H-1

U.S. DEPARTMENT OF JUSTICE
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION

DISCRETIONARY GRANT
PROGRESS REPORT

GRANTEE	LEAA GRANT NO.	DATE OF REPORT	REPORT NO.
City of San Jose	79-DF-AX-0077	March 31, 1981	6

IMPLEMENTING SUBGRANTEE
San Jose Police Department
Post Office Box 270
San Jose, CA 95103

TYPE OF REPORT
REGULAR ☐ SPECIAL REQUEST ☐
FINAL REPORT [X]

SHORT TITLE OF PROJECT
Integrated Criminal Apprehension Program

GRANT AMOUNT
$333,333

REPORT IS SUBMITTED FOR THE PERIOD
October 1, 1980 THROUGH December 31, 1980

SIGNATURE OF PROJECT DIRECTOR
Robert V. Bradshaw

TYPED NAME & TITLE OF PROJECT DIRECTOR
Robert V. Bradshaw
Assistant Chief of Police

AMOUNT OF GRANT MONIES EXPENDED TO DATE
See Final H-1 Report

EXPECTED GRANT END DATE
December 31, 1980

NAME, ADDRESS, TEL # OF LOCAL EVALUATOR
Hughes - Heiss & Associates PH: (415) 343-4508
181 Second Avenue, Suite 319
San Mateo, CA 94401

SECTION 1: GENERAL DEPARTMENT INFORMATION

1.1 CRIME STATISTICS

Provide the following data for Part I offenses for the current report quarter (as reported in the Uniform Crime Reports).

TYPE	ACTUAL OR KNOWN OFFENSES	OFFENSES CLEARED	ARRESTS
MURDER	14	11	8
FORCIBLE RAPE	110	58	21
ROBBERY	456	87	103
AGGRAVATED ASSAULT	1,541	870	145
BURGLARY	3,960	294	260
LARCENY-THEFT	7,256	1,073	682
MOTOR VEHICLE THEFT	1,111	19	29
TOTAL PART I CRIMES	14,448	2,412	1,248

1.2 PERSONNEL ACTIVITY

(for Patrol Personnel)

Number of Sick Days (Patrol only)	764.9
Number of Injury Days (Patrol Only)	461.9
Number of Requests for Transfer from Patrol to Other Units	N/A
Number of Requests for Transfer from Other Units to Patrol	N/A

1.3 MANPOWER ALLOCATION

Please indicate the numbers of sworn personnel assigned to major department divisions and total sworn personnel. (Has this changed since the last report period? Yes☐ No☒ If there has been no change proceed to question 1.4).

Patrol	
Investigations	
Crime Prevention	
Special Operating or Tactical Units	
Traffic	
Other _____	
_____	
_____	
Total Sworn Personnel	

1.4 ORGANIZATIONAL CHANGES

Please describe changes in key personnel or organization (chief, program director, manager, crime analyst or overall organizational structure). Further, describe significant changes in city administration. Indicate the time frames involved, the impact of the changes on department operations and ICAP implementation.

Staff Analyst II, Avelina Wood, transferred to the ICAP developed Operations Support Unit. 11-23-80

On November 23, 1980, San Jose's ICAP-developed Operations Support Unit (OSU) began operating in the Department's Records Division. Implementation will be phased with all burglary and receiving stolen property cases being processed in the first phase.

New case audit, enrichment, quality control, and screening functions as described in the narrative final report attached are being performed in addition to ongoing Crime Analysis and Information Coordination Services. This accomplishment represents the major ICAP contribution to the improvement of the investigative process in the San Jose Police Department. Impact on investigative operations is anticipated to be substantial. The OSU's manager reports that OSU is processing approximately 40% of all felony cases reported to the Department and is screening out (retaining in inactive status) 79.4% of those cases it processes.

SECTION 2: MAJOR ICAP COMPONENTS

2.1 CRIME ANALYSIS -- PROCESS AND OUTPUT

2.1.1 Indicate files maintained and/or utilized by crime analysis. "Files maintained" include those for which the crime analysis unit is responsible for input and editing of data/materials. "Files utilized" include those files used by the unit for purposes of data collection and analysis. The unit may use certain files without maintaining the file. (Has this changed during the report period?

Yes ☐ No ☒

If no, proceed to question 2.1.2. If yes, please indicate all files now maintained or utilized by crime analysis. Do Not indicate only the additions or deletions.)

FILE	MAINTAINED BY CRIME ANALYSIS	USED BY CRIME ANALYSIS
OFFENSE REPORTS	☐	☐
NON-CRIMINAL INCIDENT REPORTS	☐	☐
SUPPLEMENTAL REPORTS	☐	☐
ARREST REPORTS	☐	☐
CAREER CRIMINAL FILES	☐	☐
SUSPECT FILES	☐	☐
SUSPECT VEHICLE FILES	☐	☐
FIELD INTERROGATION FILES	☐	☐
WANTED PERSONS REPORTS	☐	☐
PHYSICAL CHARACTERISTICS FILE	☐	☐
PROPERTY FILE	☐	☐
OTHERS _____	☐	☐
_____		

2.1.2 Indicate use by the crime analysis unit of other files maintained by the Data Processing Division or other department units, e.g., a property file maintained by Investigations, on-line warrant files, etc. (Has this changed during the report period? Yes ☐ No ☒
If no, please proceed to question 2.1.3. If yes, list all files now used; do not note just the deletions or additions).

MAINTAINING UNIT/DIVISION	FILE

2.1.3 Indicate crime analysis products, the frequency of their distribution (monthly, weekly, daily, as needed) and to whom they are distributed (patrol commanders and officers, investigations, crime prevention unit, etc.). (Has this changed during the report period? Yes ☐ No ☒
If no, please proceed to question 2.2.1. If yes, please complete for all items.)

CHECK HERE, IF APPROPRIATE	PRODUCTS	FREQUENCY (E.G., DAILY, WEEKLY, ETC.)	DISTRIBUTION (PATROL, INVESTIGATIONS, CRIME PREVENTION)
	INFORMATION BULLETINS		
	CRIME ANALYSIS RECAPS		
	CRIME SUMMARIES		
	PATROL OPERATIONS BULLETINS		
	CRIME SPECIFIC MEMORANDA		
	CAREER CRIMINAL BULLETINS		
	OTHERS:		

2.2 CRIME ANALYSIS -- ACCEPTANCE AND UTILIZATION

2.2.1 Indicate the number and source of special requests for crime analysis information. (Sources, for example, include Patrol, Investigations Division, Crime Prevention Unit, Administration, Tactical Unit, etc. Also note requests from outside agencies.)

REQUESTING DIVISION/OUTSIDE AGENCY	NO. OF REQUESTS
Patrol	20
Investigations	43
Administration	16
Outside Agencies	11
TOTAL REQUESTS FOR THE QUARTER	90

2.2.2 Indicate the number of responses made to special requests this quarter. The number of responses includes responses to "new requests" received this quarter and any responses made in the current report period to a request which was received in a prior quarter. Total responses within the quarter are sought.

TOTAL RESPONSES FOR THE QUARTER 90

2.2.3 Have crime analysis products directly supported (i.e., provided the basis for) any tactics or strategies initiated during this quarter? Provide specific examples for each area listed below. Where data is available, quantify those responses (e.g., "X" stake-outs conducted based on tactical information provided by crime analysis).

CRIME PREVENTION ACTIVITIES: YES ☒ NO ☐

IF YES, PROVIDE AN EXAMPLE _____

TACTICAL/SPECIAL OPERATING UNIT ACTIVITIES: YES ☒ NO ☐

EXAMPLE(S) _____

PATROL DEPLOYMENT: YES [X] NO [ ]

EXAMPLE(S)

INVESTIGATIVE SUPPORT: YES [X] NO [ ]

EXAMPLE(S)

OTHER YES [ ] NO [X]

EXAMPLE(S)

2.3 OPERATIONS ANALYSIS

2.3.1 Total number of calls for service 51,149.

2.3.2 Number of calls for service handled through:

Patrol Unit dispatch	43,145
Telephone/Mail-in Reports	6,803
Walk-in reports	1,201
Community Service Officer or Civilian Aide	N/A*

*A process of integrating police records clerks into the report taking function at the Department's Information Center (TeleServe) has begun. Data as yet does not distinguish numbers of reports taken by clerks vs. officers.

2.3.3 Proportion of CFS by Time. Please indicate the percent of CFS the department receives by time of day. Frequently departments breakout CFS by 8 hr blocks. The grid below provides space to note the times of day for three eight hour blocks and the percent of calls received within those blocks. Other departments have a more refined breakdown of CFS by time (e.g., by the hour). Please provide the most refined data available. Attach additional sheets (or add to the grid) as required.

Time	% CFS	Time	% CFS	Time	% CFS
0000-0100	4.7	0800-0900	3.1	1600-1700	5.7
0100-0200	3.9	0900-1000	3.1	1700-1800	6.1
0200-0300	3.6	1000-1100	3.5	1800-1900	5.8
0300-0400	2.6	1100-1200	4.0	1900-2000	5.7
0400-0500	1.8	1200-1300	4.1	2000-2100	5.5
0500-0600	1.5	1300-1400	4.3	2100-2200	5.6
0600-0700	1.7	1400-1500	4.5	2200-2300	6.0
0700-0800	2.4	1500-1600	5.1	2300-2400	5.7

Source: CAPSS Log

2.3.4 Does the department have a formal policy for:

PRIORITIZING CFS YES [X] NO [ ]

STACKING CALLS YES [X] NO [ ]

With the first submission of this report form please attach formal department policy/criteria for prioritizing and stacking calls. For all other submissions, attach only revisions.

2.3.5 Patrol Manhours

Indicate the proportion of patrol hours consumed by:

		% OF TIME
	Calls for Service	Not Available at this time.
	Officer Initiated Activity	"
	Personal & Administrative Activities	"
	Other (SPECIFY) Free Patrol	"
Car Stops	Court Training	"
	Total Patrol Manhours	"

Indicate the basis for the percents shown and the time frame within which the data was collected (e.g., a study conducted June 1977, CAD information for the current report period, an estimate based upon a sample of dispatch and activity logs for the period October to December 1978.) CAD information for the quarter.

2.3.6 Average Time per CFS 43:00.

2.4 PATROL AND INVESTIGATIONS

2.4.1 Number of patrol personnel assigned to each shift on the last day of the reporting quarter.

	TIME OF WATCHES	NO. OF PATROL PERSONNEL
FIRST WATCH	0630 - 1630	100
SECOND WATCH	1530 - 0130	126
THIRD WATCH	2100 - 0700	83
FOURTH WATCH	N/A -	N/A

2.4.2 Indicate the number of investigations conducted during the quarter according to:

	PATROL	INVESTIGATORS
PRELIMINARY	13,233	1610
FOLLOW UP	209	6366

Please attach written policy governing investigative case screening criteria to the first submission of this report form. Indicate changes/new policies on subsequent submissions.

2.4.3 Charging and Disposition Data

Number of felony cases presented by the department to the prosecutor's office during this report period.

Felony Cases Presented N/A

Number of felony cases filed by the prosecutor during this report period. (Only for the department cases).

Felony Cases Filed 773

Number of felony convictions obtained this report period (Only for department cases).

Felon Convictions Obtained N/A

2.5 CRIME PREVENTION ACTIVITIES

2.5.1 Number of residential and commercial surveys conducted this report quarter.

Residential Not Available

Commercial "

TOTAL 400 (Crime Prevention Unit Only)

2.5.2 Indicate the number/proportion of surveys conducted by:

	NUMBER	PERCENTAGE
Patrol	Not Available	
Crime Prevention Unit	"	
Others (Specify)	"	

2.6 DIRECTED PATROL

The following questions apply to those departments with a directed patrol program. If not appropriate to your department, please indicate in the space provided and proceed to question 2.7

NOT APPLICABLE [X]

2.6.1 Describe, by checking one or more of the following, and quantify the department's directed patrol activities during the quarter.

- ☐ Community Education and Organization _____
- ☐ Tactical Deployment _____
- ☐ Saturation Patrol _____
- ☐ Investigative Follow-Up _____
- ☐ Other. Please indicate _____

2.6.2 Total number of directed patrol plans/runs prepared _____.

2.6.3 Number assigned/dispatched _____.

2.6.4 Number completed as scheduled _____.

2.6.5 Number canceled, delayed, or interrupted _____.

Optional

2.6.6 Number of hours consumed during the quarter by directed patrol ____.

2.6.7 Number of arrests attributed to directed patrol activities _____.

2.7 WARRANT SERVICE

2.7.1 Felony warrants issued in the quarter 247.

2.7.2 Felony warrants served in the quarter 184.

2.7.3 Felony warrants outstanding as of the last day of the report quarter 515.

2.8 ICAP TRAVEL

2.8.1 Describe travel undertaken with ICAP funds -- to other departments conferences, or training sessions -- during the quarter. (Exclude attendance at ICAP cluster meeting). Indicate the individuals who made the trip, the dates and purpose. Attach to the Quarterly Report, trip reports completed by those who made the visits.

N/A

2.8.2 Describe visits made to your department by other ICAP departments. Indicate the visiting department individuals who made the trip, dates and general purpose (e.g., to observe crime analysis unit operations, provide technical assistance in crime analysis, etc).

November 20, 1980:

Memphis P.D.: Earl Clark and three other members of M.P.D. visited S.J.P.D. to gain technical assistance regarding Mobile Computer Terminals.

SECTION 3: PROJECT ACTIVITIES

This section of the report is to capture the unique activities of each ICAP department, and to document those activities in relationship to stated individual project objectives. Each agency's implementation plan and schedule will be the basis for assessing agency activities and results. This section of the report includes *Quarterly Objectives, Present Activities/Results, Problems Encountered, and Status of Implementation.* Grantees should follow the instructions provided for completing each section. Additional sheets and appendices may be attached as required.

3.1 *Quarterly Objectives:* Major implementation steps and objectives for the reporting period are to be listed. These should include all objectives for the reporting period which are included in the Project Implementation Plan.

3.1.1: Complete functional development of Operations Support Unit (OSU).

3.1.2: Test OSU functions including Automated Case Enrichment System (ACES) enhanced with new disk drives.

3.1.3: Complete OSU staff selection and training.

3.1.4: Start OSU operation November 23, 1980

3.1.5: Complete patrol district/beat restructuring project in anticipation of January 18, 1981 implementation.

3.1.6: Accomplish ICAP project closedown process.

3.2 *Present Quarter Activities/Results:* Provide the highlights of the report period's project activities and the results obtained. Activities should be presented in a brief format, and linked directly to the objtives listed above. Significant activities which do not directly support a specific objective may be presented under the category of "Other". Detailed appendices may be attached as deemed necessary. To the extent possible, answers should be quantified.

3.2.1: Functional development of San Jose's Operations Support Unit was completed in anticipation of a November 23,1980 implementation date. An Automated Case Enrichment System (ACES) purchased with ICAP second grant funds has been enhanced with new disk drives, purchased with third grant funds. (See attached narrative final report for details.)

3.2.2: Pre-implementation testing of all OSU functions was accomplished by in-house and ICAP staff.

3.2.3: OSU staff selection and training was accomplsihed during this quarter.

3.2.4: OSU operations began a phased implementation process on November 23, 1980. All burglary and receiving stolen property cases are being processed through the OSU using an expanded "Managing Criminal Investigations", unweighted solvability factor, approach.

3.2.5: A comprehensive patrol district/beat restructuring project was completed by a team of in-house and ICAP staff. A new proportional allocation of patrol resources was also accomplished by the team using the previously published San Jose Allocation Method.

3.2.6: Closedown procedures for ICAP projects were accomplished.

NOTE: A detailed description of above activities is attached to this report.

3.3 *Problems Encountered:* Briefly outline the problems encountered, corrective actions planned, and changes in program objectives or schedules.

See attached narrative report.

3.4 *Status of Implementation:* Using the following code, indicate the level of success attained for each of the objectives listed:

- "1" reflects an objective partially attained
- "2" indicates an objective totally attained
- "0" indicates that the objective was not implemented

Additional information may be provided in explanation of the assigned rating.

3.1.1 - 2

3.1.2 - 2

3.1.3 - 2

3.1.4 - 2

3.1.5 - 2

3.1.6 - 2

FINAL REPORT

INTEGRATED CRIMINAL APPREHENSION PROGRAM

Grant #79-DF-AX-0077

San Jose, California

July 1, 1979 through December 31, 1980

This Project was supported by Grant Number 79-DF-AX-0077 awarded by the Law Enforcement Assistance Administration-United States Department of Justice. Points of view or opinions stated in this report are those of San Jose Police Department and do not necessarily represent the official position of the United States Department of Justice.

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Final Report for Grant 79-DF-AX-0077
Integrated Criminal Apprehension Program
San Jose, California
(Grant Period Covered - July 1, 1979 to December 31, 1980)

PREFACE

This document constitutes the final report for the LEAA grant indicated above. It is organized in five sections: Section I, Background, provides information about the City of San Jose, the Police Department and some introductory data about the project; Section II, Grant Administration, describes various aspects of administration connected with the project; Section III, The Project, the main portion of the narrative, describes in some detail the history, progress and product of the project; Section IV, Conclusion, is devoted primarily to a brief assessment of the actual and expected benefits of the product produced by the project; and Section V, Appendices, contains the principal documentation associated with the project, that is related to Section III, The Project, above.

The grant on which this document reports is actually the second of two parts of a project. The first of these was the research which determined the need for and developed an Operations Support Model. This was accomplished under grant number 78-DF-AX-0036 (termed ICAP-I) which covered the period June 1, 1978 through June 30, 1979 (with an extension until February 15, 1980 for the express purpose of expending equipment funds). The final report for that grant indicated that it was, in reality, an interim report, since it represented only the first half of the project - the research and development phase - with the implementation to follow in the subsequent (present) grant. The present grant has been devoted to the implementation of the product of the previous grant. For the purposes of this report the present grant shall be referred to as ICAP-II.

ACKNOWLEDGEMENTS

This report would not be in any sense complete without mentioning, in grateful appreciation, the assistance and support of many who, while not members of the ICAP staff, were in a very real sense members of the project. Without their contributions, it is doubtful that the ICAP staff would have realized many (or any) of the achievements of ICAP-II.

A comprehensive listing of all to whom thanks are due would involve listing a large part of the membership of the City Government of San Jose and significant numbers in other agencies. Obviously, and regrettably, it is not possible to do this, but our thanks to these people are not any less sincere, and we gratefully acknowledge our debt to each of them.

There are, however, some who made especially significant contributions and we would be remiss in not recognizing them here. The Mayor, City Council and City Manager of San Jose have been facilitative and supportive throughout. Without this help, nothing could have been done. JoAnn Foreman, Grant Coordinator, performed a myriad of administrative tasks which facilitated the operation of the project, often on short notice, but always willingly. This, together with the frequent advice and constructive criticism, allowing us to share her experience in grant administration, was invaluable. The Director of Finance and his staff maintained the financial records and submitted the required financial reports, as well as providing much useful information and advice on the financial aspect of the grant, so that many problems were avoided. The Director and staff of the City Information Systems Division provided indispensable technical assistance, especially in the process of acquiring the computer equipment. We especially appreciate the fine work performed by Betty Burnham and Carole Bruch, Programmer-Analysts in that Department,

in helping to solve many difficult problems in selecting, purchasing, and programming the equipment. We must also express our thanks to the staff of the Purchasing Division, who worked with the ICAP staff on the purchase of the EDP equipment. To all these members of the City Administration, and to our elected officials, our thanks are due and hereby given.

Within the Police Department there are so many who helped that it is really proper to thank the Department as a whole. We particularly appreciate the strong support and helpful guidance of the Chief of Police and his staff. The Research and Development Division, commanded by Lt. Bill Gergurich, and later Lt. Mike Maehler, were so much involved in the project that they often came close to being ICAP staff in function. Lt. Gergurich, and his predecessor Lt. Glenn Kaminsky, also made invaluable contributions as commanders of the newly organized Operations Support Unit. Especially to Elba Lu, Crime Analyst, do we owe a debt of gratitude for her work in cooperation with, and in support of, the project on a daily basis throughout its duration.

The Data Processing Department and the Center for Urban Analysis, both of Santa Clara County provided services in their areas which were indispensable. Our local evaluation consultant firm, Hughes-Heiss and Associates, through their interest in our work, provided much in the way of valuable advice and guidance which was instrumental in smoothing out the development of the model and which has been of great assistance in implementation. To Joe Sharp, of Search Group, Inc., we express our appreciation for the expert advice and expeditious action both of which greatly helped our efforts to acquire the EDP equipment.

Last, but emphatically not least, the many and varied contributions

made by David O'Connor, Western States Manager, ICAP in LEAA, Washington, D.C., must be mentioned. The San Jose ICAP Project was indeed fortunate to have so willing, knowledgeable, helpful and supportive a person as he to call upon, as we did often. He can justly claim a large share in any success the project has had.

I. BACKGROUND

The City

San Jose is a city of approximately 610,000 residents, situated at the southern end of San Francisco Bay. Like other local governments in California, San Jose is attempting to cope with severe budgetary restrictions as a result of Proposition 13, a voter initiative passed in June 1978, which drastically reduced property tax revenues. This situation demands that the City do everything possible to utilize its present resources to the fullest in order to maintain at least current levels of service. The ICAP Project represents a part of that effort.

The Police Department

The San Jose Police Department operates from a central location in the Civic Center area near downtown San Jose, except for several small specialized units which are quartered in other facilities. The Department has a sworn strength of 850 which is augmented by 260 non-sworn employees. This represents a ratio of approximately 1.4 sworn officers per 1000 citizens, one of the lowest officer to citizen ratios for a city of this size in the nation. Over the past 20 years, San Jose has experienced considerable growth. During the last several years this has been greatly accelerated and a high rate of growth is anticipated for some time to come. This phenomenon, considered in the light of the budgetary restrictions discussed above has created a problem for the Department, since it can be expected that only limited increases in strength will be possible under the circumstances, at least for the foreseeable future. In order to maintain the level of service the City Council and the Department desires - and the citizens demand - it is necessary to find ways to better employ the resources

which are available. That need has been addressed by the ICAP Project in the development of a model which is making substantial contributions in the area of efficiency when operated as the Operations Support Unit.

