelley - Traffic Section

Sgt. Kenneth Walker - Crime Suppression Unit

The MPO Project Director also assisted in team teaching one of the 4-hour instructional blocks. All workshops were monitored and facilitated by the MPO Project Staff.

VI. TRAINING SCHEDULE AND COURSE SYLLABUS

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Introduction Finney	Impact Areas - Warrants Detective Communications Traffic S. E. S.	Crime Analysis	Sector/District Analysis	Patrol Reference Station (Walker)
Conference Leading/ Team Building (Arthur)	(Youngblood/Arthur)	(Walker/Kelley)	(Austin/Youngblood)	Directed Patrol (Walker)
4-10/MPO Update (Arthur)	Workshop Warrants Detective Communication Traffic S. E. S.	Crime Analysis Practical Application	Sector/District Analysis Practical Application	Consolidation Workshop
4-10/MPO Workshop (Arthur)	(Austin)	(Austin)	(Austin)	(Austin) Critique (Chief Kearns)

SYLLABUS

40 HOUR ADVANCED OFFICER/SUPERVISOR COURSE

INTRODUCTION

This presentation is intended to introduce the 40 Hour course, its content, goals and the desired results.

1 Hour

CONFERENCE LEADING & TEAM BUILDING

This block of instruction focuses on team building by conferences at the start of each shift. Students will be instructed in the principles and techniques of conference leading and be asked to carry through this instruction in the later three workshops-conferences.

3 Hours

4-10/MPO PROJECT - UPDATE

The students will be given an update on the current problems and issues facing the department regarding the new 4-10/Managing Patrol Operations system employed July 1, 1979.

2 Hours

4-10/MPO PROJECT - WORKSHOP

The student will in a workshop methodology deal with and cause recommendations to be written addressing the problems and issues previously mentioned in the lecture.

2 Hours

IMPACT OF 4-10/MPO

Instruction will be presented regarding the influences the new patrol system is having on other areas of the department. These areas are to include, but are not limited to: Warrants, Detectives, Communications, Traffic and the Special Enforcement detail.

4 Hours

Workshops will be operated causing the students to come up with solutions for the department regarding problems caused by the new patrol system.

4 Hours

CRIME ANALYSIS

This section of instruction will present new procedures and information sources of crime analysis. Included in this block will be the WHAT, HOW and WHEN this information can be retrieved.

4 Hours

Practical application to this lecture will be the students producing crime analysis of his sector from the available resources identified in the instruction.

4 Hours

SECTOR/DISTRICT ANALYSIS

This block of instruction covers how to produce sector and district analyses. Besides the crime analysis previously covered, the student will be instructed on the other elements of the Sector/ District Analysis.

4 Hours

In practical application, the student groups will produce sector analysis to include:

1. Crime and traffic problems
2. Geographic problems
3. Demographic problems
4. Known offenders

4 Hours

PATROL REFERENCE

The student will be instructed in the new resources, centralization and use of the Patrol Reference Station.

2 Hours

DIRECTED PATROL

This block of instruction covers the principles and strategies of the directed patrol concept versus routine patrol.

2 Hours

CONSOLIDATION

This final block is intended to consolidate the weeks work into sector plans based on the previous instruction and performance. Additionally, the first days recommendations will be reviewed and revised.

3 Hours

CRITIQUE

1 Hour

VII. MPO SUPERVISORS WORKSHOPS: INTRODUCTION

The afternoon workshops were designed to achieve two purposes. First, it reinforced the morning lecture session by making the trainees use the materials earlier presented to them and to organize and prepare actual reports, i.e., District Profiles. By the end of the 40-hour session, a complete District Analysis Report was developed, thus allowing the supervisors not only the opportunity to review and familiarize themselves with the data sources necessary for each profile preparation, but also the time it required to reasonably assemble and write a total District Plan. Because "A" and "B" shift primary district officers were to jointly develop the District Analysis Report, the supervisors were similarly paired into teams to represent as closely as possible the actual conditions the officers would encounter.

The second purpose of the workshops was to offer the opportunity to critique the program documents and to document

- supervisor acceptance or rejection
- anticipated implementation problems
- solutions to problems
- recommendations to program change.

The critiqueing was done by dividing the entire class generally into 2 or 3 larger groups in which a facilitator and recorder were assigned. Each discussion group included at least one Patrol Supervisor and one

Detective Supervisor. The senior Patrol Supervisor in each group was designated as the group leader, regardless of the rank of other members. This permitted a continuous reinforcement of facilitation skills learned earlier in the week, and which would be used in (Patrol) Team Conference leading in the implementation phase.

VIII. SUPERVISOR TRAINING WORKSHOPS

MONDAY WORKSHOP

The Monday Workshop was only 2 hours in length and it was designed to achieve three objectives. First, the class was broken into pre-arranged teams where a patrol sergeant was, if at all possible, assigned as the facilitator, or conference leader. The objective here being to develop and practice conference leading skills in patrol supervisors which would be later applied in the Directed Patrol Program Model by replacing the traditional "Roll Calls" with "Team Conferences".

The second objective of the workshop was to generate a broad discussion of the 4/10 deployment system; problems in the deployment, as perceived by supervisors; and recommendations or suggestions for change. At the end of the workshop, each group made formal presentations to the entire class. All group notes were collected and retained by the MPO Training Staff.