The Project

The project is engaged in the conceptualization, development and implementation of an operational entity which will improve the handling of various types of crime and incident reports such that greater efficiency is realized in both the paper flow and operational areas. The work is divided into two segments: 1) conceptualization and development, and 2) implementation. The first of these two segments was accomplished during ICAP-I. The second (implementation) constitutes the work of ICAP-II. The Operations Support Unit, as this entity is known, is a response to the need for better employment of existing resources described above.

Organizationally, the project has been placed in the Office of the Chief, with the Assistant Chief of Police as Project Director. The Project Manager is a Police Sergeant, who is responsible for the day to day operation of the project. The Project Manager is supported by a staff described under Grant Administration. In addition to the ICAP Staff itself, the project has been closely associated with the Department's Research and Development Division which has facilitated a mutually beneficial continuous exchange of information.

Since what is now the ICAP Project (ICAP-II) had formerly been the Patrol Emphasis Program, and then ICAP-I, there was no period of gaining "acceptance" either in the Department, or in the rest of the City Government. Consequently, the project has, from the beginning of ICAP-II, enjoyed the support not only of various entities in the Police Department, but of the City Government, as well.

II. GRANT ADMINISTRATION

Application and Adjustments

Following submission of a Grant Manager's Project Summary and a formal application for assistance, the Grant Award in the amount of $333,333 (including 10% City cash match) was approved on June 19, 1979 and indicated a grant period from July 1, 1979 to December 31, 1980.

During the course of this grant, a total of four adjustments were applied for and approved by LEAA. The details of these adjustments are as follows:

Adjustment #1: Approved by LEAA on September 24, 1979.
Reallocates funds between categories to increase Personal Services, Travel, Supplies, and Indirect Cost.

Adjustment #1a: This adjustment was erroneously numbered #1 by LEAA, hence is listed as 1a. here.
Approved by LEAA on November 13, 1979.
Retires the Special Condition in the Grant Award which required submission and approval of a current EEO plan within 120 days of award.

Adjustment #2: Approved by LEAA on March 24, 1980.
Grants approval for sole source contracting with Hughes-Heiss and Associates for local evaluation.

Adjustment #3: Approved by LEAA on June 24, 1980
Reallocates funds between categories to provide $40,500 for purchase of computer equipment to expand the DEC PDP 11/34 system purchased under ICAP-I.

Staffing

The staffing at the beginning of this grant consisted of twelve positions funded by LEAA:

1 - Police Sergeant (Grant Manager)
1 - Statistical Analyst
2 - Staff Analyst II
1 - Analyst I
2 - Typist-Clerk II (1 vacant - to be eliminated)
5 - Staff Aides (Part-Time)

During the course of the grant the following personnel changes occurred:

July 9, 1979 - A Staff Analyst II was hired to replace the lead analyst who resigned in June, 1979.

August 19, 1979 - The Project Manager, a Police Sergeant, was removed from grant funding and placed on City General Funds. No change of function or personnel occurred as a result of this action.

September 24, 1979 - One Typist-Clerk II position deleted per Grant Adjustment Notice approving budget adjustment.

October 19, 1979 - The Analyst I resigned from the grant. This position was not filled again.

October 31, 1979 - Deletion of Analyst I position and addition of two Staff Aide positions authorized by the City. Phone authorization from LEAA (David O'Connor) obtained the same date. Followup letter of authorization obtained from LEAA on January 22, 1980.

January 20, 1980 - One Staff Aide hired.

January 23, 1980 - One Staff Aide hired.

February 22, 1980 - The Statistical Analyst resigned from the grant. This position will not be replaced. Functions will be absorbed by SJPD Research and Development Division.

May 2, 1980 - One Staff Aide resigned from the grant. The position was not filled again.

June 8, 1980 - One Staff Aide reclassified to new category of Staff Technician. (See explanation below)

September 5, 1980 - One Staff Aide resigned from the grant.

November 13, 1980 - Staff Aide position filled.

November 24, 1980 - One Staff Analyst II transferred from ICAP to Operations Support Unit.

In addition to the "regular" staff shown above, there is one other position which requires mention. The project operates as a unit in the Office of the Chief of Police, with the Assistant Chief designated as Project Director. In addition to providing policy direction, the assistance of the Project Director in liaison with the City Manager, the City Council, and, on occasion, outside agencies has been invaluable to the project. Further, the placement of the project at this level and the appointment of the Assistant Chief as Project Director has clearly demonstrated to subordinate managers and staff the commitment of top management to the project, which augmented greatly the credibility of the project within the Department.

Problems in staffing during the period of this grant were external in origin. Passage of Proposition 13, and the anticipation of Proposition 9, a ballot measure which would further reduce City revenue, would pass, resulted in the City Government instituting a "hiring freeze." This action made it difficult to obtain approval to change the position structure of the project as changing needs dictated. In the case of a vacancy in an already established position, it was possible to fill the position, however the hiring process involved delays, sometimes of considerable length. These delays had a negative effect on the functioning of the grant. Had this

development not occurred, the work of the grant would undoubtedly have been able to progress more smoothly and expeditiously. This situation was alleviated somewhat in June, 1980 when Proposition 9 failed, and the hiring freeze was relaxed in some degree.

During the period of the grant, the City of San Jose contracted with a consultant to conduct an in-depth study of the non-sworn, non-managerial personnel structure. One of the results of this study was the establishment of a new class of employee called Staff Technician. This class provides paraprofessional help (full or part time) to analytical personnel, and is of more highly technical nature than the category of Staff Aide. As a result of this study, one of the Staff Aides employed in the grant was found to qualify as a Staff Technician, and the position was reclassified accordingly.

ICAP Staff funded by LEAA at the end of the grant period (December 31, 1980) was as follows:

1 - Staff Analyst II

1 - Typist Clerk II

1 - Staff Technician

5 - Staff Aides (Part-time)

At the termination of the grant, all Staff Aides and the Staff Technician were transferred to City General Funding, and remained in the Police Department performing the same duties as during the grant period. All other personnel who chose to remain in City service were transferred to positions commensurate with their qualifications. These positions were with other City departments. One Staff Analyst II had already been transferred from ICAP to the Operations Support Unit, as noted above.

Property

In the area of equipment, no funds were budgeted for this purpose in the original grant award. All necessary office furniture and equipment had been acquired during the Patrol Emphasis Program grant period, and it was not necessary to purchase additional items of this kind for the ICAP Project.

During ICAP-I, the grant purchased a Digital Equipment Corporation PDP 11-34 computer system. The primary use to which this equipment has been put is the housing of the Automated Case Enrichment System (ACES), the first file of which was an automated Field Interview Report file. This system also has the capability of performing some basic word processing (actually text editing) functions. In addition, several other applications are being considered for the system. It was recognized at the time the system was acquired that some future expansion would be needed. During ICAP-II, an assessment was made of the capabilities of the system with its present configuration (CPU, two 5 megabyte disk drives, one printer and two CRT terminals, one of which is a systems terminal and so restricted in its use). It was determined that several enhancements would be beneficial.

While core memory (256 K Bytes) was sufficient for our needs, storage for data was sadly deficient, even considering the Field Interview File system alone. For this reason, it was decided to increase the storage capacity by adding two disk drives with a capacity for 60 to 100 megabytes each. This would provide for the needed storage, and give backup capability as well (vital in case of a head crash, etc.).

It was noted that the original configuration included one printer and two CRT terminals. One of the CRT terminals is in the Records Division, together with the printer. The second CRT terminal is a systems terminal

and is located next to the CPU in a room remote from both Records Division and Crime Analysis, the other prime user of the system. No terminal, hard copy or screen, was present in or near the Crime Analysis Unit (which is physically located approximately 450 feet from Records Division), making it very inconvenient to use the system. To correct this deficiency, it was decided that one additional CRT terminal and one additional printer should be acquired and located in the Crime Analysis area.

These items were only the most pressing needs, and, together with the expansion chassis for the CPU (needed because there was no room available to install the controller for the disk drives) and the controller for the disk drives, represented a purchase estimated at approximately $40,500. It was found that this amount could be made available from ICAP funds due to some underspends in other categories. Accordingly, a budget adjustment was prepared and submitted to LEAA, resulting in a Grant Adjustment Notice dated June 24, 1980 resulting in reallocation of funds among categories and authorizing $40,500 for equipment (previously zero).

Having secured this authorization and having prepared specifications in the interim, a request for proposal was sent to seven firms which would be likely to be able to supply the equipment. Four of these responded. International Data Services, Inc. of Sunnyvale, California was selected as the successful vendor on the basis of being the lowest responsive bidder, and the necessary documentation was prepared (including a lease versus purchase analysis) for forwarding to LEAA, through Search Group, Inc., Sacramento, California, for approval. Purchasing Division, meanwhile, took the necessary steps to obtain City Council approval of the purchase.

Federal approval was given for the purchase October 30, 1980 and was received via Search Group, Inc. A purchase order was issued on November 6,

1980 to International Data Services, who delivered the equipment on December 11, 1980 at the bid price of $40,187.78 (including sales tax). This price did not include installation.

All the equipment being purchased was of Digital Equipment Corporation (DEC) manufacture. In order for the equipment to be eligible for inclusion under a DEC maintenance agreement, it must be inspected and certified as eligible by a DEC maintenance representative. To facilitate this, a purchase order was issued for DEC to install, inspect and certify the equipment at a price of $1500.00. This process was completed on December 23 and 24, 1980.

The equipment purchase approval documentation will be found as Appendix A to this report.

It was mentioned earlier that the equipment purchased with grant funds, as described above, represented only the most pressing needs in this area. Also needed are additional items of hardware (beyond those discussed here) and software enhancements amounting to between 40 and 50 thousand dollars, which the City expects to provide as part of its ongoing commitment to this project.

Local Evaluation

City policy dictated that a formal evaluation was needed for ICAP-II. In addition, the members of the project itself felt that a neutral party assessment would be beneficial to aid in determining what, if any, changes were needed to improve the product of the ICAP Project, the Operations Support Unit. Therefore, the decision was made to contract with a consultant to accomplish this.

As part of the contract for evaluating ICAP-I, Hughes-Heiss and Associates of San Mateo, California, developed an evaluation design for

ICAP-II. Because of this, and because of their familiarity with the Project and the Department, gained during the evaluation of ICAP-I, together with the high quality of their work in ICAP-I, it was considered that the Project, the Department, the City and LEAA would all be best served if the services of the same firm could be obtained to evaluate ICAP-II. The advantages appeared to be several: 1) the expense of the RFP process would not be necessary; 2) the process of familiarizing the consultant with the Project and the Department would be eliminated; 3) this firm would be following a research design which they developed, saving the time and expense of developing a design as part of this contract; 4) the total fee would be substantially lower than it would be with a new consultant. Preliminary inquiry of Hughes-Heiss indicated that the foregoing was, indeed, the case, and they indicated a total fee of $12,100 would be acceptable. This is a figure substantially lower than could reasonably be expected with another firm performing an evaluation as detailed as that called for in the research design mentioned above.

This information was communicated to LEAA in Washington, accompanied by a request for authorization for sole source contracting with Hughes-Heiss and Associates. This request was approved by LEAA in Grant Adjustment Notice #2, March 24, 1980. A contract was concluded between the City and Hughes-Heiss on May 23, 1980, under the terms on which that firm was to evaluate the Project and its product, the Operations Support Unit, according to the evaluation design developed under the contract for evaluation of ICAP-I. The contract price for these services was $12,100, the amount previously quoted.

The report of this evaluation is found as Appendix H.

National Evaluation and Coordination with Other Projects

The San Jose ICAP Project fully recognized its responsibility to cooperate in the National Evaluation Program. This responsibility was fulfilled through two media: local evaluations performed by independent outside consultants on the San Jose ICAP Project, and submission of quarterly progress reports containing detailed information regarding the activities and progress of this project. Prior to September, 1978, these reports were submitted in a form which was primarily narrative in format, consistent with direction received from LEAA. For the period beginning September 1978 until the present, a more structured reporting format developed by LEAA has been used. In this connection, it should be noted that, in order to respond as fully as possible to the data needs of LEAA, a number of changes were found to be needed with regard to information not routinely collected by the Department. Since some of this information is derived from automated systems, it was necessary to write a number of new programs to access the data base and retrieve the information in the form required. Other items are not under the control of the Department, but had to be obtained from agencies not part of the City government. These items also required new reports to be produced by automated systems, and, hence, new programming - in some cases, extensive in scope. This effort was undertaken by request to the agencies involved, at Department expense. Efforts have been ongoing to develop as comprehensive and refined data as possible. This new data was included in the quarterly reports as it became available.

Exchange of information with other law enforcement agencies has long been a policy of the San Jose Police Department. During the period of ICAP-II, and of ICAP-I and the Patrol Emphasis Program which preceded it,

a significant increase in requests for information has occurred, compared to past experience. We attribute this to our greater use of relatively sophisticated automated systems than is the case in many other agencies, and to the fact that awareness of these systems by other agencies has increased through the medium of the ICAP Program. It is interesting to note that this awareness is not confined to ICAP agencies, suggesting that, in many areas, information is being disseminated by ICAP agencies to agencies not participating in the ICAP Program. This is evidenced by the fact that San Jose receives requests from both ICAP and non-ICAP departments. Most inquiries are received by mail or phone. The volume reached a point which made it necessary to develop information packets on the Crime Analysis Unit and the Patrol Allocation Plan, the activities most frequently asked about. Other areas in which interest has been frequently shown include our computer aided dispatch system (in San Jose it is called CAPSS - Computer Aided Public Safety System) and various other automated systems used by the Department. Every effort is made to respond to each request promptly and as fully as possible, whether or not the requesting agency is ICAP affiliated.

In addition to dissemination of information by phone or mail, a number of requests were responded to by personal contact, either by hosting a visit by representatives of other departments or by San Jose ICAP staff visiting agencies to render assistance which required more than could be provided by phone or mail. San Jose was also represented at most scheduled ICAP Cluster Meetings during the period of ICAP-II. These meetings provided a valuable opportunity for the exchange of information between participating agencies, in addition to the formal presentations on the agenda.

Special activities, other than attendance at cluster meetings, undertaken for purposes of National Evaluation or information exchange were as follows:

July 30-31, 1979 - Hosted visit by David O'Connor, LEAA/ICAP Western States Program Manager. The visit was made to render assistance in problem areas and to assess project progress.

September 26, 1979 - Dennis Moore, University City Science Center (LEAA Contractor) visited to gather data and render technical assistance in the area of quarterly reporting.

November 29, 1979 - Hosted a visit by five members of the Jackson, Mississippi ICAP Project. The purpose of the visit was for technical assistance in the area of Operations Analysis/Resource Allocation.

December 10-12, 1979 - An Operational Audit was conducted by Mike Lamson of the Sacramento office of LEAA.

March 19-20, 1980 - Three members of the Jacksonville, Florida ICAP Project visited to obtain technical assistance in several areas.

July 28-29, 1980 - Four members of San Diego Police Department visited for TA on Patrol Allocation, Deployment, Decentralization and CAD.

August 18-19, 1980 - S.J.P.D. Crime Analyst attended a meeting of CASS Advisory Committee at Simi Valley, California, to evaluate software developed for CASS and in use at that location. This participation was funded by San Jose ICAP Project.

November 20, 1980 - Four members of Memphis, Tennessee Police Department visited to learn about Mobile Computer Terminals in use here.

Administrative Problems

Under "Staffing," the problem of delays in hiring staff due to the hiring freeze instituted by the City as a result of the passage of Proposition

13 is discussed. Since this problem has already been dealt with under the appropriate heading, it is not necessary to discuss it further here. Suffice it to say that, while some amount of delay and consumption of staff time was occasioned by this, it did not result in loss of time such that the final product was adversely affected. The implementation segment of the project progressed as planned.

III. THE PROJECT

The principal product of ICAP-I was a conceptual design known as the Operations Support Model, which has been, during ICAP-II, translated into a working organizational entity called the Operations Support Unit. This Unit is intended to respond to three basic needs of the Department, to fulfill the stated goals in the application for LEAA funding, and to further the overall accomplishment of objectives of LEAA's Integrated Criminal Apprehension Program. Specifically, these are as follows:

ICAP National Program Concept

The concept of the ICAP National Program found on page 1-1, ICAP Program Implementation Guide (February 1978) is stated as follows:

> The Integrated Criminal Apprehension Program (ICAP) represents a recently developed police service delivery concept that focuses on building a structured approach to the management and integration of police services. The program has emanated from the accumulated experience and literature developed through a number of LEAA sponsored police programs. The unique feature of ICAP is that it provides a framework for the integration of the various police service delivery functions and support services. Further, it establishes a solid developmental base for increasing overall effectiveness and efficiency of a police organization.

The Operations Support Model developed and implemented as the Operations Support Unit by the ICAP staff of the San Jose Police Department addresses the elements of this strategy directly by providing for a structured approach to providing support services to management, patrol services and investigative services. It utilizes experience and insights gained in a previous LEAA

grant (Patrol Emphasis Program), and builds upon these. The model makes extensive use of integration of various services now performed in the area of support, but presently independent of each other. Enhanced efficiency and effectiveness has been, and is, a prime goal in the development of the concept. The precise manner in which these objectives were attained will be more clearly seen below, as the model is described in more detail. It is appropriate (and necessary) to refer back to ICAP-I activities since ICAP-I and II were two grants which funded two segments of a single ongoing effort to develop and implement the concept described. It is therefore difficult to speak of ICAP-II without reference to previous work under ICAP-I (and to some extent, the Patrol Emphasis Program (PEP)).

It should be mentioned here that another ICAP objective, that of technology transfer, has also been kept in mind during the development of the Operations Support Model. The model (and unit) provides a basis which other agencies, with suitable adaptation, will find useful in seeking to solve similar problems.

Goals Stated in Application

The overall goal as stated in the application for LEAA funding in ICAP-I is:

> To increase the productivity of police manpower and strengthen management and supervision's decision making processes that allocate such manpower in order to effectively and directly affect the potential victim, offender and opportunity for crime.

This broad goal was further defined by stating three sub-goals, each of which included three objectives. The sub-goals were related to program areas (labeled Program Area I, II and III, for convenience). They were stated as follows:

Program Area I, Patrol Methodology and Rationale.

Goal: To improve the capability of patrol forces to impact the occurrences of crime and meet the demands for other police services.

Objective A - To improve Field Deployment and Strategies and Tactics.

Objective B - To increase the amount of Police Officer effectiveness in Patrol Operations.

Objective C - To minimize response time.

Program Area II, Apprehension Techniques and Effectiveness.

Goal: To improve the capacity and effectiveness of patrol and investigative resources for apprehension of offenders.

Objective A - To increase the level and quality of investigative resources available for apprehension activities.

Objective B - To improve the procedures for preliminary investigative and case assignment.

Objective C - To improve tactical deployment of special units assigned to apprehension operations.

Program Area III, Supervision and Management Resources.

Goal: To strengthen management and supervision's capability in improving and maintaining a high level of police officer productivity.

Objective A - To create a functional unity among Information Analysis, Crime Prevention and Apprehension Operations.

Objective B - To systematically provide the information and training needed by management to make decisions in allocating personnel and deployment of manpower.

Objective C - To improve the relationships with external agencies that affect police productivity.

These goals, originally stated in ICAP-I, continued to be the goals of ICAP-II. Indeed, the fact that ICAP-II was a continuation of ICAP-I would make this necessarily so.

Needs of the Department

The three basic needs of the Department are essentially simplified restatements, in practical terms, of the foregoing. The Department has a need to provide better information to management and supervisory personnel to assist in decision-making as relates to utilization of available resources. There is a need for better information for field officers, to enhance their effectiveness in daily operations. A third need relates to investigative personnel - specifically to enhance their ability to solve cases. This third need is addressed in two ways: 1) by reducing the paperwork with which investigators now cope, thus providing more time for field investigative work, and 2) by providing investigators with more and better information with which to work.

Through the Patrol Emphasis Program in San Jose, some of the goals and objectives of Program Area I were addressed. The ICAP Project utilized and built upon the work of PEP, and so many areas which have already been greatly improved, will be enhanced still further through the implementation of the Operations Support Model.

The specific objectives for the final phase of the project were stated in the application for ICAP-II funding as follows:

Results Sought

(a) Objectives. The major objective of ICAP-II will be the successful implementation of the Operations Support Model in the Department. That accomplishment will represent the achievement of the goals and objectives of the Operations Support Model--to provide and promote:

Consistency in information gathering, quality control, storage, accession, and dissemination in the Department.

Optimization of the utilization of line personnel in both the patrol and investigative functions.

Needed information for management and line personnel to enhance the police service delivery capability.

Timeliness in identifying crime patterns and suspect/offense correlations and advising management and line personnel of those conditions.

Responsibility being fixed at all levels for the most effective and efficient completion of assigned tasks.

Operations/Crime Analysis information for informed management judgment and improved line operations.

Liaison within the Department and with the public being improved and strengthened.

(b) 1. Performance Goals. The following have been identified as critical measures of progress achieved in terms of implementing ICAP-II - Operations Support Model (O.S.M.):

Achieve basic operational status for the Operations Support Model not later than September 1979.

Complete and submit study of re-configuring beat structures by January 1980.

Complete conceptual design of Operations Managers' Information System by September 1980.

Initiate ICAP-II Phase-out plan by July 1980.

2. Impact Goal. The ultimate goal of ICAP-II - O.S.M. to conceptualize and operationalize an organizational entity that will manage the flow of information throughout the Department, perform and promptly report the results of analyses of data on operations and crimes to the end that the administration is capable of providing the highest level of professional police service to the community in the most effective and efficient manner possible. In this State at this time, police chief executives are faced with severely constrained budgets. Yet, crime has not appreciably abated and the demand for police services has increased. Such conditions impose upon police executives the necessity for defining and achieving comparable goals. The efforts undertaken in San Jose may serve as a model for replication elsewhere.

The Research (Operations Support Model)

Historically, the Operations Support Model began with a Reorganization Task Force in the San Jose Police Department, which began work in August 1977. A component of its overall study was the consideration of a centralized operations support function. At that time, this function was not precisely defined. The PEP Project participated in the work of the Reorganization Task Force, which was composed of experienced and knowledgeable representatives of the various operating and administrative units of the Department. The final report of the Task Force was published in June 1978, the month which also marked the beginning of ICAP-I. In the report, attention was given to some aspects of what has become the Operations Support Model, but none of these was treated in depth, nor were the elements brought together to

comprise a single functional entity. It became the task of ICAP to perform the extensive research needed and to develop and implement the concept of the model.

Prior to and during ICAP's participation in the Reorganization Task Force, the PEP/ICAP staff engaged in a number of other activities, each of which was ultimately to contribute to the development of the model. As early as October 1976, the PEP staff provided support in the system development of the Records Index System II (RIS II, an automated records index system housed on Santa Clara's computer system), and the Computer Assisted Public Safety System (CAPSS, a computer aided dispatch system). An analysis of the management of the Juvenile Division was done, beginning in April 1977, and in July of the same year an analysis of sex offenses was performed. An in-depth study of the Court Liaison function was also initiated in that same month.

As a result of the participation in the Reorganization Task Force and the other activities cited above, by June 1978, when the ICAP-I grant period began, a great deal of data on current resource management and deployment had been gathered and analyzed. Two conclusions were formulated based on the analysis. First, the data indicated that many of the problems hampering the operating areas investigated were traceable to the flow of records and information. A number of problems which appeared initially to be internal to the operating units studied actually turned out to be problems external to the units and not solvable except to the extent that the records and information flow could be altered. Secondly, data indicated that the records and information flow in the Department was excessively complicated and inefficient. This condition had adverse affects on most, if not all, areas in the Department. The evidence also indicated that it would not be productive, and might even be counter-productive, to attempt to superimpose

a new entity on the existing records and information flow. The most likely result of so doing would be that of adding to the complexity, thereby increasing, rather than alleviating, the problem. The alternative was a complete restructuring of the records and information flow, and it was this course that ICAP undertook to follow.

To accomplish the task of restructuring, it was necessary for project personnel first to have an intimate knowledge of the existing system, since only with this knowledge could the system be effectively altered. Simply scrapping the present system en toto and beginning anew was not considered a viable approach. Were such a method to be advocated by ICAP, it was felt that the ICAP Project would suffer a great loss of confidence - confidence which it enjoyed at the outset of ICAP-I as a result of the accomplishments of PEP, its predecessor. This meant, then, that the entire system of report generation, document flow and information flow would have to be studied in great detail followed by sound recommendations for step by step changes in procedures and work flow.

As a result of this decision, the initial four months of ICAP-I (i.e.,June through September 1978), were devoted to two principal activities, carried on concurrently; 1) a period of intense gathering of highly detailed data needed for flowcharting the entire report generation and document flow processes; 2) a series of on-site visits, meetings, analyses, and comparisons. By the latter part of September, extensive data had been gathered, analyzed and compared, rechecked, further analyzed and compared again until all the data was consistent. Concurrent with this data gathering process, a search of the literature was done to determine whether the concept of an Operations Support Model had been explored in some other agency. It was found that, while various features of the Model had been

implemented elsewhere, there was no evidence that the total concept had been tried previously.

Next, it was necessary to present this data in a readily useable form. The next three months were consequently devoted to flowcharting the entire system. Despite the amount of data already collected, the complex nature of the system made it necessary to make still further inquiries and observations during flowcharting as the process disclosed real or apparent errors. In December 1978, the flowcharting was essentially complete, although some minor changes were needed in the months following. The resulting flowcharts will be found in Appendix B.

The second principal activity that was carried on during this period, concurrent with the data gathering and flowcharting, was that of model development. During the data gathering phase, a preliminary concept of the nature of the Operations Support Model was formed as a result of discussion and comparison of ideas presented by various members of the ICAP Project and some input from sources external to the Project. It was essential throughout the activities of the project, and especially crucial in model development, to encourage the free flow of ideas not only among members of the Project itself, but among Project members and all interested parties. Since the Project had a high level of acceptance, many valuable ideas were contributed from resident staff in the Department. As the data gathering and flowcharting progressed, the conceptual model was refined so that when flowcharting was completed (December, 1978) a fairly sophisticated model had been developed.

It was now possible to represent the model schematically from a structural and a functional standpoint. It was also possible, with the aid of the flowcharts developed for the existing system, to flowchart the

Operations Support Model. The months January through June, 1979, were largely devoted to these activities, to preparing material descriptive of the proposed functions and staffing, etc. of the Model, and to developing a plan for implementation.

Selected schematics of the model which show the major steps in development are to be found in Appendix C. The last two of the series (Appendices C-6 and C-7) show the final version, the first being a structural presentation, and the second a functional one. The flowchart of the Operations Support Model corresponding to the schematic diagrams will be found in Appendix D. Funding and other impediments made it necessary to alter, somewhat, the O.S.M. in implementation. A flowchart of the Model as implemented will be found in Appendix E. A comparison of the flowchart of the Model with that of the original system (Appendix B) will convey a sense of the dramatic change the Model achieves. This same comparison, when it is recalled that the changes were made incrementally on the basis of study of each individual function rather than simply scrapping the old and devising the new system, will provide graphic indication of the magnitude of the problem, and, hence, the task, of the Project staff during the ICAP-I grant period.

Implementation

The ICAP-II Project was committed to two major efforts; 1) the successful establishment of an Operations Support Unit in the San Jose Police Department; 2) completion of an analytical program to re-configure the patrol "beats." The narrative in this section is intended to document the most important aspect of ICAP-II; how the Operations Support Model, was implemented and operates.

At the beginning of ICAP-II, a model which promised a successful solution to the problem of information flow was available, having been developed in ICAP-I. It was now necessary to implement the Model as a unit. To do this required additional research beyond that which was completed in the development of the model. The developmental research focused on the flow of documents within the Department, but took little notice of how many documents were involved, nor were time factors critical in the earlier research. Implementation would require considerable, detailed information along these lines. Consequently, beginning in July, 1979, a series of studies, collectively termed Report Processing Studies, were done which measured numbers of documents generated at various times, workload at different times of day and days of the week, and provided detailed information on processing procedures, including time-motion studies. Every effort was made to insure that the studies represented typical periods of time so that they would form a good historical base for determining what the staffing levels should be in the Operations Support Unit. They would also point to specific skills that would be needed. The Report Processing Studies were the major effort of the Project through the month of September. The results of these studies may be found as Appendix F to this report.

On July 1, 1979, a Police Lieutenant was appointed Commander of the Operations Support Unit. Following a brief period of familization, he embarked on a series of meetings with representatives of Patrol, Records Division, and Investigations. The purpose of these meetings was twofold: 1) to orient those who would be primarily impacted by the institution of the Operations Support Unit, and 2) to solicit input from these persons as to how best to accomplish the change from one system to another with

the least amount of upheaval in day to day operations. The orientations were necessary since, though command staff and management were somewhat familiar with the concept of the OSU (and even they, it turned out, were not as familiar as they needed to be), subordinate levels in all three areas were quite unfamiliar with the proposed change, with the exception, of course, of those particular individuals who had worked with the ICAP staff in the research done during ICAP-I. Cooperative effort would be needed on the part of a wide spectrum of people at all levels, as implementation proceeded, and so it was vital that these people have a clear understanding of just what it was they were being asked to cooperate in doing. How important and useful these orientations were was evident time and time again as implementation of the OSU proceeded. The second aspect of these meetings - solicitation of ideas - was also important. It will be recalled that, during the development of the model upon which the Operations Support Unit is based, ideas were solicited from various people outside ICAP, with beneficial results. Because the new unit would impact a broad spectrum of people and activities throughout the Department, input by these people would be beneficial in two ways. First, greater insight was gained not only concerning the positive impact, but the negative as well. Although the negative impact was found to be minimal, it seemed important to attempt to neutralize any negative effect (real or perceived) to the maximum feasible extent. Feedback, both positive and negative, was received at each stage of implementation, and many of the suggestions were incorporated into the changeover. The second benefit was the realization of a low level of resistance to the change in procedures. Change of any kind can be perceived as threatening to many. This perceived threat, combined with inertia which affects many others, has often proven a formidable barrier

to organizational change. By making those affected participants in the change, the size and nature of this barrier can often be reduced to minimum levels. Such was the case here. Instead of resistance to change, which might well have been encountered, positive participation became the prevailing pattern - a condition which greatly facilitated the implementation of the Operations Support Unit.

Although, at this point, the functions of the Operations Support Unit had been determined, its physical location had not, except that it would be part of, and occupy space, in the Records Division. A series of planning sessions took place, involving ICAP staff, Records staff and the OSU commander to resolve this question. A floor plan of the existing space utilization was prepared. The opening of the new wing of the Police Administration Building resulted in the movement of activities adjacent to Records Division. This, in turn, permitted Records Division to expand its physical area, and therefore, to provide space for the new Operations Support Unit. Two alternative floor plans were devised which incorporated OSU into the Records Division. These two plans were considered as working documents, and not necessarily as final determinations of the physical location of any entity. As initially implemented, the OSU looks similar to Alternative I with all systems terminals located in the area labeled "Enrichment." As with any organization, it is realized that, over time, the physical arrangement will probably change for any number of reasons. Suffice it to say that the Unit was successfully integrated into the Records Division. The floor plans noted above are found as Appendix F-58 & 59.

In implementing the OSU, at least two alternatives were possible in methodology. The first of these would be to simply install the new unit, give it full scope responsibility from the start, with relation to all

crime types, and "debug" the system as problems arose. The experience of others, both in San Jose and elsewhere, when instituting broad organizational change, led to the conclusion that this approach would be the more disruptive and, should the system require adjustment (as we expect it will, inevitably), adjustment would be more difficult to accomplish because of the volume and variety of the cases handled. The second alternative, therefore, was selected by management as the more desireable. This method involved the selection of one crime type which would be handled by the new OSU while other crime types continued to be handled as before, being added to the responsibility of OSU incrementally as it proved itself able to absorb the additional load and was able to acquire the increased staff to make handling of other crime types feasible. (It should be noted that this phased implementation applies only to the Case Control Section. Crime Analysis and Information Coordination were both in existence prior to the development of the OSU, and were handling all crime types, and they continue to do so as part of OSU.)

The crime type selected for initial implementation of OSU was burglary. Two reasons can be cited for this choice. First, there is sufficient volume ($\pm$12,000 per year) to provide a good test of OSU function, while at the same time providing needed assistance to the Burglary Investigation Unit. Second, a high proportion of burglaries have little prospect of solution in that solvability factors are low or virtually nonexistent. That means that a significant number of these cases are "early closed" (see the description of functions, below), and are not assigned to the Burglary Investigation Unit, thereby freeing investigators from a heavy unnecessary paper burden which they bore prior to implementation of OSU. As indicated earlier, other crime types will be added to the OSU operation

as the unit indicates its ability to handle them and as personnel resources become available.

At the heart of the functioning of the OSU is the information contained in the report submitted by the officer who performs the preliminary investigation. Since this is so, the ability of the patrol officers to properly conduct a preliminary investigation assumes great importance. With this in mind, surveys were done to determine the level of this ability. One survey involved the patrol officers themselves while another surveyed detectives to gain their impressions based on the crime reports and other material submitted to them as a result of preliminary investigations. The results of the two approaches were surprisingly similar, and served to point up both strengths and weaknesses in this vital area. Based on these studies, training programs were developed to maintain the strengths and correct the weaknesses found. This training will be continuous in order to continue to improve the quality of preliminary investigations.

Several other important pieces of research were necessary before the OSU could be made a functioning unit. Screening methods and solvability factors had to be developed. A number of alternatives for each of these was possible. ICAP staff worked together with Bureau of Investigations staff as well as members of the Records Division to develop a system for case screening that was both efficient and agreeable to all concerned. Solvability factors for use in determination of cases to "early close" were devised, also by conference. Nationwide literature was researched. An unweighted screening approach was selected. The need to achieve a consensus on these areas made this a rather time consuming process involving many revisions before agreement was eventually reached. It is anticipated that experience, over time, may well result in further alteration.

The new procedures made it necessary to take a close look at the forms which were being used to determine whether changes in them would be necessary or helpful in implementing and operating the OSU. Particular concern was given the fact that greater use of automated systems than had previously been the case might necessitate changes in format of report forms of various types to achieve both consistency of data and ease of entry into the computer systems. It was found that several forms needed revision. There were also needs for forms which had not been used before, and so had to be designed from scratch. These revisions and designs were undertaken with several purposes in mind. The forms had to be functional with relation to the internal operation of the Operations Support Unit. They needed also to provide for the submission of information as complete as possible while, at the same time, providing the patrol officer (in the case of report forms) with a form which was easy and relatively quick to complete, both to encourage completeness and to reduce, as far as possible, the paperwork load on the patrol officer. With these criteria, it is obvious that this was no easy task. In the development of the forms, a considerable amount of time was expended in obtaining suggestions from members of the Bureau of Field Operations (Patrol Division) and incorporating these comments into the new forms where they were not inconsistent with other goals. The end result accomplished, to a high degree, all the purposes, as can be seen by reviewing the forms, shown in Appendix G. One form deserves particular mention, since it represents a departure from past procedure on the part of all patrol officers. This it the "Information Bulletin for the Crime Victim." This form is found in Appendix G-3. The form, besides providing a fairly large amount of general information to the victim, also indicates the case number assigned to the occurrence, and

the status of the case. This means that the patrol officer now has the responsibility to perform a complete preliminary investigation and make a determination, based on the solvability factors discussed earlier, as to whether the case will be submitted for follow-up investigation or not. Of course, this initial decision can be changed by reviewing officers in OSU, when justified, or upon receipt of additional information which would change the "solvability" status of the case, but normally, the recommendation of the patrol officer performing the preliminary investigation acts as the primary guide in this respect.

Staffing considerations loom large in the institution of any new entity, and they were certainly a major area of concern in implementing the Operations Support Unit. The problem arose in connection with the Document and Case Control Sections, since both the Crime Analysis and the Information Coordination functions were already operating entities in the Department, and were staffed. For Case Control, however, personnel would be needed from one source or another, since this was an entirely new entity. It is true that some of the functions had been performed by Records Division personnel, but most had not. Originally, it was planned to acquire the necessary clerical personnel from within the Records Division insofar as it was possible to do so, and rely on new hiring only to a minimum extent. Sworn personnel would be selected from among experienced officers and sergeants in the Department. These officers would be replaced gradually as new personnel were hired and graduated from the academy. During the last half of 1979 and the first part of 1980, the private sector in Santa Clara County experienced a period of expansion which resulted in many job opportunities and higher wage offers. Because of the severe financial constraints imposed by Proposition 13, the City was unable to prevent the loss of many of its employees, sworn and non-sworn. The resulting

personnel shortage in the Department (and throughout the City government) made it unfeasible to divert the necessary personnel from their present assignments to staff the new OSU. The solution was found in the availability of State of California Office of Criminal Justice Planning Mini-Block Grant funds for Plan Year 1980. An application was prepared which requested funding to support one Police Sergeant, two Police Officers, and four Police Records Clerk II, together with certain non-personal expenses. This request was approved on June 18, 1980. In addition to the personnel supported by the Mini-Block Grant funds, the Department was able to make available one Police Lieutenant (OSU Commander), one Police Sergeant and Police Officer. This was enough to staff the OSU provided certain adjustments were made to the design.

As has been noted, the design of the Operations Support Model is quite flexible. This flexibility was now to prove valuable (as we believe it will if and when other agencies attempt to implement a unit on the same design). It was found that by consolidating the functions of the Document Control Section and the Case Control Section into one entity, the OSU could operate and carry out the functions called for in the design. The fact that management had already decided on a phased implementation with relation to crime type (beginning with burglary) meant that the initial volume would not be as great as it otherwise would have been. As implemented, then, the functions of Document and Case Control are handled by one section called Centralized Case Control. It is planned that, as the OSU proves itself, and other crime types are added to its area of responsibility, that additional personnel would be available for the increased workload entailed. A determination will be made at the appropriate time as to whether a consolidated Centralized Case Control Section is the best way to

continue, or whether it is better, because of volume, to return to the idea of separate Document Control and Case Control Sections, as originally envisioned.

The Operations Support Unit, as implemented, consists of a Centralized Case Control Section, Crime Analysis Section (Operations Analysis now made a function of the Research and Development Div.) and Information Coordination Section. The functions of each section are briefly described below:

Centralized Case Control Section

- Collects: All original crime reports, offense reports, citations, supplemental reports, property/evidence reports, etc. are being routed to the section. Each police response is given a computer-generated discrete identifier. Each document associated with the event is given the same number.
- Audits: A "log" is generated by the Computer Assisted Dispatch System (CAPSS) at 0400 hours daily containing all events to which a response was made. The log contains a "disposition code" indicating the closing status. The code will indicate if a report(s) had been made. The section uses the log to ensure that reports for each event have been received. Any discrepancies noted are immediately reported to the appropriate watch commander with a request that the document(s) be submitted without delay. The notification is documented and a copy routed to the unit in which the delinquency occurred. A "tickler" file is maintained in the control section.
- Collates: All the documents associated with each event are then assembled to form a preliminary case file.
- Prioritizes: The County "CJIC" System generates a report at 0600 hours daily of all bookings by agencies in Santa Clara County for the

preceding twenty-four hours. The most current custody status is shown. The Section scans the report for San Jose arrests and for custody status shown as "held." The associated case file is located; a worksheet is affixed with the label of "priority case" being assigned (in this locality the Sheriff will release all arrestees after twenty-four hours from initial booking if no complaint has been filed). The "priority" notation alerts all personnel handling the document that processing needs to be expedited and it must be received by the appropriate court liaison officer as soon as possible. If a complaint received from the District Attorney is not filed prior to the arrestee's release, an arrest warrant must be obtained, the suspect located, re-arrested and booked. This process provides the medium for early identification of in-custody habitual offenders which are priority cases in the prosecutor's office.

- Distributes: When a case has completed processing within the Operations Support Unit, it is faced with a sheet indicating the units or agencies to receive copies. This section is responsible for reproducing the document, as required, and routing it as indicated.
- Reviews: A preliminary "sort" process is conducted at this step. Some report(s) forms (cases) by their nature are not intended for further investigation. Such items are identified and assigned low priority for further processing, but also flow through the "Assignment" element for verification of status of assignability. This unit is responsible for ensuring all critical elements of each document are completed. Inadequacies are handled in the same manner as in the "audit" function.
- Enriches: This section is furnished with computer consoles to access all local, regional, state, and national criminal justice, and allied

(motor vehicles, drivers license, etc.) information systems. According to enrichment procedures established for each type of case and the preliminary evidence reflected in the report, an extensive data base search will be conducted. All results obtained will be attached to the case. (Development and operation of this component will be supported by experienced investigators and experienced Police Records Clerks who will bring their experience, intuition, and ingenuity to bear in directing the data base search process.)

- Evaluates: This is one of the most critical functions in the entire model. It involves the evaluation of the merit of a case and determination as to whether further investigation is warranted. The criteria for the case evaluation process have been developed. At present, copies of cases "not to be assigned" are being routed to detectives for information only. If the investigative commander wishes to assign the case, justification for such action must be documented and severe time constraints established for the supplemental investigation.
- Assigns: A formal case assignment procedure has been developed. This component will determine on the basis of the offense type, ages of suspect(s)/victim(s) the investigative unit(s) to handle the case solely or jointly. The unit(s) of assignment are entered on the case face sheet.
- Systems Entry: In the review and enrichment processes critical case control (status-assignability) and crime analysis data elements are highlighted. The data elements so indicated are entered into the R.I.S. (Records Index System) and thus initiate the on-line status of the case (Assigned/Unassigned/Unit(s)) and crime analysis elements (crime type, location, time, victim, suspect(s), witnesses, etc.).

A responsibility of this section is systems quality control. Supplemental reports received necessitate "calling-up" of the case on the screen face. Quality control personnel ensure all data elements recorded are correct and that any errors are corrected without delay.

- Victim Liaison: In the event a case is determined not to merit investigative assignment, a brochure will have been provided the victim/reporting party of that decision by the officer conducting the preliminary investigation. The brochure also advises the recipient that in the event they become aware of additional, related information it is essential they telephone the Section at the number found in the brochure and report the matter. The Unit records the information on a supplemental report form, re-activates the case, and routes it to the case evaluation function for decision-making as to its assignability.

Crime Analysis Section

- Analysis: The Crime Analyst directs the activities of this section. In the area of crime analysis, ready access to the crime event data bases is available. Present production reports will be refined and expanded as justification and resources warrant. Copies of reports of selected target crimes (sexual and aggravated assault, robberies, burglaries, etc.) are routed to the section and scanned by support staff in the belief that reading only selected cases will promote the ability to make early identification of pattern, trends, etc. Such speculations will be tested by the crime analyst in programmed searches of data bases. The function will provide management, operations, and line personnel with timely crime data of high utility.

The Operations Analyst, although disassociated from OSU and now part of Research and Development, will impact OSU operations since he/

she will continue research to re-evaluate the Patrol Allocation Plan, expand the concept to other field units, and with more reliable workload measures for the investigative branch being developed as a result of the functioning of the Operations Support Model, will initiate studies into investigative resource allocation models. A set of limited management reports are generated by that section. The Operations Analyst will assume lead responsibilities for the conceptualization of an Operations Managers' Information System. These products will dovetail with those of the Crime Analyst to provide better information for command and management use.

- Recommends: The Section develops and submits to management recommendations for strategic/tactical deployments, allocations, etc., based upon the results of the analytical process and any discernable, unique features of identified series of events.
- Assesses: This section and the Operation Analysis Section in Research and Development bear the responsibility for the in-house evaluation of those plans and programs instituted by operations elements of the Department upon the recommendations generated by this unit.
- Reports: The obligation to keep management and operations informed as to the results achieved from functions performed by the section are of the utmost importance. Strategic and tactical plans based upon or incorporated into such reports will be developed and implemented without delay.

Information Coordination Section

- Disseminates: The Department publishes a daily "Watch Bulletin" utilized by line members of this and other nearby police departments. That function is performed by this section. Additionally, plans are being

developed to expand the "Watch Bulletin," identify appropriate other media (videotape, television time, cassettes, etc.) for the widest, most effective dissemination of information that will facilitate operations in the identification and apprehension of wanted persons.

Implementing this Model meant that additional personnel with specific skills would be needed. Previous management commitments had been made to reassign some existing staff to Operations Support, where they would perform duties virtually identical to those they performed in their previous assignments. Such reallocations could not satisfy personnel requirements in the Case Control Section for two reasons: the first, that new and special skills had to be developed in the staff selected for the Case Review, Enrichment, Evaluation and Victim Liaison components; the second, that there are not sufficient personnel, generally funded, to provide staff for assignment to the above identified critical tasks.