The final objective of the Monday Workshop was a supervisory review and critique of job descriptions under MPO for:

- Police Officer
- Patrol Sergeant
- Patrol Lieutenant

The job descriptions were organized into 3 sections:

1. A Typical Day Under MPO
2. Job Obligations Under MPO (What is expected of them)
3. Job Rights Under MPO (Support services that must be in place).

MONDAY WORKSHOP CRITIQUE

Section 1 - 4/10 Deployment

a. Comments

Section 2 - Job Descriptions

a. Typical Day Patrol Lieutenant under MPO
b. Patrol Lieutenant's Obligations under MPO
c. Patrol Lieutenant's Rights under MPO
d. Typical Day Patrol Sergeant under MPO
e. Patrol Sergeant's Obligations under MPO
f. Patrol Sergeant's Rights under MPO
g. Typical Day Patrol Officer under MPO
h. Patrol Officer's Obligations under MPO
i. Patrol Officer's Rights under MPO

TUESDAY AFTERNOON WORKSHOP

This workshop was divided into one session. Discussion groups were carried over from Monday's Workshop. Each group had a leader and recorder assigned. The groups

kept written notes on all topics discussed and reported their findings to the class as a whole.

This session assessed the impact of MPO on other departmental units, either in terms of demanding more supportive services and informational needs, or identifying the need for more inter-office coordination of efforts. The discussion generally centered on identifying problems and offering solutions. Some problems which would not be impacted by MPO were also identified. These comments are also included, verbatim, in the MPO Impact Areas Section of this chapter.

TUESDAY WORKSHOP CRITIQUE

Section 1. Comments pertaining to specific units

a. Patrol
b. Communications
c. Traffic
d. Detectives
e. Crime Analysis
f. Crime Suppression Unit
g. Special Investigation Section

Section 2. General Comments

WEDNESDAY AFTERNOON WORKSHOP

This workshop dealt principally with Crime Analysis-Data Collection. A series of prepared exercises were given to the supervisors to, again, reinforce materials presented during the morning lecture sessions. In these exercises, supervisors were paired into two-man teams to represent the "A" and "B" Shift officers of a Patrol District.

Three separate geographical areas were chosen. The areas did not follow actual district boundaries but closely approximated current district sizes. Each pair of officers were assigned to one of the three shifts. All officers working the same hypothetical district around the clock were then assigned to the same team, i.e., North Sacramento. On some of the exercises, the information was constant on all watches and the "district officers" were able to collaborate. Most of the information varied from watch to watch, but this illustrated the overlap of problems and the need for greater cooperation and coordination between watches. Each pair of students was given a loose-leaf binder. The binder contained the training materials and instructions. Each binder had the assigned district and watch marked, along with the student's name.

The last session of each workshop was used to critique the entire day with emphasis on the workshop. Each "team" was asked to write their criticism down and report back to the group as a whole. The MPO/SPUDS staff then collated the remarks and had them transcribed verbatim.

WEDNESDAY WORKSHOP HANDOUTS AND CRITIQUE

Section 1. Crime Pattern Notice (CPN)

a. Instructions
b. Active Crime Pattern Notice
c. Field Contact Search Request Form
d. Comments

Section 2. Crime Magnitude Charts

a. Instructions

b. District binders

1. SCARS Printouts

2. District Maps

3. Crime Magnitude Graphs

4. Crime Magnitude Summary*

c. Comments

THURSDAY AFTERNOON WORKSHOP

The district binders were collected on Wednesday and the Thursday training material was added. The students began to fill out an actual District Analysis Report using the proposed format. Each pair of students used a variety of sources, including personal knowledge, to fill out five profiles:

- Geographic
- Intelligence
- Crime Problem
- Traffic Problem
- Community Problem

The Strategies Manual was used as a guide. After the exercise was completed, several members read their profiles to the class.

The class was divided into teams for a discussion of the exercise and the District Analysis Report. The comments included the five profiles plus the Demographic and

* Included in the last two weeks of training.

the Community Leaders Profiles.

THURSDAY WORKSHOP HANDOUTS AND CRITIQUE

Section 1. Profiling

a. Instructions

b. District binders

1. Maps

2. SCARS Printout

3. Crime Magnitude Charts

4. High Accident Locations Memo (Added for Workshop)

5. Profile Worksheets (Added for Workshop)

c. Comments

FRIDAY AFTERNOON WORKSHOP

This session was divided into three sections. First, the students completed the District Analysis Report by developing a strategy designed to diminish or eliminate an identified problem and then assessing needs. Second, they reviewed and critiqued the morning session on the Strategies and Needs Assessment Profiles, the Strategies Manual, related forms and the Patrol Reference Station. The last section was a roundtable discussion and recap of the course with Chief Kearns and Deputy Chief Finney.

FRIDAY WORKSHOP HANDOUTS AND CRITIQUE

Section 1. Profiling

a. Instructions

b. District Binder

1. SCARS Printout
2. District Maps
3. Crime Magnitude Charts
4. Crime Magnitude Summary
5. High Accident Locations Memo
6. Completed Profiles
7. Profile Worksheets (Added for Workshop)

c. Comments

Section 2. Patrol Reference Station and Manual

a. Instructions

b. Comments

Section 3. Recap with Top Management

a. General Comments

IX. LESSONS LEARNED

As previously stated, the classes were structured in such a manner (Lecture and Workshop) so as to provide supervisor input into the final Directed Patrol Model and to the Crime Analysis Delivery System Design. The Project staff anticipated criticism and was prepared to accomodate as many changes as possible in order to gain program acceptance. What was not anticipated was the wide range of other organizational problems and issues that emerged out of the workshops.