It was determined that two levels of sworn personnel would be required for the Review, Evaluation and Victim Liaison functions. A supervisory sergeant would be needed to coordinate all functions of the section during a shift. Most importantly, that individual would have final authority for confirming decisions made by a police officer to early close, reclassify, unfound, or reactivate cases and to make the screening and investigative unit assignment determinations. The supervisors would be required to acquire new skills, but must also be generally regarded and respected for their expertise in preliminary and supplemental investigative practices and procedures and their knowledge of existing prosecutorial requirements and judicial philosophies. The police officers must have many of those same skills but not to such an advanced degree. The distinguishing characteristic between the two positions is that the police officer would recommend; the

sergeant would be held accountable for the final decisions made. The volume of work estimated to be flowing through the Case Control Section supports the need for one officer and one sergeant on two shifts daily, five days per week. The assignment of a sergeant also provides for overall shift supervision.

The Case Enrichment function is performed by Police Records Clerks. Essentially, the staff selected must be trained to acquire a broad knowledge of all existing criminal information systems and how to access the systems in an interactive, dynamic fashion so as to obtain all possible information related to fragmentary information elements contained in preliminary investigation reports. Those selected for this specialized assignment must have demonstrated knowledge of automated systems and especially an acute interest in police investigatory practices and procedures. The personnel required for such positions are in addition to the Police Records Clerks reassigned from the Records Division, who are responsible for the Case Systems Entry function. Two positions of Police Records Clerks are required for each of two shifts five days per week.

As mentioned earlier mini-block grant monies available for State of California OCJP Plan Year 1980 were successfully requisitioned to support the funding of two positions of police sergeant, two positions of police officer, and four positions of Police Records Clerks to perform duties as outlined in the foregoing. The utilization of block grant funds as proposed reflects the commitment of the Department and the City to full implementation of the Operations Support Model.

Results (OSU)

The processing of all burglary and receiving stolen property cases by San Jose's OSU represents a workload during first phase of approximately 40% of all felony cases handled by the Department. The OSU reports that it, during its first ten weeks of operation, screened out (held open but inactive) 79.4% of the 3,266 cases it processed. This resulted in the OSU's retention of responsibility for 2,594 cases. 20.6% of the total cases processed (672) were sent to the Burglary Investigation Unit for followup.

Highlights of the ICAP local evaluator's findings with regard to OSU are that:

- Pre and post measurements indicate positive changes in Burglary Unit operating patterns.
  - Patterns of time usage by investigators showed positive changes in three areas.
  - Investigator attitudes toward OSU impact showed moderate positive shifts.
  - A higher proportion of "assignable" cases are being assigned and receiving some followup.
  - Burglary complaints filed have increased in number and in proportion to numbers of assigned cases.
- Analysis of OSU. . .activities indicate that:
  - Most low probability cases are being screened out by the OSU.
  - The great majority of cases forwarded to burglary are subjected to enrichment. . .
  - A high proportion of enrichment. . .activities are successful.
  - About 11% of those cases forwarded to burglary by OSU had new solvability elements added. . .
  - . . .there appears to be a direct link between OSU enrichment activities and ultimate disposition of those cases by Burglary (Unit).

The OSU manager's closing comment on the Unit's first status report represents the majority opinion of all San Jose Police Department members who are affected by the existence of the OSU. It merits repetition here. "We are optimistic that we are on the right track and that the effort is worthwhile."

IV. CONCLUSION

Operations Support Model (Unit)

As can be seen from the information given above, the Operations Support Model provides for an integrated, coordinated and efficient means of providing direct support to the operational entities of the Department. While many of the functions were already being performed, they were not organized into a simple functional entity. It is anticipated that those functions will be enhanced by the very fact of close operational relationship with other functions in the Operations Support Unit, over a period of time. It is also anticipated that certain functions, particularly Crime Analysis and Operations Analysis (although not an OSU function, but part of R & D, an ICAP product, nonetheless), will be expanded so as to provide even greater contributions to the overall performance of the traditional police mission. We fully recognize that because the Department does not operate in a static environment some changes may be necessary as implementation proceeds. The Operations Support Model has purposely been designed with this in mind. As can be seen from the presentation above and in the appendices indicated, the Model is flexible, and has been designed to meet changing requirements. Indeed, its flexibility was crucial in enabling its implementation, as discussed above.

While the Model is designed to increase efficiency, and is expected to result in savings over time, it did require a degree of financial expenditure in the initial stages to accomplish the needed changes. That financial need was met, in part, by State of California Mini-Block Grant funds, as described earlier. Current and continuous budget constraints may require some changes (or require changes from the original

design now in being to become permanent) particularly where additional personnel resources are required. Since some of the key functions of the Model already existed in the Department, changes in implementation which were necessary because of funding limitations were not so severe as to prevent the resulting entity from accomplishing its stated goals. It is hoped that, over time, those areas which are affected can be funded (even incrementally) so that the end result will be full realization of the Operations Support Model as planned.

District/Beat Restructuring Project

A performance goal written into San Jose's ICAP II application was to "complete and submit study of reconfiguring beat structures by January, 1980". This study was accomplished; the resulting plan was implemented by the Department on January 18, 1981.

After the close of ICAP I San Jose ICAP's local evaluators, Hughes-Heiss, during their exit meeting with the Chief and Assistant Chief of Police stated that it was their opinion that ICAP II, which was already in progress, was over committed. They felt that 1) implementation of "OSU", 2) completion of "ACES" installation/testing, 3) development and implementation of a new district/beat system, and 4) designing an Operations Managers' Information System were more than could be achieved by the Project at the then existing resource level.

A succession of resignations of all three of the Project's original analysts compounded this identified problem. The remaining key staff were the manager and two relatively new staff analysts. Halfway through the grant (the nine month point) the Project was without a statistical analyst, confronted by a City hiring freeze and, allowing that the freeze could be bypassed, was hard pressed to find a statistical analyst who

1) would take a nine-month job or 2) could accomplish the district/beat project in the remaining nine months.

All of the above resulted in the Department's decision to postpone implementation of the district/beat project to January, 1981, and to not hire a statistical analyst for ICAP. The grant manager teamed with the Department's Crime Analyst, also a statistical analyst, and the newly selected Operations Analyst in the Research and Development Division; together they, with support staff, accomplished the district/beat project.

This project is documented in Appendix H.

As can be seen from a careful study of the foregoing, the Law Enforcement Assistance Administration's Integrated Criminal Apprehension Program through the San Jose Project has had and will have in the future substantial impact on the operation of the San Jose Police Department. The functions, methods and processes of the Department which have been affected by the incorporation of ICAP-articulated concepts we feel will provide a rich return to the people of San Jose on their investment in terms of improved, cost effective police services.

SECTION V

APPENDICES

Appendix A

Computer Equipment Purchase

Approval Documents

CITY OF SAN JOSE, CALIFORNIA

POLICE DEPARTMENT

201 W. MISSION STREET
TELEPHONE (408) 277-4000

P.O. BOX 270
95103

September 8, 1980

Search Group, Inc.
925 Secret River Drive
Sacramento, CA 95831

Attention: Mr. Joe Sharp

Dear Joe:

Attached is our request for approval for the EDP equipment to expand our Automated Case Enrichment System. As you know, the primary file on the system is the Field Interview Card file. As a secondary function, the system will be used as a word processor to update our Duty Manual and Beat Book Index, as well as other similar work as the needs arise.

We also plan to use the system for a variety of other files, to be put on at a later time.

The equipment to be purchased will correct two deficiencies. The first of these is a lack of adequate storage space, which the disk drives will greatly expand. The second is flexibility which will be enhanced by the addition of a CRT terminal and printer to be located in the crime analysis area and which will be available not only for crime analysis purposes, but for input of data, etc., as well.

Since prior LEAA approval is needed before our City Council can authorize the purchase, your early action on this request will be greatly appreciated.

Any questions you may have may be directed to Bud Bye, ICAP Project Manager, at (408) 277-4106.

Sincerely,

JOSEPH D. McNAMARA
Chief of Police

R. Bradshaw

ROBERT V. BRADSHAW
Assistant Chief of Police

JDM/RVB/MRB/crf

1. Recommendation of SPA

Since the City of San Jose ICAP Project is a "track one" grant, the SPA (Office of Criminal Justice Planning) is not involved in the administration of this grant. Therefore, the recommendation of the SPA is not applicable.

2. Specific Equipment to be Purchased

The following equipment is to be purchased:

1. One (1) Digital Equipment Corporation Expander Chassis, Model BA 11-KE.
2. One Disk Drive, with disk pack and controller, Digital Equipment Corporation Model RJP-04, 88 megabyte capacity.
3. One Disk Drive with disk pack, Digital Equipment Corporation Model RP-04, 88 megabyte capacity.
4. One CRT Terminal, Digital Equipment Corporation Model VT-100.
5. One Matrix Printer, Digital Equipment Corporation Model LA-180 (operating speed of 180 characters per second).

3. Project Goal

The project goal, as stated in the grant application is:

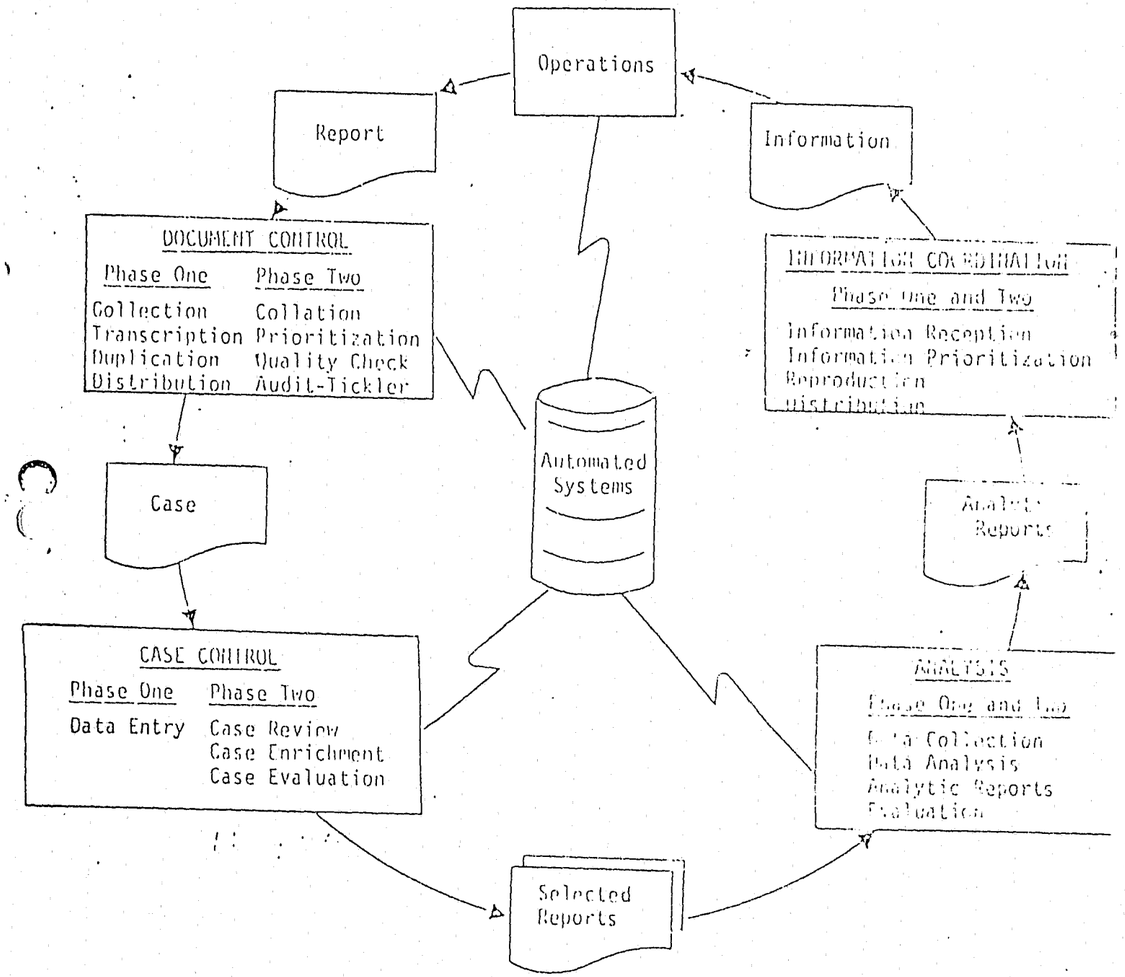
> To increase the productivity of police manpower and strengthen management and supervision's decision-making processes that allocate such manpower in order to effectively and directly affect the potential victim, offender and opportunity for crime.

This rather broad goal has been translated into the development of an Operations Support Model, a schematic of which is attached. This model is being implemented in the third grant period, and will become a permanent system in the Department.

The equipment to be purchased is for expansion of a DEC PDP 11-34 computer system purchase during the second grant period. The expansion is needed to provide sufficient storage for the applications contemplated (including the Field Interview File, currently on the system), and to enhance flexibility of the system. Since the computer system (called the Automated Case Enrichment System - ACES) is used almost entirely by the Operations Support Unit, this purchase represents a direct enhancement of an ICAP product - namely the Operations Support Unit.

OPERATIONS SUPPORT MODEL

SCHEMATIC CHART



4. Bidders List

The following is the list of organizations solicited by the City of San Jose in its Request for Proposal (RFP):

Digital Equipment Corporation*
100 Bush Street, Seventh Floor
San Francisco, CA 94104

Digital Accessories and Supplies
632 East Carribean
Sunnyvale, CA 94086

Systems Industries
525 Oakmead Parkway
P.O. Box 9025
Sunnyvale, CA 94086

Xebec Systems, Inc.
2985 Kifer Road
Santa Clara, CA 95051

West Coast Computer Exchange, Inc.
248 Sobrante Way
Sunnyvale, CA 94086

International Data Services, Inc.**
453 D Ravendale Drive
Mountain View, CA 94043

Pacific Data Systems
701 Welch Road
Palo Alto, CA 94304

* Response received from office in Santa Clara, CA. See listing in item 5, following.

** Response received from office in Sunnyvale, CA. See listing in item 5, following.

5. Responses

The following is a list of organizations responding to the RFP:

Digital Equipment Corporation
2525 Augustine Drive
Santa Clara, CA 95051

International Data Services, Inc.*
1020 Stewart Drive
Sunnyvale, CA 94086

West Coast Computer Exchange, Inc.
248 Sobrante Way
Sunnyvale, CA 94086

Systems Industries
525 Oakmead Parkway
P.O. Box 9025
Sunnyvale, CA 94086

* Selected as the lowest responsible and responsive bidder. The firm will supply all items of equipment indicated herein.

6. Lease/Purchase Analysis

LEASE/PURCHASE ANALYSIS SUMMARY

COMPONENT	PURCHASE AMOUNT	MONTHLY MAINTENANCE	MONTHLY RENTAL	LEASE/PURCHASE DECISION	PRESENT VALUE OF SAVINGS THROUGH PURCHASE
1. Expander Chassis	$ 3,425	$ 18.00	$ 87.26	Purchase	$ 189.80
2. Disk Drive, Pack and Controller	17,000	272.00	543.59	Purchase	2,865.41
3. Disk Drive and Pack	13,000	242.00	449.69	Purchase	2,549.03
4. CRT Terminal	1,850	17.00	46.56	Purchase	179.21
5. Matrix Printer	2,460	50.00	89.30	Purchase	526.11

LEASE/PURCHASE ANALYSIS WORKSHEET

Page 1 of 5	Implementation Date	Release Date	Elapsed Time	Purchase Amount	Component	DEC BA-11EL Expander Chassis
	Nov. 1, 1980	Nov. 1, 1990	10 years	$3,425.00		

	Factors	Purchase			Lease		
Year	Discount	Annual Maintenance	Present Value	Cumulative Value	Annual* Costs	Present Value	Cumulative Value
1	0.877	216	189.43	3,425.00	872.62	765.29	765.29
2	0.769	216	166.10	3,591.10	872.62	671.04	1,436.33
3	0.675	216	145.80	3,736.90	872.62	589.02	2,025.35
4	0.592	216	127.87	3,864.77	872.62	516.59	2,541.94
5	0.519	216	112.10	3,976.87	872.62	452.89	2,994.83
6	0.456	216	98.50	4,075.37	872.62	397.91	3,392.74
7	0.400	216	86.40	4,161.77	872.62	349.05	3,741.79
8	0.351	216	75.82	4,237.59	872.62	306.07	[illegible]
9	0.308	216	66.53	4,304.12	872.62	268.77	[illegible]
10	0.270	216	58.32	4,362.44	872.62	235.61	[illegible]

Differential Calculation:

Cumulative Value of Purchase	$ 4,362.44
Less Cumulative Value of Lease	$ 4,552.24
Difference	$ 189.80

Supportive Comments:

* Includes maintenance costs

Decision = Purchase

Lease/Option Analysis Worksheet

Page 2 of 5	Implementation Date	Release Date	Elapsed Time	Purchase Amount	Equipment: DEC RJP-04 Disk Drive and Disk Pack with Controller		
	Nov. 1, 1980	Nov. 1, 1990	10 years	$17,700			
	Factors	Purchase			Lease		
Year	Discount	Annual Maintenance	Present Value	Cumulative Value	Annual* Costs	Present Value	Cumulative Value
1	0.877	3,264.00	2,862.53	17,000.00	6,523.13	5,720.79	5,720.79
2	0.769	3,264.00	2,510.02	19,510.02	6,523.13	5,016.29	10,737.08
3	0.675	3,264.00	2,203.20	21,713.22	6,523.13	4,403.11	15,140.19
4	0.592	3,264.00	1,932.29	23,645.51	6,523.13	3,861.69	19,001.88
5	0.519	3,264.00	1,694.02	25,339.53	6,523.13	3,385.50	22,387.38
6	0.456	3,264.00	1,488.38	26,827.91	6,523.13	2,974.55	25,361.93
7	0.400	3,264.00	1,305.60	28,133.51	6,523.13	2,609.25	27,971.18
8	0.351	3,264.00	1,145.66	29,279.17	6,523.13	2,289.62	30,260.80
9	0.308	3,264.00	1,005.31	30,284.48	6,523.13	2,009.12	32,269.92
10	0.270	3,264.00	881.28	31,165.76	6,523.13	1,761.25	34,031.17

Differential Calculation:

Cumulative Value of Purchase	$ 31,165.76
Less Cumulative Value of Lease	$ 34,031.17
Difference	$ 2,865.41

Supportive Comments:

* Includes maintenance costs

Decision = Purchase

Lease/Option Analysis Worksheet

Page 3 of 5	Implementation Date	Release Date	Elapsed Time	Purchase Amount	Equipment: DEC RJP-04 Disk Drive and Disk Pack		
	Nov. 1, 1980	Nov. 1, 1990	10 years	$13,000			
	Factors	Purchase			Lease		
Year	Discount	Annual Maintenance	Present Value	Cumulative Value	Annual* Costs	Present Value	Cumulative Value
1	0.877	2,904.00	2,546.81	13,000.00	5,396.28	4,732.54	4,732.54
2	0.769	2,904.00	2,233.18	15,233.18	5,396.28	4,149.74	8,882.28
3	0.675	2,904.00	1,960.20	17,193.38	5,396.28	3,642.49	12,524.77
4	0.592	2,904.00	1,719.17	18,912.55	5,396.28	3,194.60	15,719.37
5	0.519	2,904.00	1,507.18	20,419.73	5,396.28	2,800.67	18,520.04
6	0.456	2,904.00	1,324.22	21,743.95	5,396.28	2,460.70	20,980.74
7	0.400	2,904.00	1,161.60	22,905.55	5,396.28	2,158.51	23,139.25
8	0.351	2,904.00	1,019.30	23,924.85	5,396.28	1,894.09	25,033.34
9	0.308	2,904.00	894.43	24,819.28	5,396.28	1,662.68	26,696.02
10	0.270	2,904.00	784.08	25,603.36	5,396.28	1,457.06	28,153.08

Differential Calculation:

Cumulative Value of Purchase	$ 25,603.36
Less Cumulative Value of Lease	$ 28,152.39
Difference	$ 2,549.03

Supportive Comments:

* Includes maintenance costs

Decision = Purchase

Page 4 of 5

Implementation Date	Release Date	Planned Time	Purchase Amount	Alternate: DEC CRT Terminal Model VT-100
Nov. 1, 1980	Nov. 1, 1990	10 years	$1,850.00	

Year	Factors: Discount	Lease: Annual Maintenance	Lease: Present Value	Lease: Cumulative Value	Alternate: Annual* Costs	Alternate: Present Value	Alternate: Cumulative Value
1	0.877	204	178.91	1,850.00	558.67	489.95	489.95
2	0.769	204	156.88	2,006.88	558.67	429.62	919.57
3	0.675	204	137.70	2,144.58	558.67	377.10	1,296.67
4	0.592	204	120.77	2,265.35	558.67	330.73	1,627.40
5	0.519	204	105.88	2,371.23	558.67	289.95	1,917.35
6	0.456	204	93.02	2,464.25	558.67	254.75	2,172.10
7	0.400	204	81.60	2,545.85	558.67	223.47	2,395.57
8	0.351	204	71.60	2,617.45	558.67	196.09	2,591.66
9	0.308	204	62.83	2,680.28	558.67	172.07	2,763.73
10	0.270	204	55.08	2,735.36	558.67	150.84	2,914.57

Differential Calculation:

Cumulative Value of Purchase	$ 2,735.36
Less Cumulative Value of Lease	$ 2,914.57
Difference	$ 179.21

Supportive Comments:

* Includes maintenance costs

Decision = Purchase

Page 5 of 5

Implementation Date	Release Date	Planned Time	Purchase Amount	Alternate: DEC LA-84 Matrix Printer
Nov. 1, 1980	Nov. 1, 1990	10 years	$2,460.00	

Year	Factors: Discount	Lease: Annual Maintenance	Lease: Present Value	Lease: Cumulative Value	Alternate: Annual* Costs	Alternate: Present Value	Alternate: Cumulative Value
1	0.877	600	526.20	2,460.00	1,071.62	939.27	939.27
2	0.769	600	461.40	2,921.40	1,071.62	824.08	1,763.35
3	0.675	600	405.00	3,326.40	1,071.62	723.34	2,486.69
4	0.592	600	355.20	3,681.60	1,071.62	634.40	3,121.09
5	0.519	600	311.40	3,993.00	1,071.62	556.17	3,677.26
6	0.456	600	273.60	4,266.60	1,071.62	488.66	4,165.92
7	0.400	600	140.00	4,506.60	1,071.62	428.65	4,594.57
8	0.351	600	210.60	4,717.20	1,071.62	376.14	4,970.71
9	0.308	600	184.80	4,902.00	1,071.62	330.06	5,300.77
10	0.270	600	162.00	5,064.00	1,071.62	288.34	5,589.11

Differential Calculation:

Cumulative Value of Purchase	$ 5,064.00
Less Cumulative Value of Lease	$ 5,589.11
Difference	$ 525.11

Supportive Comments:

* Includes maintenance costs

Decision = Purchase

Explanatory Notes

1. If the City were to lease the equipment, lease payments would begin after installation. In the case of the present proposed purchase, it is anticipated that this will be accomplished in October 1980, and, therefore, an implementation date of November 1, 1980 has been used, since that would be the date of the first lease payment.