MPO is a broad-based concept that impacts widely across the entire police organization. As designed for Sacramento, MPO placed hard focus on Patrol's importance and on its function. Inter-departmental cooperation then

became the keystone to program success in terms of providing the informational resources for team-level Directed Patrol planning. And, of course, cooperation is present only when there is effective communication and understanding.

Unquestionably, the greatest lessons learned from the MPO Supervisors Training was the awareness of the communication blockages in the organization. We are replete with examples:

1. Crime Analysis was issuing Crime Pattern Notices without first checking with Detectives for updated investigative information. As a result, the CPN's were ridiculed by Detectives as being out of date or erroneous.
2. Detectives were issuing Arrest Bulletins (AB's) on felony cases just as soon as investigation had established "probable cause" to arrest, and where they had filed for an arrest warrant. The prevailing attitude in Patrol was that the Detectives were unable to find the suspect themselves and that the issuance of the AB was merely a way to file the case.
3. In a similar vein, Detectives were issuing Information Bulletins (IB's) as a means of providing information on cases to Patrol and soliciting their cooperation. Again, Patrol's view was that the IB's were just a means of filing the case.

4. Patrol complained that Detectives were inaccessible and withheld information. Investigators countered by saying that they were providing information to those officers who wanted to come and get it -- usually on a one-to-one basis.
5. Rumors abounded among Patrol that Chief Kearns and Deputy Chief Finney were using MPO as a means of getting rid of the 4/10 deployment of Patrol. (This rumor was laid to rest quite convincingly by Chief Kearns after two of his appearances at the Friday Workshops.)
6. Nearly everyone complained that special programs existed throughout the Department that nobody else knew about or had been allowed to provide input. Detectives did not know what Patrol was doing; Patrol did not know what Detectives were doing; and nobody knew what was going on in Administration.

What became interesting was the spinoff results of this dialogue that occurred among the supervisors. Agreements were struck to resolve a number of the problems and concerns that emerged. For example:

1. The Lieutenant in charge of the Burglary Investigation Section informed Patrol supervisors of his Unit's reorganization whereby Detectives would be assigned case loads corresponding to Patrol Sectors. Furthermore, as of March 1, 1980, these Investigators would begin attending the Patrol team conferences on a regular basis in order to share information and to provide updates and feed back.
2. Under heavy pressure from all sides, the Crime Analysis Unit established a direct liaison with Detectives. Further agreements were struck with regard to checking with Detectives prior to the issuance of Crime Pattern Notices and Updates.
3. Considerable support was voiced for various alternatives to bridge the communications gap between Patrol and Detectives. Suggestions included: a job rotation policy; Ride-a-Long Program for Detectives; and expanding the Field Training Officer Program whereby FTO's are assigned to the Detectives for an orientation period of usually one month.
4. Every supervisors class agreed that the Crime Analysis Unit was the central key to Directed Patrol success. It was also their opinions that, given the present staffing levels, Crime Analysis could not keep up with the anticipated demand. Therefore, police management must provide staff support. This concern, after being repeatedly expressed in the Friday Afternoon Wrapup Session with Chief Kearns and Deputy Chief Finney, resulted in additional manpower being assigned to the Crime Analysis Unit.

X. OTHER COMMENTS AND BENEFITS

Police organizations that provide 7-day week/24-hour day service delivery face enormous problems insofar as inter-departmental communication is concerned. And the larger the organization, the more compounded is the problem. Improper communication results in misunderstandings as to: operating programs; unit and individual responsibilities; job roles; policies; procedures; and priorities. Over and over again, these themes were voiced in the Supervisors MPO Training. Many of them stated to the Chief that this was the first time they have ever been pulled together and allowed the opportunity to have input to a program design and to discuss other problems that were bothering them. Many were suspicious. Some didn't believe us. In order to establish credibility with the classes, we utilized one of the early suggestions expressed to the Chief that all Captains should attend the MPO Training Sessions. The Chief agreed and the Captains were immediately scheduled. Although it helped with our credibility, the presence of the Captains did have somewhat of a chilling effect on the class discussions.

In retrospect, everyone benefitted from the experience. The Chief learned first hand as to what was bothering the supervisors and what they saw as problems for MPO. And, as Chief Kearns noted, "These guys weren't the least bit bashful". The supervisors, of course, learned MPO and its potential impact across the organization. Equally, the Chief made clear to them that Patrol is the focus

of the Department and all things are support for it. The MPO Project staff learned, too, as we used the opportunity to obtain numerous sound program suggestions and to debug both planned procedures and data collection methods.

XI. RESULTS OF MPO SUPERVISORS COMMENTS AND SUGGESTIONS

The comments and suggestions put forth by the Supervisors have been used at several points in the MPO Project, and they have been major influencing factors.