2. It is anticipated that the equipment will serve the purposes for which it is being acquired for a period of ten years. Also, given the post Proposition 13 funding situation in the City, it is doubtful that funds for replacement of the system would be available any time soon, and it can be reasonably anticipated that the system will have to be used to its maximum feasible time before a replacement system could even be considered. In that there is now computer equipment in use in the City which is approaching ten years in age, it would appear that ten years is a reasonable anticipated use time. For these reasons, the release date of November 1, 1990 is used, and the analysis is predicated on an anticipated use of ten years.

3. On a long term lease, the City would ordinarily make annual payments, and so the Distributed Payment Factor was not used. Maintenance costs in a purchase situation will be by contract and paid annually.

4. The discount factors used are for 14% interest, the rate most recently paid by the City for leasing of equipment.

7. Sole Source Justification

Not Applicable.

8. Programming Language

Not Applicable.

U.S. Department of Justice

Bureau of Justice Statistics

Washington, D.C. 20531

OCT 30 1985

Mr. Joe Sharp
SEARCH Group, Inc.
925 Secret River Drive, Suite H
Sacramento, California 95831

Dear Mr. Sharp:

SEARCH Group, Inc. letter of October 7, 1980 requested approval for the San Jose Police Department, an ICAP agency in California, to procure certain ADP equipment.

We have reviewed the equipment listed in the enclosures to the letter and concur with the proposed expansion and procurement.

Sincerely,

Wayne P. Holtzman
Director
Systems Development Division

APPENDIX B

REPORT GENERATION AND PROCESSING

FLOW CHARTS

SAN JOSE POLICE DEPARTMENT
REPORT GENERATION AND PROCESSING
FLOW CHARTS
1979

SAN JOSE POLICE DEPARTMENT
REPORT GENERATION AND PROCESSING
FLOW CHARTS

INDEX TO FLOW CHART PLATES

--SPECIAL THANKS TO STAFF INSPECTIONS FOR THEIR ASSISTANCE AND TO ALL DEPARTMENTAL PERSONNEL INTERVIEWED.

ICAP
8-79

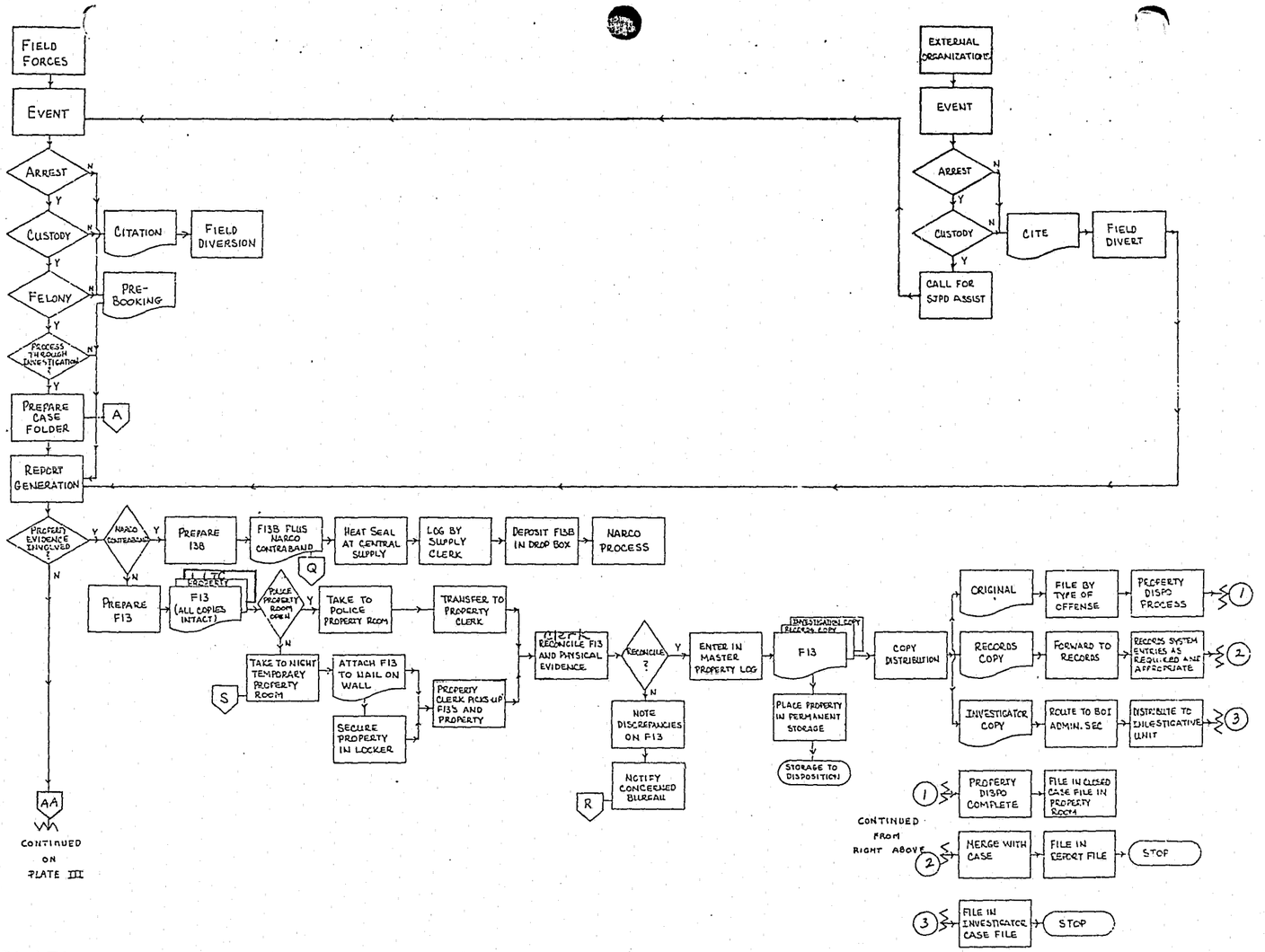

FIELD FORCES
EVENT
ARREST
CUSTODY
CITATION
FIELD DIVERSION
FELONY
PRE-BOOKING
PROCESS THROUGH INVESTIGATION?
PREPARE CASE FOLDER
A
REPORT GENERATION
PROPERTY EVIDENCE INVOLVED?
NARCO CONTRABAND
PREPARE 138
F13B PLUS NARCO CONTRABAND
Q
HEAT SEAL AT CENTRAL SUPPLY
LOG BY SUPPLY CLERK
DEPOSIT F13B IN DROP BOX
NARCO PROCESS
PREPARE F13
F13 (ALL COPIES INTACT)
POLICE PROPERTY ROOM OPEN
TAKE TO POLICE PROPERTY ROOM
TRANSFER TO PROPERTY CLERK
S
TAKE TO NIGHT TEMPORARY PROPERTY ROOM
ATTACH F13 TO WALL ON WALL
SECURE PROPERTY IN LOCKER
PROPERTY CLERK PICKS UP F13'S AND PROPERTY
RECONCILE F13 AND PHYSICAL EVIDENCE
RECONCILE?
NOTE DISCREPANCIES ON F13
R
NOTIFY CONCERNED BUREAU
ENTER IN MASTER PROPERTY LOG
F13
INVESTIGATION COPY
RECORDS COPY
PLACE PROPERTY IN PERMANENT STORAGE
STORAGE TO DISPOSITION
COPY DISTRIBUTION
ORIGINAL
FILE BY TYPE OF OFFENSE
PROPERTY DISPO PROCESS
RECORDS COPY
FORWARD TO RECORDS
RECORDS SYSTEM ENTRIES AS REQUIRED AND APPROPRIATE
INVESTIGATOR COPY
ROUTE TO BOI ADMIN. SEC
DISTRIBUTE TO INVESTIGATIVE UNIT
1
PROPERTY DISPO COMPLETE
FILE IN CLOSED CASE FILE IN PROPERTY ROOM
CONTINUED FROM RIGHT ABOVE
2
MERGE WITH CASE
FILE IN REPORT FILE
STOP
3
FILE IN INVESTIGATOR CASE FILE
STOP
AA
CONTINUED ON PLATE III
EXTERNAL ORGANIZATIONS
EVENT
ARREST
CUSTODY
CITE
FIELD DIVERT
CALL FOR SJPD ASSIST

PLATE I

3-79

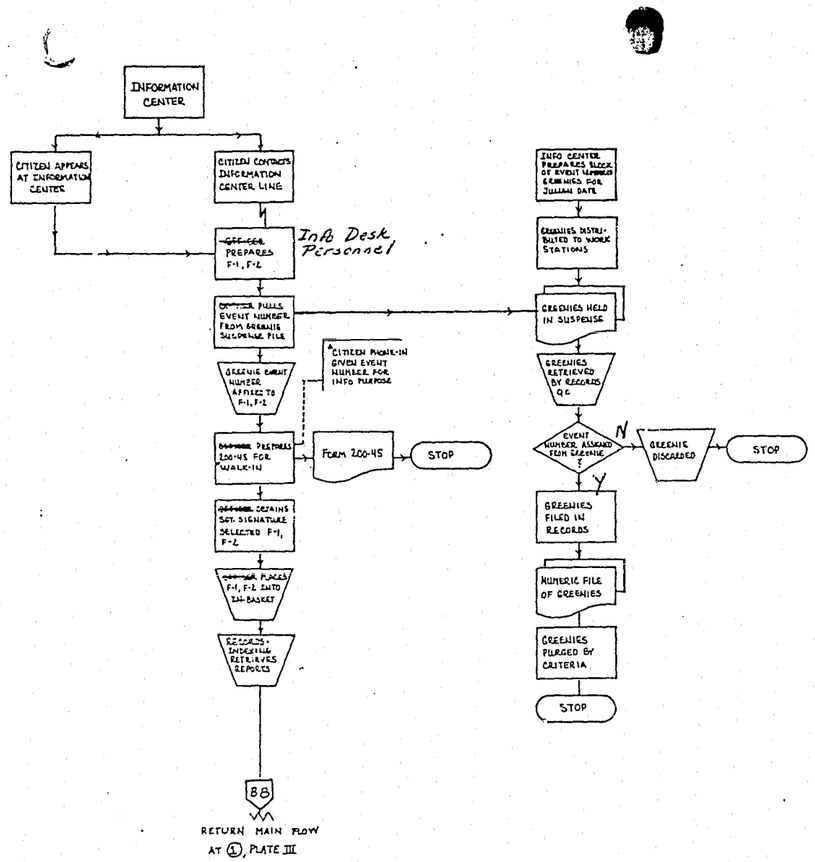

INFORMATION CENTER
CITIZEN APPEARS AT INFORMATION CENTER
CITIZEN CONTACTS INFORMATION CENTER LINE
PREPARES F-1, F-2
Info Desk Personnel
PULLS EVENT NUMBERS FROM GREENIE SUSPENSE FILE
GREENIE EVENT NUMBER AFFIXED TO F-1, F-2
*CITIZEN PHONE-IN GIVEN EVENT NUMBER FOR INFO PURPOSE
PREPARES 200-45 FOR WALK-IN
FORM 200-45
STOP
OBTAINS SUP. SIGNATURE SELECTED F-1, F-2
PLACES F-1, F-2 INTO IN-BASKET
RECORDS-INDEXING RETRIEVES REPORTS
88
RETURN MAIN FLOW AT (1), PLATE III
INFO CENTER PREPARES BLOCK OF EVENT NUMBERS REMOVED FOR JULIAN DATE
GREENIES DISTRIBUTED TO WORK STATIONS
GREENIES HELD IN SUSPENSE
GREENIES RETRIEVED BY RECORDS QC
EVENT NUMBER ASSIGNED FROM GREENIE ?
N
GREENIE DISCARDED
STOP
Y
GREENIES FILED IN RECORDS
NUMERIC FILE OF GREENIES
GREENIES PURGED BY CRITERIA
STOP
INVESTIGATIONS
PRELIMINARY INVESTIGATIVE ACTIVITY
CASE INITIATION PROCESS
OBTAIN & AFFIX CASE #
OPEN CASE FILE UNIT LOG ENTRY
F-3 REPORT
CASE REVIEW/ EVALUATION PROCESS
RIS ENTRY
CONTINUE INVESTIGATION ?
N
ORIGINAL COPY UPDATE RD PORT
Y
INVESTIGATION PROCESS
TRANSCRIPTION PROCESS
UPDATE F-3 + PERM. SUMMARY FORM
SUPERVISORY REPORT
SEEK COMPLAINT ?
N
CONTINUE INVESTIGATION
N
Y
Y
D.A. COMPLAINT PROCESS AND/OR TRIAL PROCEDURES
RIS ENTRY
CASE DISPOSITION
UNIT COPY REMARKS
QC Process (includes RIS entry)
ORIGINAL REPORT TO RECORDS FILE
RECORDS PROCESSING
U
RECORDS CENTRAL FILE
STOP

PLATE II

3-79

CONTINUED

1 OF 3

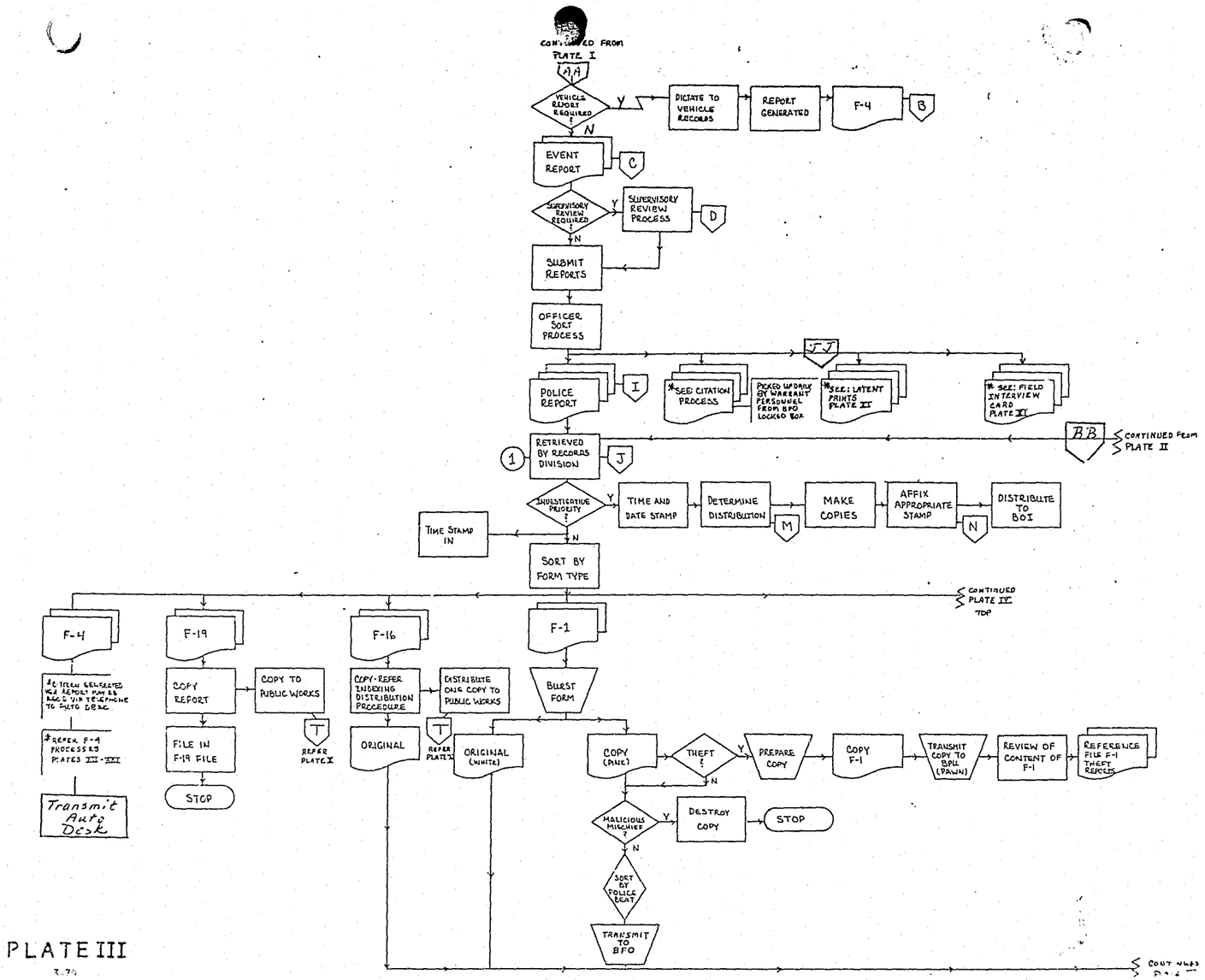
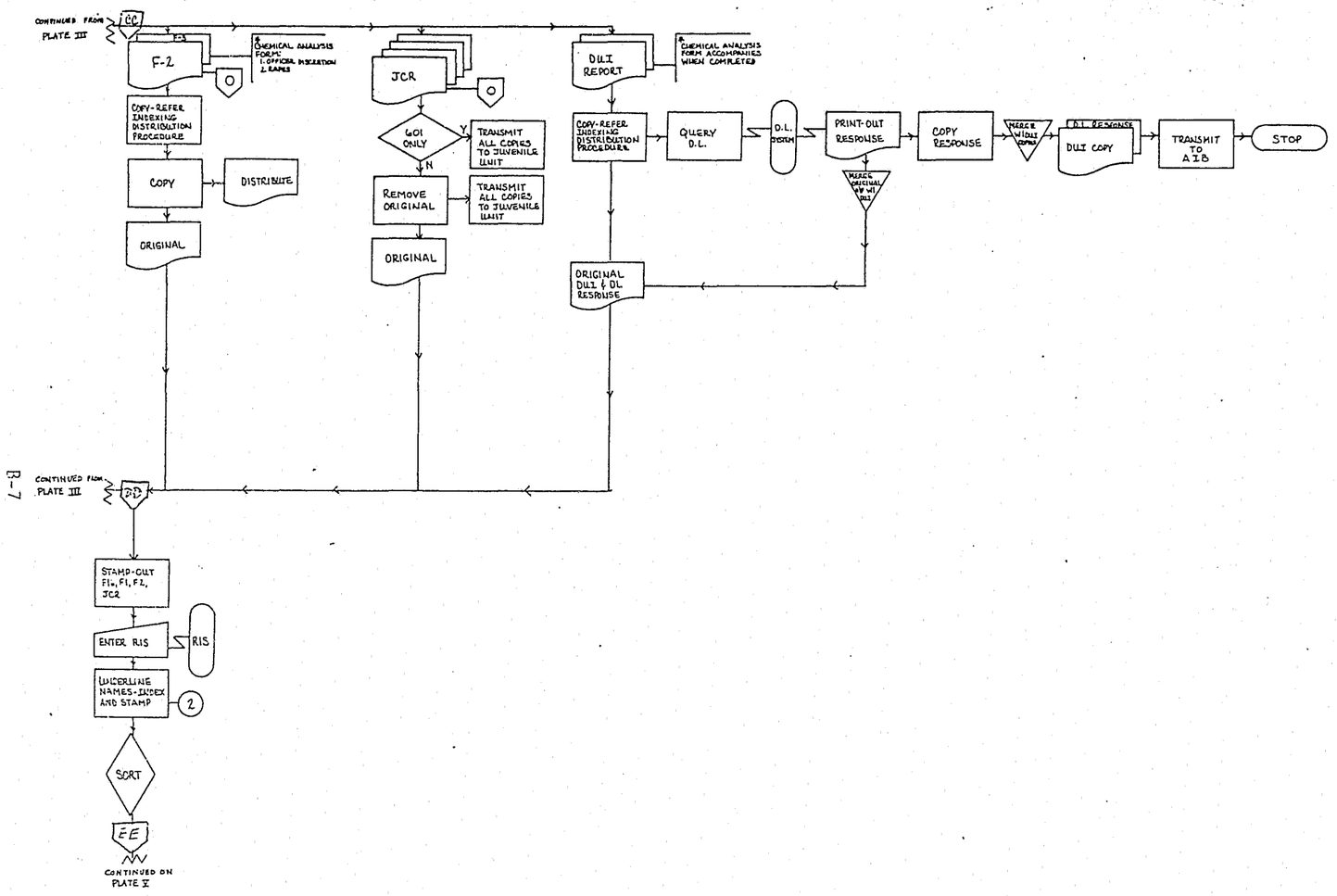

CON'T'D FROM PLATE I
MA
VEHICLE REPORT REQUIRED ?
Y
N
DICTATE TO VEHICLE RECORDS
REPORT GENERATED
F-4
B
EVENT REPORT
C
SUPERVISORY REVIEW REQUIRED ?
Y
N
SUPERVISORY REVIEW PROCESS
D
SUBMIT REPORTS
OFFICER SORT PROCESS
JJ
POLICE REPORT
I
*SEE: CITATION PROCESS
PICKED UP BY/BY WARRANT PERSONNEL FROM BPO LOCKED BOX
*SEE: LATENT PRINTS PLATE II
*SEE: FIELD INTERVIEW CARD PLATE XI
BB
CONTINUED FROM PLATE II
1
RETRIEVED BY RECORDS DIVISION
J
INVESTIGATIVE PRIORITY ?
Y
N
TIME AND DATE STAMP
DETERMINE DISTRIBUTION
M
MAKE COPIES
AFFIX APPROPRIATE STAMP
N
DISTRIBUTE TO BOI
TIME STAMP IN
SORT BY FORM TYPE
CONTINUED PLATE IV TOP
F-4
*ITEMS GENERATED VIA REPORT MAY BE REQ'D VIA TELEPHONE TO AUTO DESK
*REFER F-4 PROCESSING PLATES III-XXX
Transmit Auto Desk
F-19
COPY REPORT
COPY TO PUBLIC WORKS
REFER PLATE X
FILE IN F-19 FILE
STOP
F-16
COPY-REFER INDEXING DISTRIBUTION PROCEDURE
DISTRIBUTE ONE COPY TO PUBLIC WORKS
ORIGINAL
REFER PLATE X
ORIGINAL (WHITE)
F-1
BURST FORM
COPY (PINK)
THEFT ?
Y
N
PREPARE COPY
COPY F-1
TRANSMIT COPY TO BPU (PAWN)
REVIEW OF CONTENT OF F-1
REFERENCE FILE F-1 THEFT RECORDS
MALICIOUS MISCHIEF ?
Y
N
DESTROY COPY
STOP
SORT BY POLICE BEAT
TRANSMIT TO BFO
CONTINUED PLATE IV

PLATE III



B-7

PLATE IV

3-79

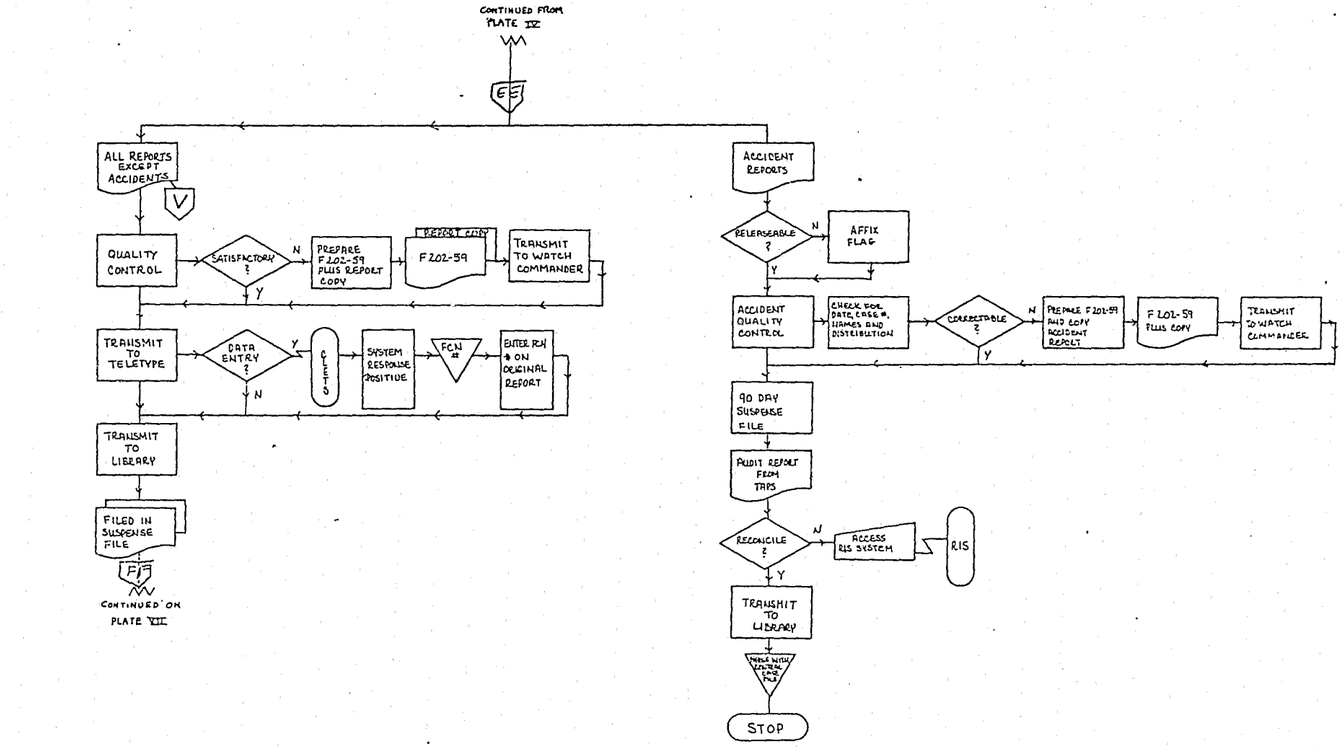

CONTINUED FROM PLATE IX
EE
ALL REPORTS EXCEPT ACCIDENTS
V
QUALITY CONTROL
SATISFACTORY ?
N
Y
PREPARE F 202-59 PLUS REPORT COPY
REPORT COPY
F 202-59
TRANSMIT TO WATCH COMMANDER
TRANSMIT TO TELETYPE
DATA ENTRY ?
Y
N
CLEAR
SYSTEM RESPONSE POSITIVE
FCN #
ENTER RN + ON ORIGINAL REPORT
TRANSMIT TO LIBRARY
FILED IN SUSPENSE FILE
FF
CONTINUED ON PLATE VII
ACCIDENT REPORTS
RELEASEABLE ?
N
Y
AFFIX FLAG
ACCIDENT QUALITY CONTROL
CHECK FOR DATE, CASE #, NAMES AND DISTRIBUTION
CORRECTABLE ?
N
Y
PREPARE F 202-59 AND COPY ACCIDENT REPORT
F 202-59 PLUS COPY
TRANSMIT TO WATCH COMMANDER
90 DAY SUSPENSE FILE
AUDIT REPORT FROM TAPS
RECONCILE ?
N
Y
ACCESS RIS SYSTEM
RIS
TRANSMIT TO LIBRARY
FILED WITH NATIONAL CASE FILE
STOP

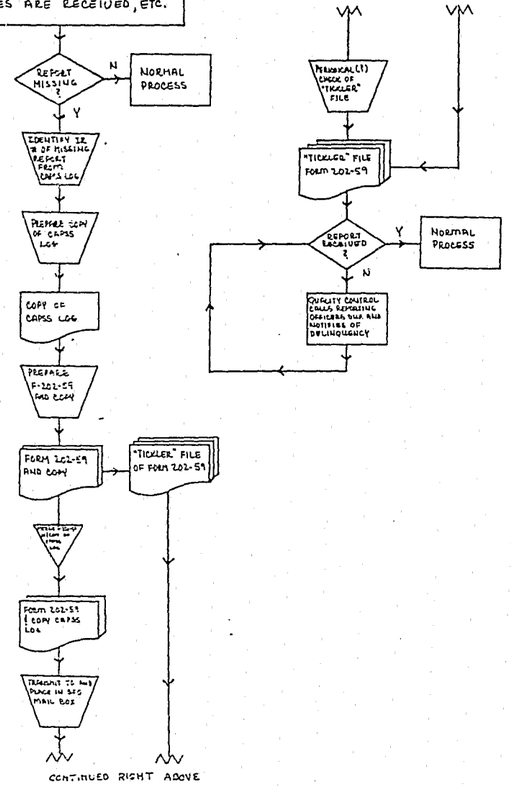
PLATE V

3-79

MISSING REPORTS PROCESS

NOTE: NO AUDIT OR RECONCILIATION PROCESS IS PERFORMED BY THE RECORDS DIVISION IN CONNECTION WITH REPORTS RECEIVED. THAT IS, NO CHECK OF THE "DISPOSITION CODE" ON THE "CAPSS" LOG THAT INDICATES A REPORT IS TO BE SUBMITTED IS MADE AGAINST THE REPORTS ACTUALLY RECEIVED. THUS, "MISSING REPORTS" ARE IDENTIFIED ONLY WHEN SUPPLEMENTAL DOCUMENTS ARE RECEIVED AND NO ORIGINAL REPORT CAN BE LOCATED, INQUIRIES ARE RECEIVED, ETC.

INFO FROM & PROCEDURES FOLLOWED BY QUALITY CONTROL CLERKS - RECORDS DIVISION



PROCESS FOR CORRECTING CASE #'S (AFTER DISTRIBUTION)

CAUSE: ATTEMPT TO MERGE SUPP RPTS W/ORIG., ETC.

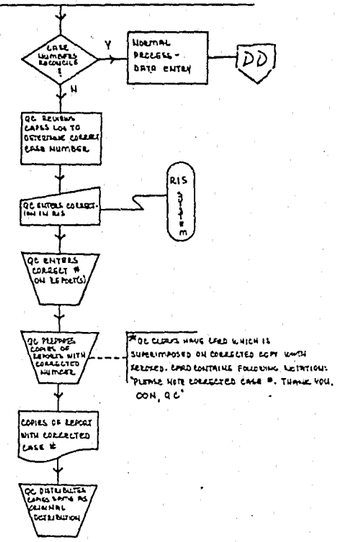


PLATE VI

3-73

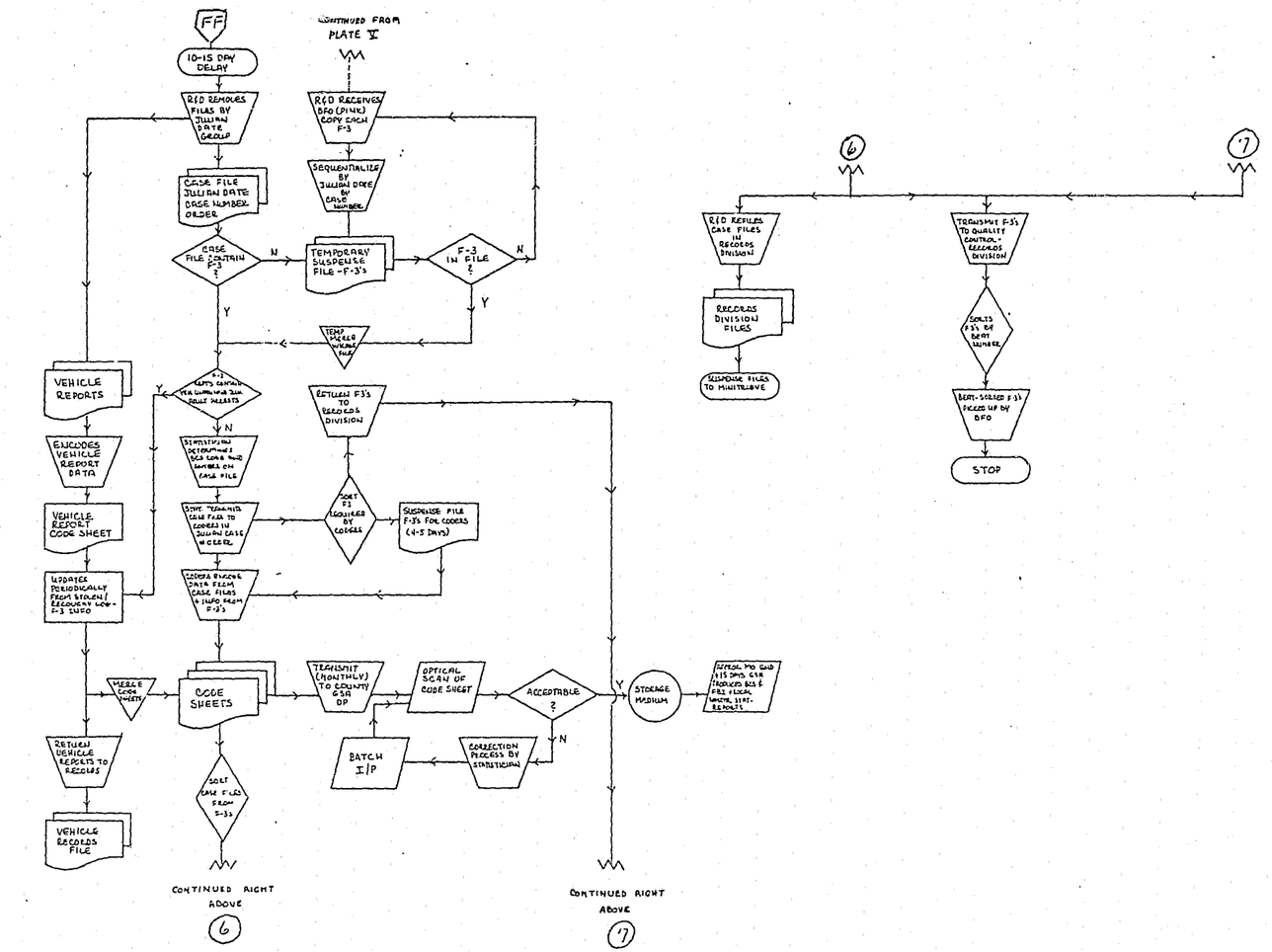

FF
10-15 DAY DELAY
RID REMOVES FILES BY JULIAN DATE GROUP
CASE FILE JULIAN DATE CASE NUMBER ORDER
CASE FILE IN TRAIN ?
N
Y
TEMPORARY SUSPENSE FILE - F-3's
F-3 IN FILE ?
N
Y
TEMP MERGED WITH CASE FILE
VEHICLE REPORTS
ENCODES VEHICLE REPORT DATA
VEHICLE REPORT CODE SHEET
UPDATES PERIODICALLY FROM STOLEN/RECOVERY LOG - F-3 INFO
MERGE CODE SHEETS
CODE SHEETS
RETURN VEHICLE REPORTS TO RECORDS
VEHICLE RECORDS FILE
SORT CASE FILES FROM F-3's
CONTINUED RIGHT ABOVE
6
CONTINUED FROM PLATE V
RID RECEIVES DFO (PINK) COPY EACH F-3
SEQUENTIALIZE BY JULIAN DATE BY CASE NUMBER
RETURN F3's TO RECORDS DIVISION
SORT F3 REQUIRED BY CODERS
SUSPENSE FILE F-3's FOR CODERS (4-5 DAYS)
TRANSMIT (MONTHLY) TO COUNTY GSA DP
OPTICAL SCAN OF CODE SHEET
ACCEPTABLE ?
N
Y
BATCH I/P
CORRECTION PROCESS BY STATISTICIAN
STORAGE MEDIUM
CONTINUED RIGHT ABOVE
7
6
7
RID REFILES CASE FILES IN RECORDS DIVISION
RECORDS DIVISION FILES
SUSPENSE FILES TO MULTILEVE
TRANSMIT F-3's TO QUALITY CONTROL - RECORDS DIVISION
SORTS F-3's BY DEPT NUMBER
DEPT-SORTED F-3's PICKED UP BY DFO
STOP

PLATE VII

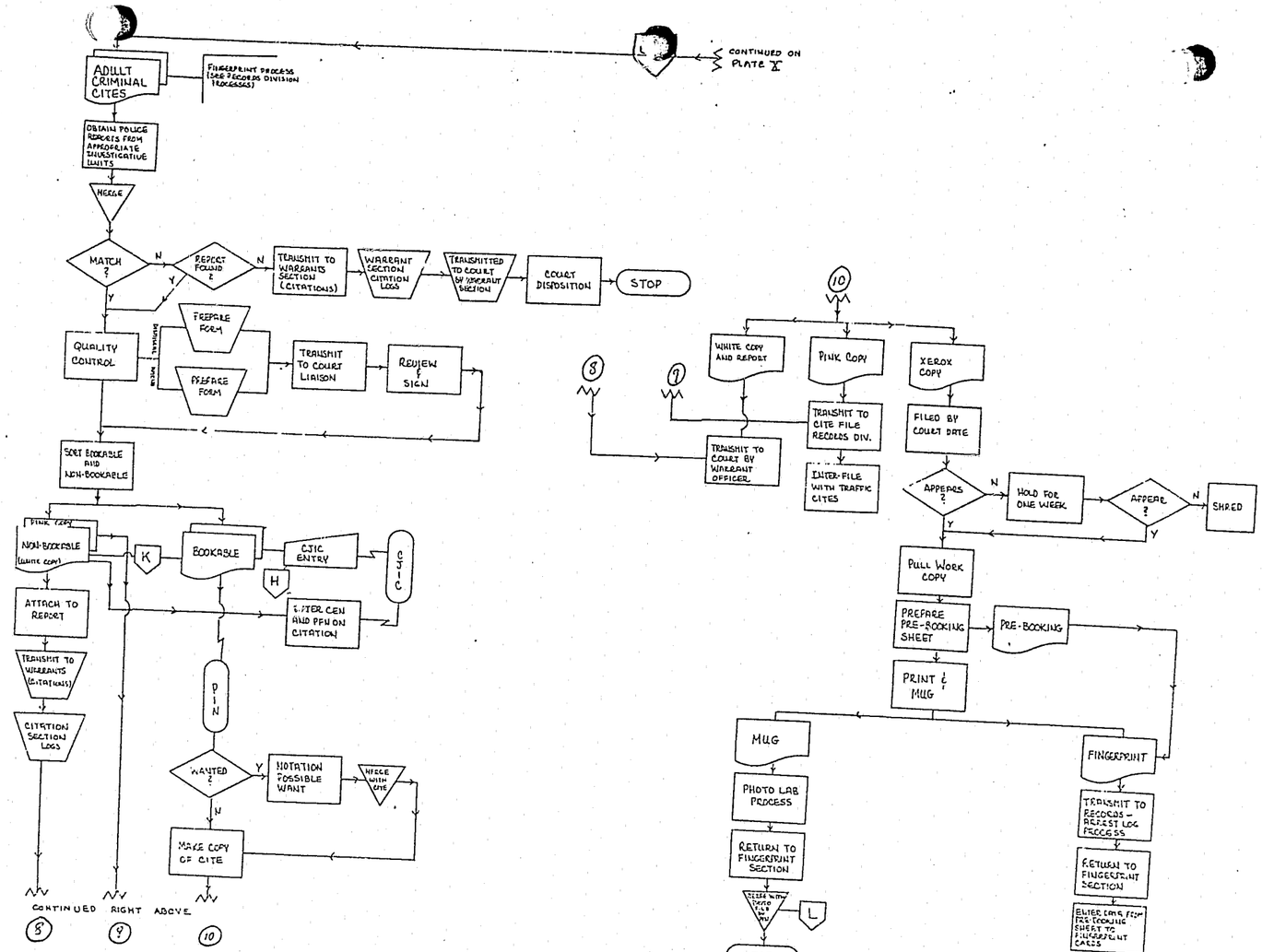
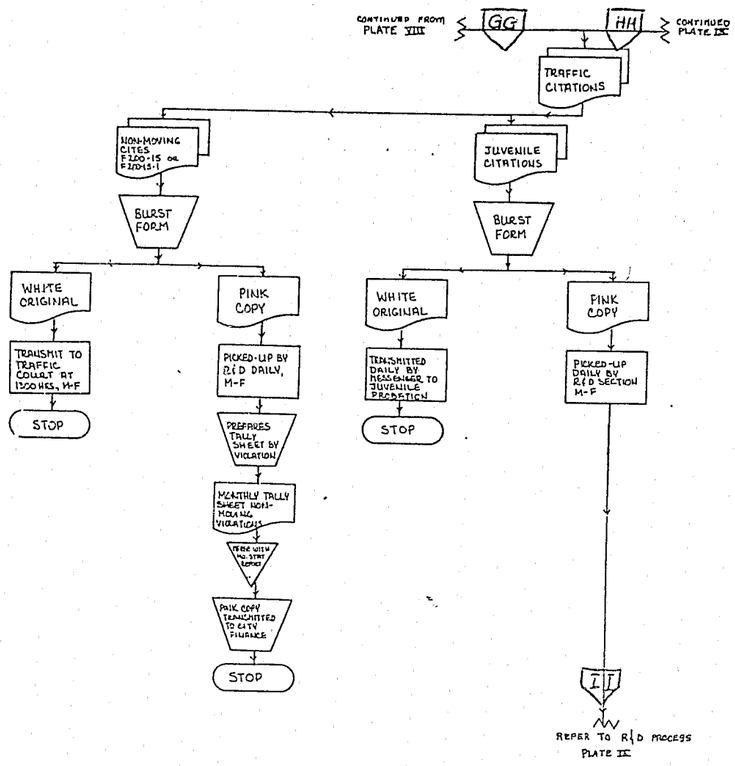

ADULT CRIMINAL CITES
FINGERPRINT PROCESS (SEE RECORDS DIVISION PROCESSES)
CONTINUED ON PLATE X
OBTAIN POLICE REPORTS FROM APPROPRIATE INVESTIGATIVE UNITS
MERGE
MATCH ?
N
Y
REPORT FOUND ?
TRANSMIT TO WARRANTS SECTION (CITATIONS)
WARRANT SECTION CITATION LOGS
TRANSMITTED TO COURT BY WARRANT SECTION
COURT DISPOSITION
STOP
PREPARE FORM
PREFACE FORM
TRANSMIT TO COURT LIAISON
REVIEW & SIGN
QUALITY CONTROL
SORT BOOKABLE AND NON-BOOKABLE
PINK COPY
NON-BOOKABLE
(White copy)
K
BOOKABLE
CJIC ENTRY
CJIC
H
ENTER CEN AND PFN ON CITATION
ATTACH TO REPORT
TRANSMIT TO WARRANTS (CITATIONS)
CITATION SECTION LOGS
PIN
WANTED ?
Y
N
NOTATION POSSIBLE WANT
MERGE WITH CITE
MAKE COPY OF CITE
CONTINUED RIGHT ABOVE
5
8
10
10
WHITE COPY AND REPORT
PINK COPY
XEROX COPY
3
7
TRANSMIT TO CITE FILE RECORDS DIV.
FILED BY COURT DATE
TRANSMIT TO COURT BY WARRANT OFFICER
INTER-FILE WITH TRAFFIC CITES
APPEARS ?
N
HOLD FOR ONE WEEK
APPEAR ?
N
SHRED
Y
PULL WORK COPY
PREPARE PRE-BOOKING SHEET
PRE-BOOKING
PRINT & MUG
MUG
PHOTO LAB PROCESS
RETURN TO FINGERPRINT SECTION
L
STOP
FINGERPRINT
TRANSMIT TO RECORDS - ARREST LOG PROCESS
RETURN TO FINGERPRINT SECTION
ENTER CDHS FROM PRE-BOOKING SHEET TO FINGERPRINT CARDS
TRANSMIT FINGERPRINT CARDS-FBI, CII & CJIC
ROUTE RECORDS TO SUPERVISOR OF CC