1. Resource Allocation

On Wednesday, October 24, 1979, the Sacramento Police Department Patrol Planning Committee was convened for the purpose of setting the Patrol Division Manpower Allocation Deployment Plan for 1980. Among the Committee Reports was a presentation by Sgt. Fred Arthur on the criticisms and suggestions of Police Supervisors on the current 4/10 Deployment Plan. The supervisors criticisms were verified, in fact, by the PCAM and Hypercube Studies. Thus, the Project was able to achieve several objectives:

- Credibility for PCAM and Hypercube was established inasmuch as their outputs were consistent with the supervisors own observations.
- Substantial support for changes to the 4/10 Deployment Plan was clearly established among supervisors.
- And finally, that the 4/10 Deployment Plan

itself was substantially improved.

For a more detailed discussion on the comments by supervisors, see the chapter on "Resource Allocation", Section VII.

2. Directed Patrol

On November 15th and 16th, 1979, the MPO Advisory Committee met to develop the Sacramento Directed Patrol Program based on general concepts and the Supervisors MPO Class feedback. The MPO Advisory Committee was selected to fully represent all components of the Sacramento Police Department.

Patrol management indicated that the program developed by the Advisory Committee, in fact, would be the final product that would be presented to and implemented by the Patrol force. Patrol management identified specific non-negotiable program concepts which must be incorporated.

The concepts were:

- The Patrol force of the Sacramento Police Department will engage in Directed Patrol.
- The Patrol force will engage in some form of profiling as a means of beat awareness and understanding.
- The Patrol force will use and understand Crime Analysis information reports.

The MPO Advisory Committee followed a programmed agenda which included:

1. Profiling
2. Directed Patrol Reports
3. A discussion on Crime Analysis processes, products and procedures.
4. A discussion on the concept of minimum manning as it effects Field Operations when engaged in a Directed Patrol Program.

The Directed Patrol Advisory Committee developed three separate reports. They are as follows:

1. District Analysis Report
2. Sector Plan
3. Watch Report

XII. DISTRICT ANALYSIS REPORT:

The MPO Advisory Committee developed a District Analysis Report. Specific descriptive elements of two profiles (Geographic and High Interest) will be prepared by the current district officer during the training session.

Beginning November 30, 1979, all patrol officers will attend a ten-hour training session. On the overlap day, both teams in a sector (A & B) will attend the same training session. Officers working the same district will be paired for the joint preparation of the descriptive elements of the District Analysis Report.

The District Analysis Report is comprised of eight separate profiles. The profiles are as follows:

1. Geographic
2. Demographic
3. Community Leaders
4. High Interest
5. Crime Problem
6. Traffic Problem
7. Strategies
8. Needs Assessment

Geographic Profile

The MPO Advisory Committee decided that the current district officer would be the one that will provide the basic information for this profile. In February, after the new shift assignment, the new district officer will review and validate the information contained within this profile. The Geographic Profile has several categories:

1. Natural and Man-made Barriers
2. Main Streets
3. Schools
4. Parks
5. Public Facilities

The MPO Staff will provide the highest quality maps available for each district. Maps of major complexes will be included.

Demographic Profile

All of the information provided in this Demographic Profile will be provided by the MPO Staff. The source of the information is from the 1975 Special Census and the 1979 Housing and Population Module. This data is provided for information only. The officer need not add anything to it. The statistical information provided is as follows:

1. Population
2. Ethnicity by percentage of the total population
3. Income
4. Percentage of renters versus the percentage of home owners.
5. Percentage of non-English speaking households and the predominant language spoken.
6. The number and types of dwellings. This will include single-family dwellings, two to four unit dwellings and more than four unit dwellings.

Community Leaders

The Community Leaders Profile stirred the most controversy of all the profiles in the District Analysis Report. The Committee made several recommendations:

1. That the complete list would be available in Community Resources Division for community review.
2. All persons listed in the Community Services Planning Council Directory will be used as a source as deemed necessary by Community Resources.

3. All other persons not listed in the Directory who are identified as community leaders will be contacted personally by Community Relations to obtain their permission to be listed.
4. Office of Operations will provide staff assistance to type and sort all Community Leaders Profiles by Patrol District.
5. Officers working districts may supplement the Community Leaders Profile with the same restrictions identified above.
6. It is not the intent of the Community Leaders Profile to become a dossier of criminal information. The intent of the Community Leaders Profile is to identify people who, by virtue of their jobs or by virtue of their community involvement, can be of assistance to the Police Department.

High Interest Profile

The MPO Advisory Committee decided that the current district officer is the most knowledgeable person in this area. The current officer will provide basic information in each sub-heading based upon personal knowledge and information collected from other sources (SIS). This profile has seven major categories:

1. Areas frequented by known offenders
2. Group Activity
   (1) Criminal
   (2) Activist Groups
3. Halfway Houses

4. Juvenile Problems
5. High Risk Businesses
6. Neighborhood 415's
7. Hazardous Persons
   (1) Emotionally Impaired
   (2) Criminals

Crime Problem Profile

The MPO Advisory Committee decided on the following crimes that the officer will monitor as a means of obtaining a beat awareness:

1. Burglary: Residential
2. Burglary: Commercial
3. Burglary: Auto/Car Clout
4. Theft: Auto
5. Robbery: Person
6. Robbery: Business
7. Robbery: Purse Snatch
8. Rapes/Attempt Rapes