PLATE VIII

* CVC SECTIONS:
10001
11101
11101
11103
11106

PLATE IX

3-79


CONTINUED FROM PLATE VIII
GG
HH
CONTINUED PLATE IX
TRAFFIC CITATIONS
NON-MOVING CITES F 220-15 OR F 2703-1
JUVENILE CITATIONS
BURST FORM
BURST FORM
WHITE ORIGINAL
PINK COPY
WHITE ORIGINAL
PINK COPY
TRANSMIT TO TRAFFIC COURT BY 1300 HRS., M-F
PICKED-UP BY R & D DAILY, M-F
TRANSMITTED DAILY BY MESSENGER TO JUVENILE PROBATION
PICKED-UP DAILY BY R & D SECTION M-F
STOP
PREPARES TALLY SHEET BY VIOLATION
STOP
MONTHLY TALLY SHEET NON-MOVING VIOLATIONS
FORM WITH NO STAT REPORT
PINK COPY TRANSMITTED TO CITY FIGURES
STOP
I I
REFER TO R/D PROCESS PLATE IX

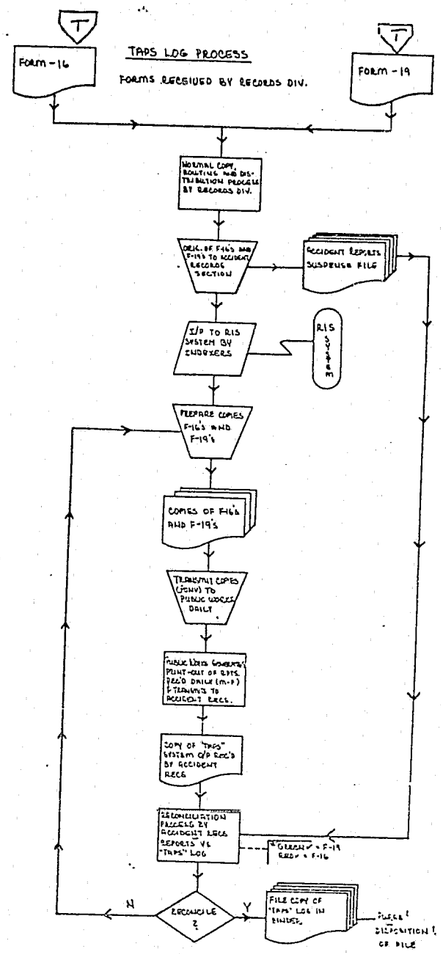

T
FORM-16
TAPS LOG PROCESS
FORMS RECEIVED BY RECORDS DIV.
T
FORM-19
ORIGINAL COPY, ROUTING AND DISTRIBUTION PROCESS BY RECORDS DIV.
DESIG. OF F-16's AND F-19's TO ACCIDENT RECORDS SECTION
ACCIDENT REPORTS SUSPENSE FILE
I/P TO RIS SYSTEM BY KEYPUNCHERS
RIS SYSTEM
PREPARE COPIES F-16's AND F-19's
COPIES OF F-16's AND F-19's
TRANSMIT COPIES (SCAN) TO PUBLIC WORKS DAILY
PUBLIC WORKS GENERATE PRINT-OUT OF DATA RECD DAILY (M-F) & TRANSMITS TO ACCIDENT RECS.
COPY OF "TAPS" SYSTEM O/P RECD BY ACCIDENT RECS
RECONCILIATION PROCESS BY ACCIDENT RECS REPORTS VS "TAPS" LOG
"GREEN" + F-19 RECD + F-16
RECONCILE ?
N
Y
FILE COPY OF "TAPS" LOG IN BINDER.
PURGE DESTRUCTION OF FILE

PLATE X
3-79

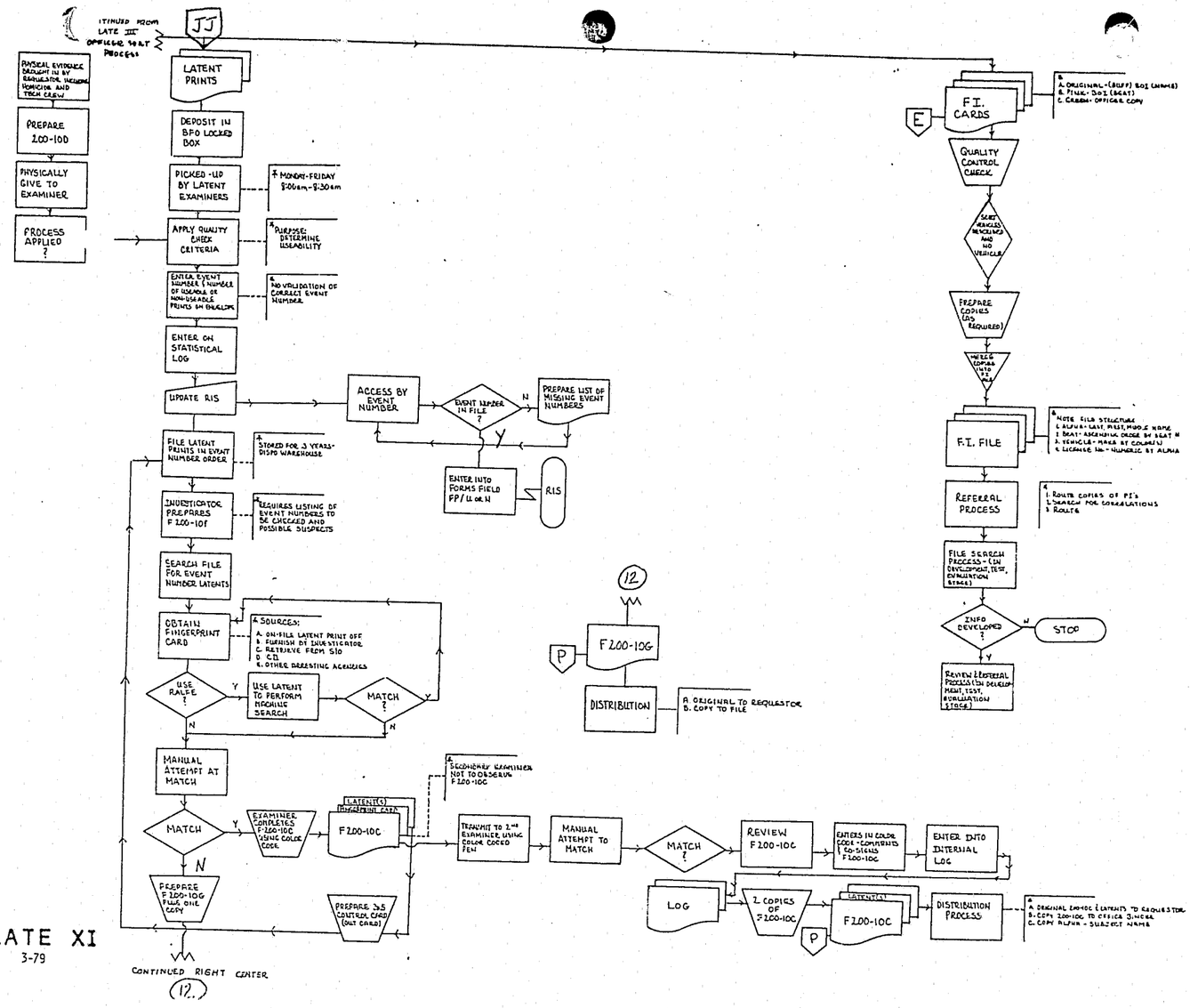
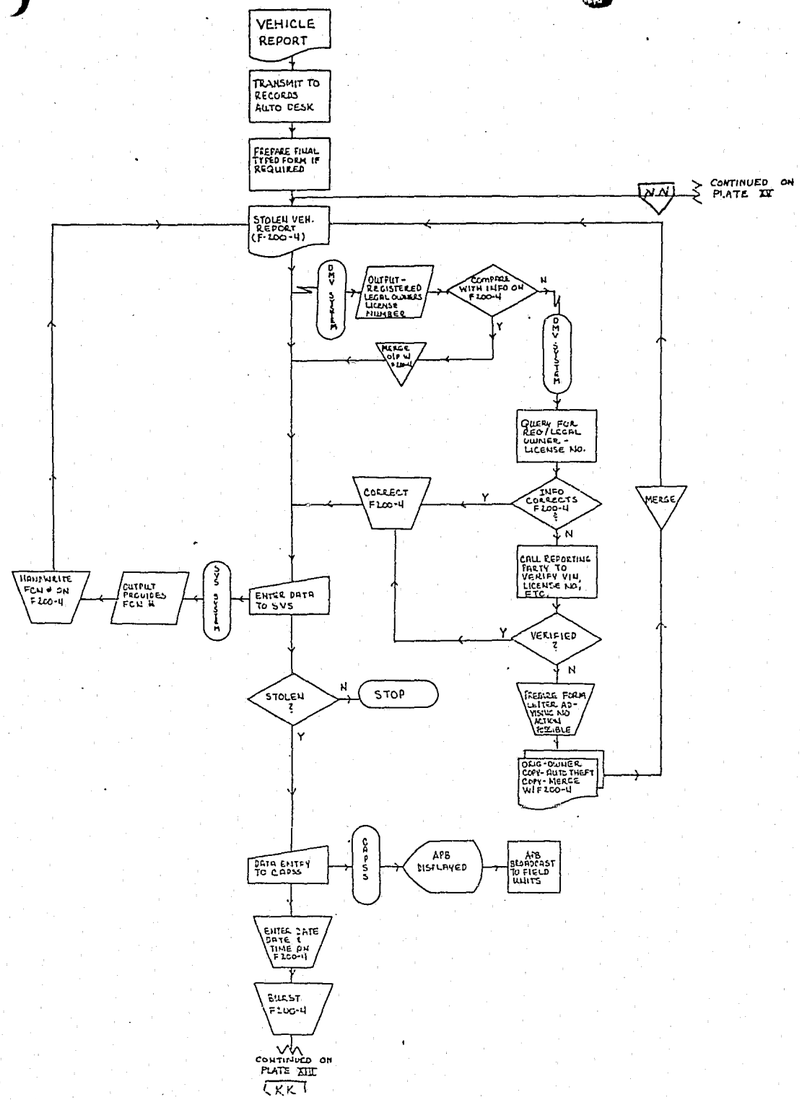


PLATE XI
3-79

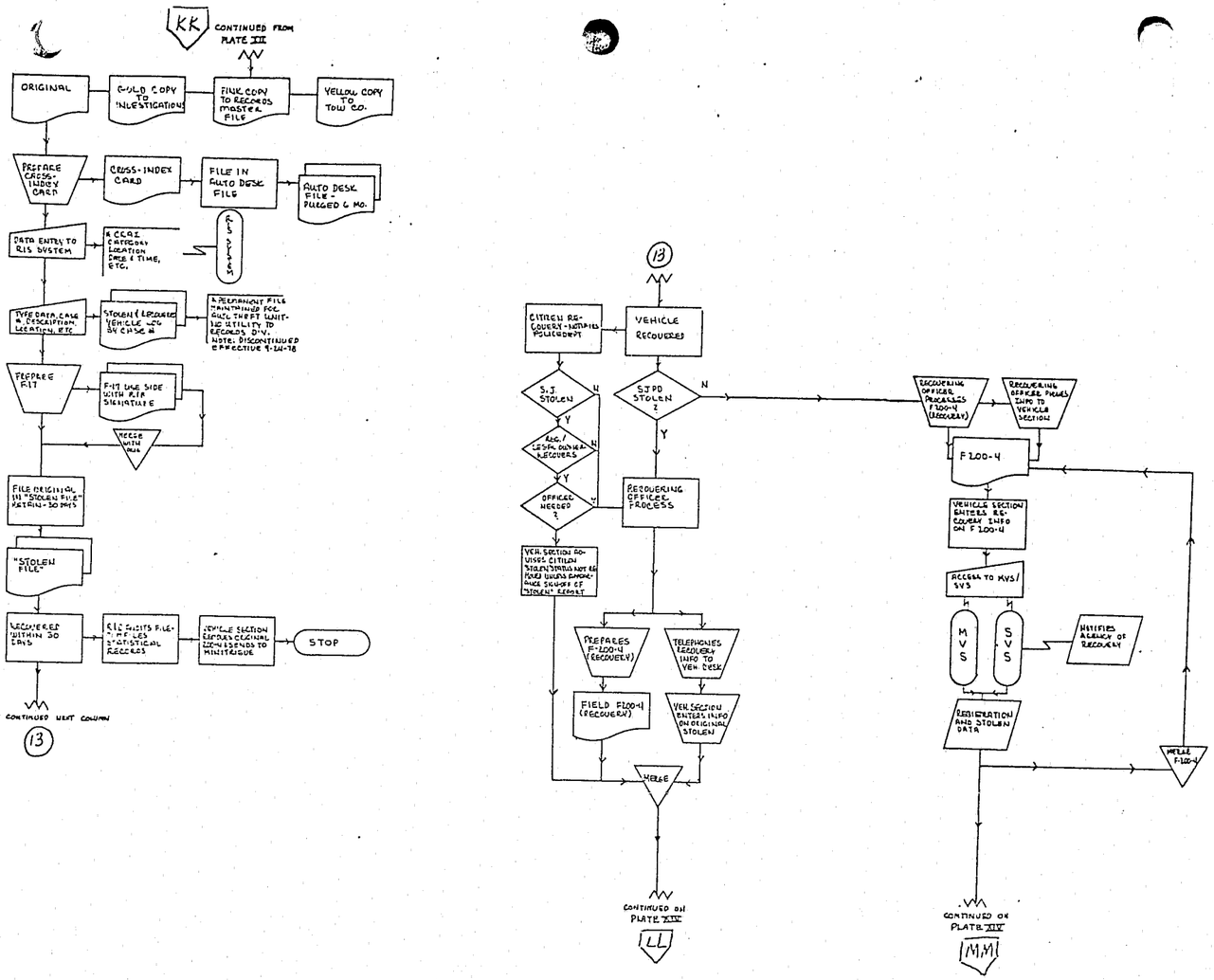
R-14



B-15

PLATE XII

3-73



R-16

PLATE XIII

3-79

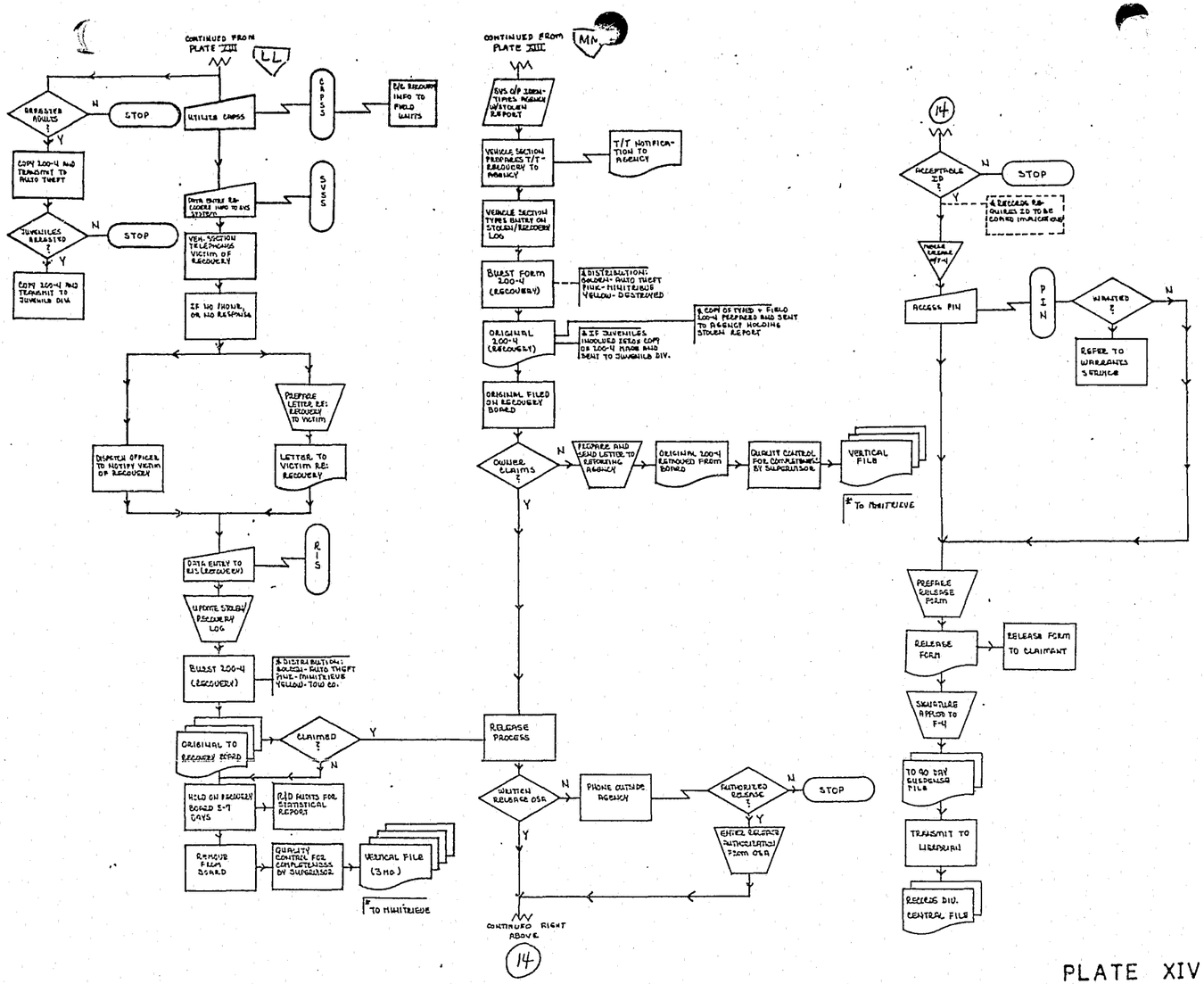


PLATE XIV

3-79

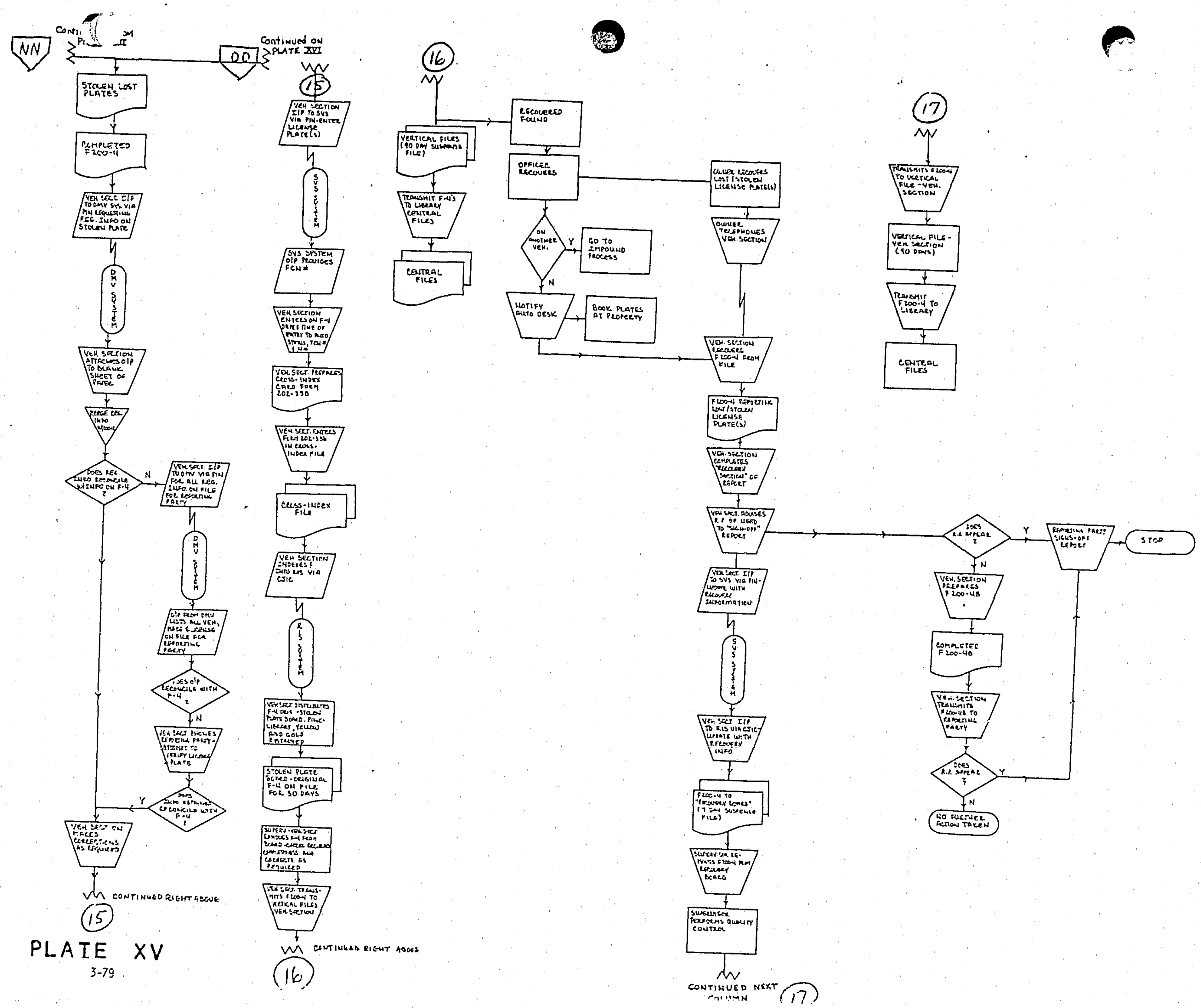

NN
DD
Continued on PLATE XVI
STOLEN LOST PLATES
COMPLETED F200-4
DMV SYSTEM
SVS SYSTEM
CROSS-INDEX FILE
RIS SYSTEM
CONTINUED RIGHT ABOVE
15
16
17
VERTICAL FILES (90 DAY SUSPENSE FILE)
CENTRAL FILES
RECOVERED FOUND
OFFICER RECOVERS
GO TO IMPOUND PROCESS
NOTIFY AUTO DESK
BOOK PLATES AT PROPERTY
STOP
NO FURTHER ACTION TAKEN
CONTINUED NEXT COLUMN