The MPO Staff will explore with the City Data Processing Department the possibility of developing a new report from the SCARS System that will provide monthly Summary Crime Statistics for each Patrol District, by Watch. An initial data base of 36 months was requested by the Committee in order to establish seasonal trends. Thereafter, the District Crime Summary Report will be utilized by District officers to monitor overall crime magnitude. The Office of Operations will plot three years of specified crimes on charts which will visually depict crime magnitudes. Thereafter, once a month, the officer

will receive a report that will tell him the total gross number of crimes that were reported in his district, within the hours of his Watch. The officer will then be responsible for maintaining the crime magnitude chart. In February, the new district officer will view crime magnitude charts of each of the above crime categories. He will attempt to make some statement regarding the frequency of crime in his district and to prioritize the importance of each crime. Secondly, he will attempt to identify trends. For those crimes that have a high magnitude or high frequency, the officer will then identify the problem and discuss with his sector sergeant how much information he needs; what he needs to query from the various systems (STARS, SCARS) or whether it should be a simple information request to Crime Analysis or Detectives.

Traffic Problem Profile

This profile has three categories:

1. High accident locations
   This information is a synopsis of the STARS run and will be provided by Traffic.
2. Chronic Traffic Problems or Complaints
   Traffic will provide an observation report to affected Patrol Unit indicating the chronic traffic problems that are generated by citizen complaints in each district for each watch.
3. Special Traffic Control Problems
   This is an informational category only. It will be provided by Traffic, no responses required.

This is basically a calendar of special events and parades as it relates to Traffic Control as it will affect each particular district.

Strategies Profile

Once a problem has been identified, the district officer shall evaluate the problem and develop a Directed Patrol Strategy designed to diminish the problem. Strategies requiring an operational plan must have the prior approval of the Watch Commander. Lesser strategies that require only the effort of the district officer may be approved by the Sector Sergeant. After a strategy has been approved, it is up to the sector teams to review the strategy so that all members of the team are cognizant of the chain of events and the intent of the strategy.

Needs Assessment Profile

This profile has four major categories:

1. Equipment
2. Training
3. Interdepartmental Assistance
4. Outside Agency Assistance

XIII. SECTOR PLAN REPORTS:

The MPO Advisory Committee developed a Sector Report which is prepared jointly by a Sector Sergeant and his shift counterpart in March, 1980. The Sector Plan Report has four major categories:

XV. DIRECTED PATROL STAFFING LEVELS

Engaging in Directed Patrol activities shall not be done at the expense of jeopardizing a Sector's fundamental responsibility to respond to calls for service. Some balance must be struck whereby Sector teams can release units or officers to engage in formal Directed Patrol activities, and at the same time, sufficient units remain available to handle the Call for Service workload. Minimum staffing levels will vary from watch to watch, sector to sector, and in fact, from day to day. The ability to divert personnel to formal Directed Patrol activities will have to be negotiated between the Patrol teams and the Watch Commander, who must ultimately approve such plans. Again, such decisions will be based upon a multitude of variables including, but not limited to:

1. Available Team Resources
2. Call for Service Workload
3. Severity of the problem to which the Directed Patrol activity is targeted.

CHAPTER 9

M.P.O. TRAINING FOR PATROL OFFICERS

INTRODUCTION

The M.P.O. training for patrol officers was designed to accomplish several goals. First, all patrol officers would be informed in detail as to both Sacramento Flexible Directed Patrol Program and the newly expanded role of the Crime Analysis Unit. Secondly, to introduce all officers to problem identification and the formulation of appropriate directed patrol strategies. A final goal was to enhance beat awareness and thereby develop a coordinated effort between operational units for more effective utilization of manpower in problem solving.

LEARNING OBJECTIVES OF OFFICER TRAINING

The broad objective of the training was to introduce the officer to the program and to develop those skills necessary to participate in the program. The training objectives can be cataloges as follows:

SACRAMENTO FLEXIBLE DIRECTED PATROL

1. Problem Introduction
2. Developing "Beat Awareness" through profiling
   a. Geographic Profile
   b. Demographics Profile
   c. Community Leaders Profile
   d. High Interest Profile
   e. Crime Problem Profile
   f. Traffic Problem
   g. Strategies Profile
   h. Needs Assessment Profile

1. Problem Identification
2. Short and Long Range Plans
3. Needs Assessment
4. Evaluation

Problem Identification

The sector sergeant shall review the District Analysis Reports of each of his districts. He shall evaluate each identified problem or problem area and prioritize them on two levels. First, those problems that are identified sector wide. These are problems that affect more than one district and require the resources of the entire sector or more than two units to diminish that particular problem. Second, the sector sergeant identifies problems that are exclusively district problems. These are problems that the district officer should be able to handle by himself and require limited resources, usually one or two units. In this manner, the sergeant is able to prioritize all of the problems identified in his sector on his watch.

Short and Long Range Plans

The sector sergeant shall prepare recommendations and plans in response to the identified sector-wide problems.

The team will develop day to day objectives dealing with short range problems. For instance, newly developed burglary series will have to be addressed.

Long Range plans shall address team objectives to reduce or diminish the magnitude of specific crime types. In the case of burglary, the team may implement a Crime Prevention program as a long range means of diminishing

the problem and, at the same time, they may engage in some specific Directed Patrol apprehension or deterrent activities.

Needs Assessment

This category, like the District Analysis Report, has four basic sub-headings:

1. Equipment
2. Training
3. Interdepartmental Assistance
4. Outside Agency Assistance

Those categories are used by the sergeant to identify specific needs as they relate to those sub-headings. In addition, the sector sergeant should not forget the resource of time. It is very important that the element of time usage be addressed in his Sector Plan to allow for the better managing of manpower at the sector level.

Evaluation of Operation

The sector sergeant should identify what means will be employed to monitor the success or failure of the employed strategies. The idea behind this portion of the report is to pull together the most successful strategies used in the City of Sacramento and not to affix blame or in any negative way impair the creativity and imagination of the officers in developing their strategies. This evaluation portion of the report will also be used for purposes of future plans, watch plans, training and, hopefully, the preparation of budget items for the Police Department.

XIV. WATCH REPORT:

The Watch Report will be a report prepared by both the A and B Shift Lieutenants. The scope will encompass the total watch, including both shifts. The report will review and list recommendations on the Sector Plans submitted for the watch.

Crime Analysis

The MPO Advisory Committee developed three information reports to be provided to patrol teams. The first report is a daily Sector Crime Summary which will be a listing of the major cases that occurred within the previous 24-hour period. This will keep the Sector Teams aware of the activity on a daily basis. A copy of the Sector Crime Summary will be placed on the bulletin board inside each team conference area. Additionally, there will be a copy placed in the Patrol Reference Station and a copy in the Sergeant's conference package.

The second report recommended by the Committee will be a Crime Pattern Notice (information only). This report serves to provide information regarding a possible pattern of which the Patrol Teams should be aware. The CPN will be similar to the one already being used by the Crime Analysis Unit. No followup or feedback to Crime Analysis is required at this point.

In the event additional crimes are reported, Crime Analysis will check with the detail in the Detective Division handling the cases to confirm, if in fact, that it is a pattern. If the Detectives agree with Crime Analysis and a consensus is reached that there is a

pattern, a CPN Update report will be prepared containing all available information. The CPN Update will indicate, minimally, if there are fingerprints, eye witnesses, the name of the investigator and list all suspects and suspect vehicles with the reason as to why these persons are listed as suspects.

In the event that a crime "series" is detected rather than a pattern, a Crime Pattern Notice series will be sent to the Sector Team which will contain all available information. A crime series is generally defined as repeating crimes occurring within a relatively short period of time and committed by a specific person, or group of persons.

Where an identified series is one in which the crime is of a violent, or potentially violent, nature -- such as rapes, armed robberies, or where physical injury has been inflicted, the CPN series first Update Report will be stamped with "Feedback Required". The Sector Sergeant shall prepare a report describing what steps, if any, have been taken to address the problem.

In the event the series continues, and Crime Analysis issues a second CPN Series Update Report, with "Feedback Required" stamped on it, copies will be routed to the Deputy Chief of Operations, the Watch Commanders, as well as the Sector Sergeant. The Watch Commander is then required to formally notify the Deputy Chief and Crime Analysis what steps are being taken to address the problem. This process shall continue until such time as the problem is solved.

3. Crime Analysis
   a. Role
   b. Reporting capabilities and products
   c. Feedback requirements
4. Directed Patrol Indoctrination
   a. Strategy types
      (1) Crime Prevention
      (2) Crime Deterrent
      (3) Criminal Apprehension
   b. Operational Planning
      (1) Long Range Problem Solving
      (2) Short Range Problem Solving
5. Role of the Team Conferences
6. Introduction to the Patrol Reference Station
7. "Obligations and Rights" of Patrol Officers Under M.P.O.

TRAINING STRUCTURE

The M.P.O. Advisory Committee divided the patrol officer training into two sessions. Phase I training commenced in November 1979, three months before the annual rotation. The training was conducted on the overlap day when both teams were present. This allowed the entire "A" and "B" shift teams to train simultaneously. All training was conducted at the classroom in the Police Annex Building, 625 H Street.

Phase I utilized the lecture/workshop concept which was successful in training the supervisors. Phase I was a ten hour basic orientation on the Sacramento Flexible Directed Patrol Program. The first half was a lecture on the theory and program design of

the chosen model. The second half was a hands-on workshop in which the district officers were paired for the joint preparation of selected descriptive portions of the District Analysis Report. Since greater than half of all patrol officers would ultimately change districts or watches in the February 1980 rotation, it was felt that the current district officer could address certain profiles with a greater knowledge than the incoming officer.

Phase II began in February 1980, two weeks after the annual rotation. This session lasted five hours on the overlap day. As before, both sector teams trained as a unit. Again, district officers were paired for the joint review and completion of the District Analysis Reports. Phase II focused upon Problem Identification, Problem Solving (strategies), and Needs Assessment. Integral components, e.g., crime analysis products, were also reviewed to reinforce previous lessons.

M.P.O. INSTRUCTORS

Each Watch Commander selected a sergeant and a patrol officer to be the M.P.O. instructors for his watch. All of the instructors met with the project staff to outline the lesson plans and review team teaching techniques. The personnel selected to be instructors were:

Sergeant Anthony Stella	First Watch
Officer Victor Sanchez	First Watch
Sergeant Joe Harrington	Second Watch
Officer Jeff Gibson	Second Watch
Sergeant James Deaton	Third Watch
Officer John Boyle	Third Watch

All of the instructors participated in team teaching Phase I. Unfortunately, Officers Sanchez and Gibson transferred out of the Patrol Division and were not available for Phase II.

PHASE I TRAINING

PHASE I TRAINING SUMMARY

Phase I training provided the first real opportunity for the department to explain the Sacramento program to the patrol officers in detail. In addition to the goals set forth above, it was hoped that all rumors would be laid to rest and any resistance to the program would diminish.

After the first two sessions (there were thirteen in total), the lecture outlining other Directed Patrol experiments was deleted. Most of the officers felt what other cities were doing had no affect on them and was a waste of time. The same officers, however, were intently interested in learning what was expected of them in the Sacramento program.

As the training session progressed into the detailed explanation of each "Profile" in the District Analysis Report, the officers raised the same issues as the supervisors during the forty hour course. Almost without exception, patrol officers agreed the Geographic Profile was both useful and desirable. During the practical application segment, sixty-seven out of the seventy District Analysis Reports were prepared correctly.

Two profiles were prepared in their entirety by staff personnel. The Demographic Profile was prepared by MPO/SPUDS staff. Many officers felt the profile was "nice to know, but who cares" and questioned its potential worth. The Community Leaders Profile was prepared by Community Resources Section personnel. It was a very controversial profile even though the officer wasn't required to do anything beyond reading it. Many officers believed it was a method of legitamizing crackpots and their organizations.

Officers complained it was a management trick to establish a list of individuals who warranted special treatment. The theory and intent of the profile was repeated in explicit terms, but it still did not alleviate the suspicions in the minds of some officers.

The High Interest Profile was considered to be of the most value by the majority of officers. Most officers viewed the profile as one having a direct correlation to police work. In general, officers were more enthusiastic during this practical application session than during all other Phase I training. The most common complaint by the officers was a lack of preparedness. Officers would come into the training session not knowing what to expect, and they would not have their field notes handy. In retrospect, the MPO/SPUDS staff should have provided an outline or a shopping list to each officer at least a week in advance.

Since the remaining profiles were not going to actually be prepared for three months, most officers showed a moderate interest in the profiles. The Phase I class presented an overview of the remaining profiles but it did not spark a great deal of discussion.

The Crime Analysis lecture led into the Team Conference building. After the officers were introduced to the new forms and products of Crime Analysis, they used an actual crime series notice to formulate a team strategy. Unfortunately, there were only two active crime series at the time. This meant many officers had to develop a strategy for a crime problem on a different watch and in an unfamiliar sector. This section was successful in team building, notwithstanding the aforementioned difficulties.

The final session, the Patrol Reference Station, was abbreviated because most officers were already using it. Most classes

finished approximately one-half hour early which permitted the officer to complete his weekly administrative reports.

At the conclusion of Phase I training, the initial profiles for three districts (two of them foot beats) out of seventy (the combined total of all watches) were not prepared. Those districts had been vacant due to injuries and vacations. Ten districts had duplicate reports filed because all officers assigned to Crime Suppression attended the training session. Since those officers were not assigned to a specific district, they were given the option of analyzing any district of their choosing.

PHASE II TRAINING

PHASE II TRAINING SUMMARY

Phase II training was designed to serve as a review and validation of the previously completed profiles, in addition to completing the remaining profiles. The Phase I profiling was prepared by officers assigned to a district before the annual rotation. On February 1, 1980, many officers changed their assignment within the Patrol Division and were assigned to new districts. Phase II training was delayed until the third week in February to permit an orientation period. The first hour was reserved for the review and validation process. The "A" and "B" shift officers were paired in the same fashion as the Phase I Training. Officers were given the Demographic and Community Leaders Profiles for insertion into the District Analysis Report. The information contained within those two profiles pertained only to the individual district. The information on District One was identical for Second and Third Watches as they have the same boundaries. The information for First Watch District One included Districts One, Three, and Four, as all are combined into one district during the First Watch.

The Crime Problem Profile is one of the final steps in beat awareness. The profile design had undergone extensive debugging during the 40 hour supervisors course. However, once the patrol officers began analyzing the data supplied for their individual districts, some problems arose. Most of the problems involved the the data. The remaining problems dealt with analysis.

The data was presented to the officers on maxtrix charts entitled "Monthly Crime Summaries". The charts displayed the total number of offenses reported in that district in any given month for each

targeted crime category. The initial data base covered the years 1977, 1978, and 1979. Programming limitations reduced the effectiveness of the crime summaries. The following list represents the best numeric reporting format for crime statistics by district.

1.	Residential burglary	- daylight	0600-1800 hours
2.	Residential burglary	- night	1800-0600 hours
3.	Residential burglary	- unknown	0000-2400 hours
4.	Commercial burglary	- daylight	0600-1800 hours
5.	Commercial burglary	- night	1800-0600 hours
6.	Commercial burglary	- unknown	0000-2400 hours
7.	Auto burglary/car clout	- unknown	0000-2400 hours
8.	Auto theft	- unknown	0000-2400 hours
9.	Robbery (weapon) on business premise		0700-1600 hours
10.	Robbery (weapon) on business premise		1600-2200 hours
11.	Robbery (weapon) on business premise		2200-0200 hours
12.	Robbery (weapon) on business premise		0200-0700 hours
13.	Purse snatch and strongarm robbery		0700-1600 hours
14.	Purse snatch and strongarm robbery		1600-2200 hours
15.	Purse snatch and strongarm robbery		2200-0200 hours
16.	Purse snatch and strongarm robbery		0200-0700 hours
17.	Rape and attempt rape		0700-1600 hours
18.	Rape and attempt rape		1600-2200 hours
19.	Rape and attempt rape		2200-0200 hours
20.	Rape and attempt rape		0200-0700 hours

A typical package for a Third Watch unit would include: Residential burglary-night and unknown, Commercial burglary-night and unknown, Auto burglary/Car clout-unknown, Auto theft-unknown,

Robbery (weapon) on business premise (1600-2200 hours and 2200-0200 hours), Purse snatch and Strongarm robbery (1600-2200 hours and 2200-0200 hours), and finally, Rape and attempt rape (1600-2200 hours and 2200-0200 hours). Programming limitations would not permit the district officer to differientiate between those night burglaries occurring on Third or First Watches. Secondly, the number of burglary unknowns nearly equalled the knowns and there is no possibility of determining when those burglaries actually took place or what percentage occurred during the officer's watch.

Similar problems arose in obtaining the monthly summaries for both Auto theft and Auto burglary/Car clout. The SCARS system produced a monthly total by district but could not differentiate by watch. The gross numbers would reflect the reported level of crime in a twenty-four hour period. In order to obtain specific watch information, the district officer would have to initiate a special SCARS extract query. The detailed extract would include only those variables requested. A sampling of detailed extracts were analyzed to determine if there was a constant percentage of occurrence by watch. Often the same district would have as much as 85% reportedly committed during Third Watch in one month, and as little as 10% in another.

The statistical data base involving crimes against the person is much more exact. Monthly gross totals are easily separated into four time periods:

1.	0200 hours to 0700 hours	First Watch
2.	0700 hours to 1600 hours	Second Watch
3.	1600 hours to 2200 hours	Third Watch
4.	2200 hours to 0200 hours	First and Third Watch overlap

First Watch districts would be provided with information exclusively for their Watch plus duplicate information covering the overlap period. The information would appear to inflate the actual total because it is reported by more than one watch. It is important to note that watch totals are intended to reflect all of the crimes which may have occurred during the officer's tour of duty. The inflated totals, of course, are not fed back into the system but are used only as a barometer.

RESULTS OF TRAINING

Direct results of the training can be observed in two major areas; improved beat awareness and greater operational planning on the team level.

The profiling process was unquestionably successful in enhancing beat awareness. The wide range of areas queried in the profiles drew upon the collective experience of all officers. Most of the officers used a wide variety of textual sources in the completion of their District Analysis Reports. Several officers who had established themselves as experts in specialized areas were solicited for information. An informal, non-scientific survey was conducted. The survey substantiated those observations made during the training sessions.

The team building exercise was beneficial in developing problem identification, goals and priorities. Each officer was permitted to express his own ideas as they related to problem resolution. The collage of ideas was then molded by the team as a whole and strategies emerged. The team conferences have continued beyond the training sessions and are currently an integral component of operational planning on a daily basis.

LESSONS LEARNED:

All of our predictions were confirmed to a certain degree during the training process. As expected, some officers excelled in demonstrating beat awareness; some lacked even rudimentary knowledge; and the vast majority showed some basic knowledge. Without exception, each and every officer expanded his beat awareness during the training. Those with the least knowledge generally learned the most.

It came as no surprise to learn that officers and sergeants would rather be out on patrol than in the office preparing Directed Patrol reports, i.e., District Analysis Reports and Sector Plans. To their credit, most officers accepted that the profiles would be properly filled out and made an honest effort. A few officers, however, used the profiles as a medium for sarcasm. Those officers were brought back into the station and the inappropriate replys were stricken.

To a much greater degree than earlier predicted, officers had not been utilizing the informational systems within the Department. The consolidation of textual sources and EDP terminals in the Patrol Reference Station, coupled with the changes in Crime Analysis, enhanced the entire profiling process. Officers now have a clearer understanding of the informational systems and are being used more extensively.

In retrospect, a greater measure of success could have been realized if the officers had received more frequent MPO Project progress reports, detailing the various components and decisions. Officers would have been better prepared for profiling. Advertising the MPO program more may have also diminished the misconceptions and rumors. Officers had suspicions about the same issues the

supervisors brought up: "MPO is a subtle scheme to end the 4/10 plan" and "MPO is just another program to be tolerated until the Federal monies run out".

An additional training session will have to be scheduled to clarify any misconceptions about the profiling validation process. The District Analysis Reports will be validated and reviewed in February 1981, after the annual rotation. This training session will require two instructors, team teaching all patrol officers and sergeants. Using the same two instructors for all sessions will help guarantee standardization of the District Analysis Reports.

SUMMARY OF OFFICER TRAINING:

By and large, the training program was successful. Officers were paired for the joint preparation of the District Analysis Reports which were completed within the allotted time. Most officers demonstrated an acceptable level of understanding the various components of the program.

The quality of information in all of the District Analysis Reports was not as high as we had hoped. The two problem areas in the District Analysis Report are Crime Problem Profile and Strategies Profile. These profiles were more foreign to the officers than the others and will take longer to develop an expertise.

We recognize the need to monitor future Directed Patrol planning efforts on the team level. Additional training sessions will have to be scheduled to resolve the difficulties encountered with the Crime Problem and Strategies Profiles.

END