PLATE XV

3-79

B-19

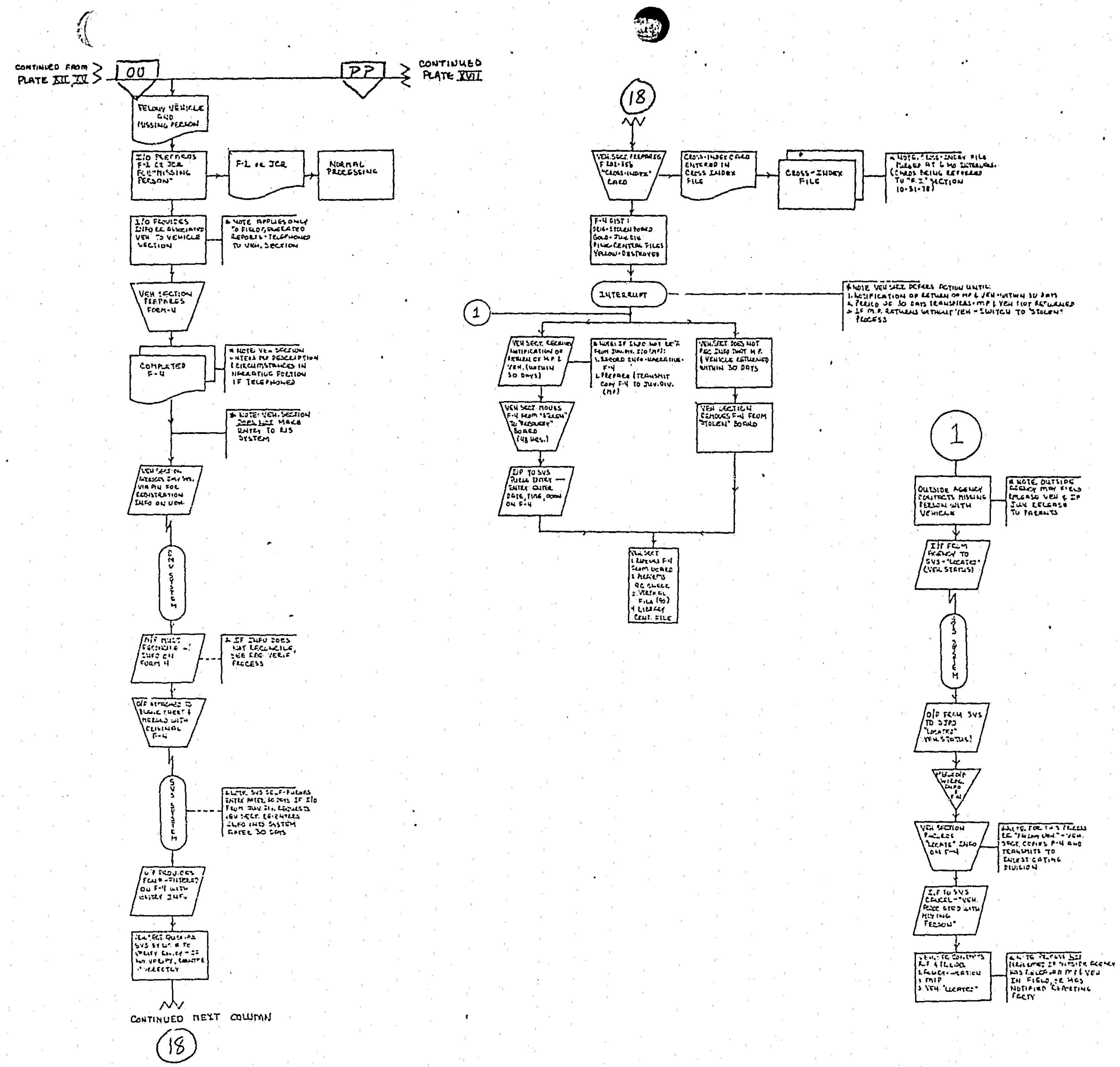
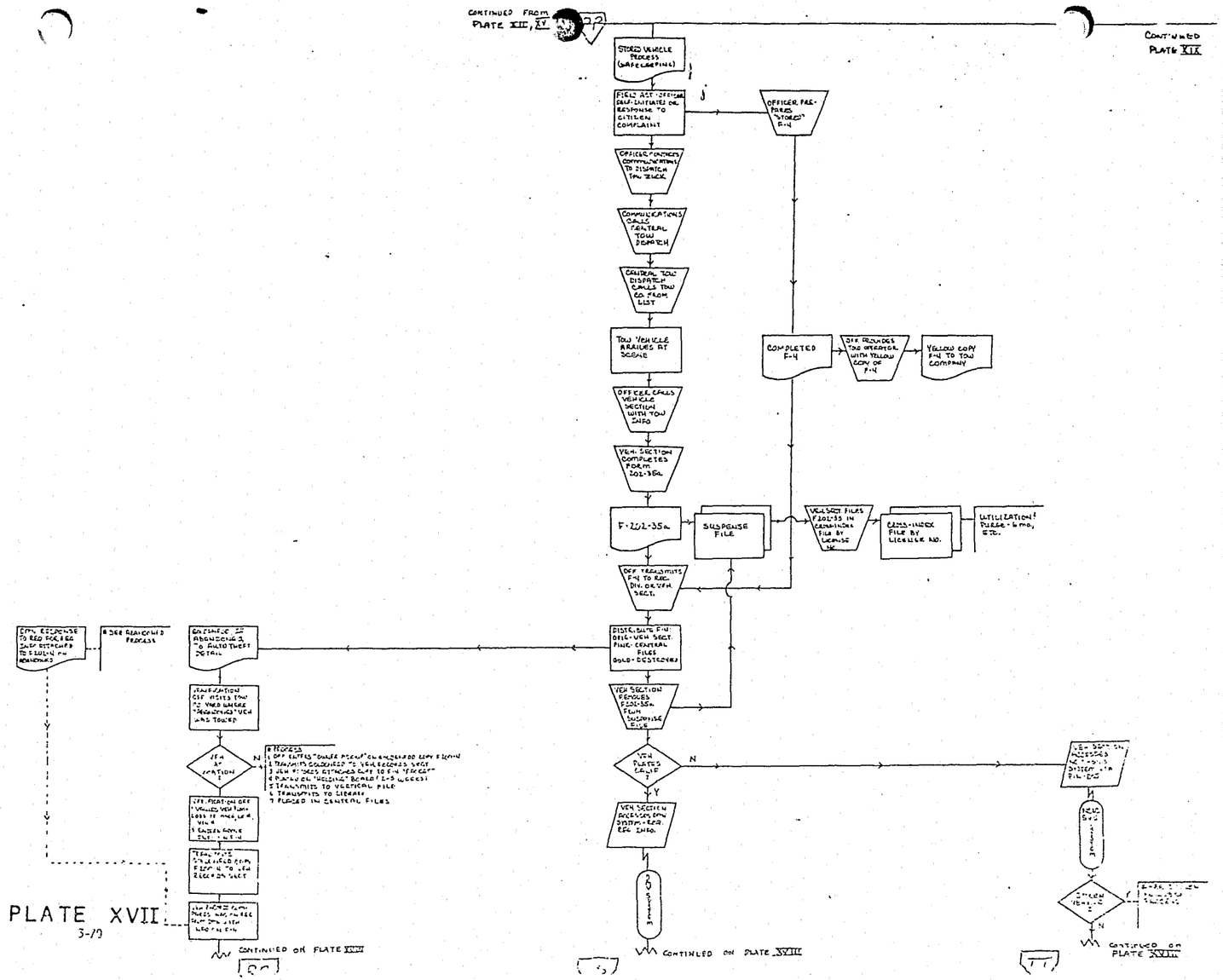


PLATE XVI

3-79


CONTINUED FROM PLATE XIII, XV
CONTINUED PLATE XIX
STORED VEHICLE PROCESS (SAFEGUARDING)
FIELD ACT - OFFICER INITIATED OR RESPONSE TO CITIZEN COMPLAINT
OFFICER PREPARES "STORED" F-4
OFFICER CONTACTS COMMUNICATIONS TO DISPATCH TOW TRUCK
COMMUNICATIONS CALLS GENERAL TOW DISPATCH
GENERAL TOW DISPATCH CALLS TOW CO FROM LIST
TOW VEHICLE ARRIVES AT SCENE
OFFICER CALLS VEHICLE SECTION WITH TOW INFO
VEH. SECTION COMPLETES FORM 202-35A
COMPLETED F-4
OFF RELEASES TOW OPERATOR WITH YELLOW COPY OF F-4
YELLOW COPY F-4 TO TOW COMPANY
F-202-35a
SUSPENSE FILE
VEH SECT FILES F&I/SS IN CHRONO FILE BY LICENSE NO.
CROSS-INDEX FILE BY LICENSE NO.
UTILIZATION: PURGE - 6 mo. ETC.
OFF TRANSMITS F-4 TO REC. DIV. OR VEH. SECT.
DISTRIBUTE F-4: ORIG-VEH SECT. PINK-CENTRAL FILES GOLD-DESTROYED
VEH SECTION RECEIVES F-202-35a FROM SUSPENSE FILE
VEH PLATES CALLED ?
N
Y
VEH SECTION ACCESSION SYSTEM - ECR. EFD INFO.
24 HOURS
CONTINUED ON PLATE XVIII
CONTINUED ON PLATE XVIII
ECR: RECEIVE TO REQ RELEASE SALV DISPATCH TO ROUTINE OR EMERGENCY
B SEE BRANCHED PROCESS
GO CONFLICT TO ABSENCE OF "O AUTO THEFT DETAIL
TRANSACTION OF MOVED TOW TO VEH WHERE "RECOVERED" VEH WAS TOWED
IS A "A" VERSION ?
N
B NOTES
1 OFF RELEASES "OWNER RECOVERED" ON RECORD BY PHONE
2 TRANSMITS GOLDENROD TO VEH RECORDS SECT.
3 JOB TICKET STRUCK OUT TO F-4 TO CLERK
4 PLACED ON "HOLDING" BOARD (2-3 WEEKS)
5 TRANSMITS TO VERTICAL FILE
6 TRANSMITS TO LIBRARY
7 PURGED IN CENTRAL FILES
SEE RELEASE OF VEHICLE FROM LOSS TO TOW CO. VIN #
ENTER ROUTE SLIP - W.S.W.
TRANSFER SLIP & FIELD COPY OF ECR "A" TO VEH RECORDS SECT.
ENTER ROUTE SLIP - W.S.W.
PLATE XVII
3-19
CONTINUED ON PLATE XVIII

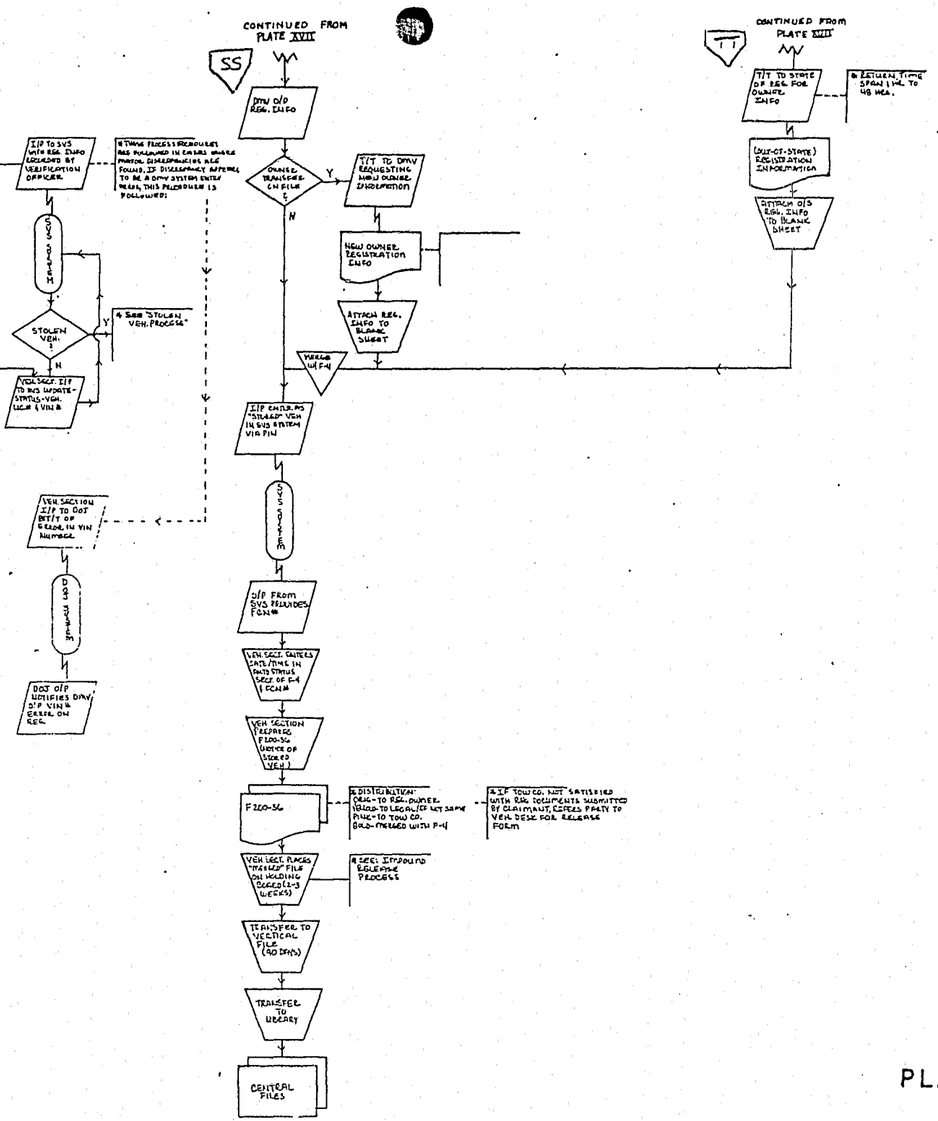


PLATE XVIII

3-79

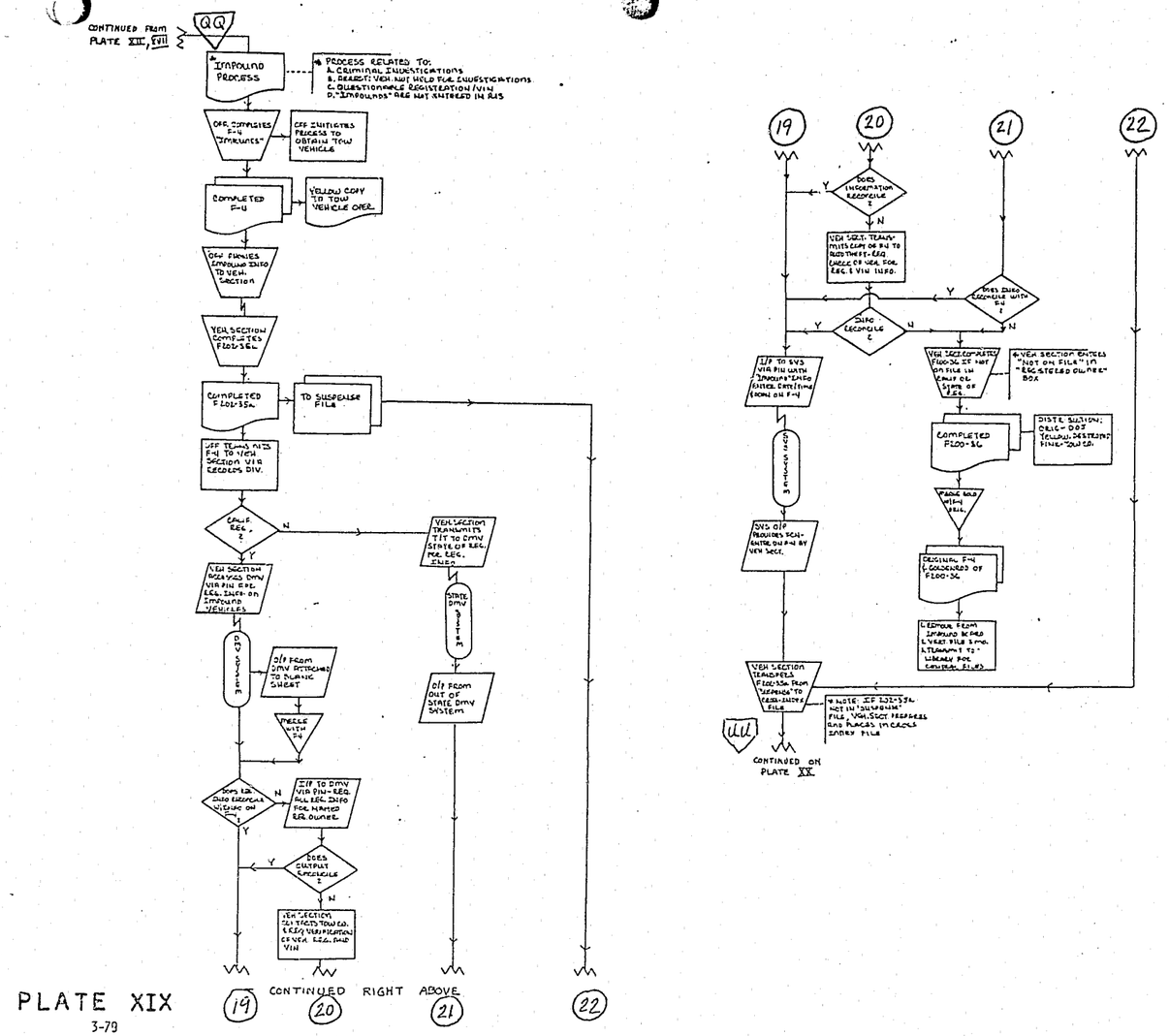
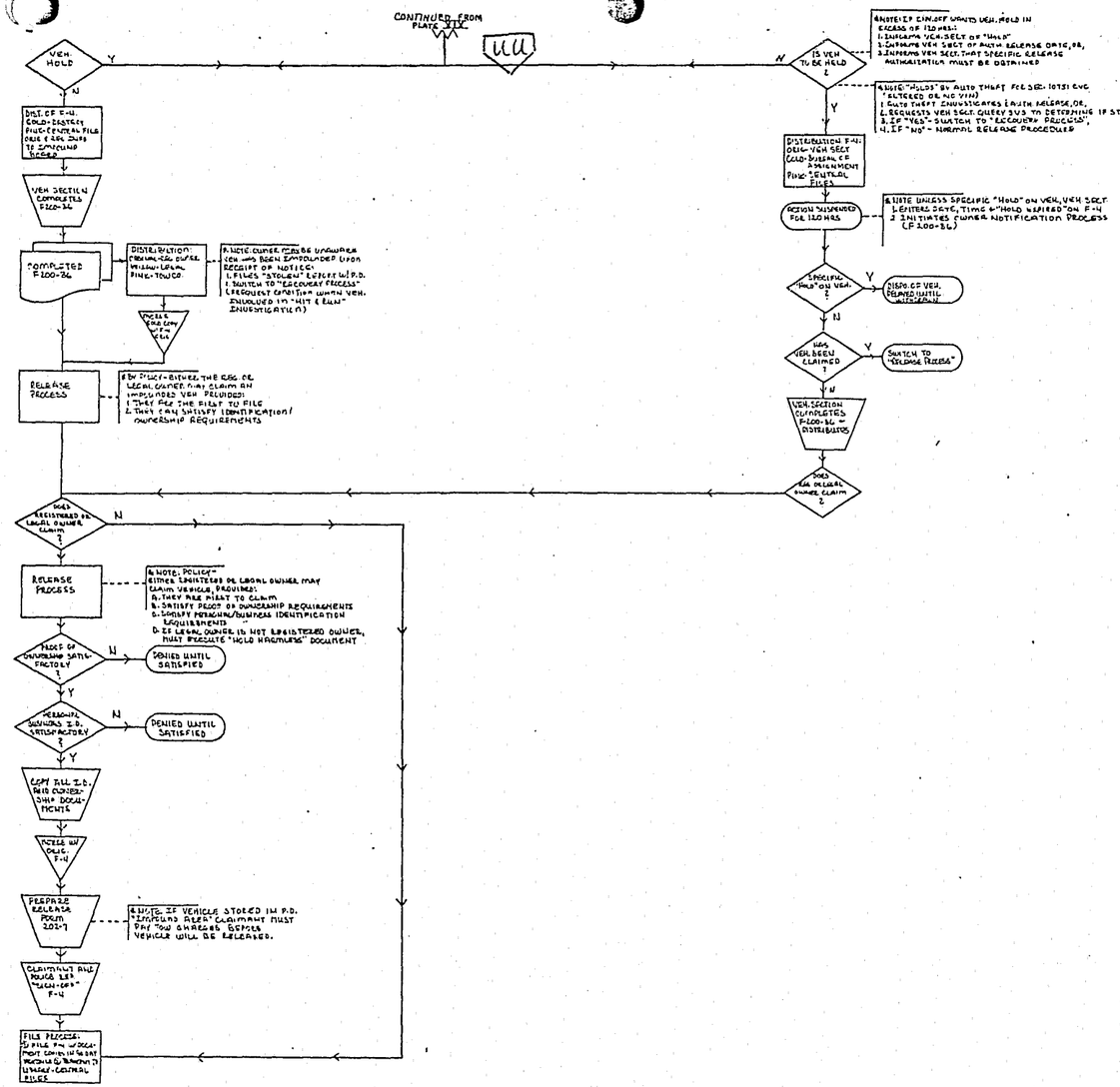


PLATE XIX

3-79


CONTINUED FROM PLATE XX
VEH. HOLD
Y
N
DIST. OF F-U. COLD-DESTROY PINK-CENTRAL FILE ORIG & 4 CRS COPIES TO IMPOUND YARD
VEH. SECTION COMPLETES F.100-36
COMPLETED F.100-36
DISTRIBUTION: ORIGINAL-TO OWNER WHITE-LEGAL PINK-TOWCO
& NOTE: OWNER MAY BE UNAWARE VEH. HAS BEEN IMPOUNDED UPON RECEIPT OF NOTICE:
1. FILES "STOLEN" REPORT W.P.D.
2. SWITCH TO "RECOVERY PROCESS"
3. FREQUENT QUESTION WHEN VEH. INVOLVED IN "HIT & RUN" INVESTIGATION
RELEASE PROCESS
& BY POLICY-EITHER THE REG. OR LEGAL OWNER MAY CLAIM AN IMPOUNDED VEH. PROVIDED:
1. THEY ARE THE FIRST TO FILE
2. THEY CAN SATISFY IDENTIFICATION/OWNERSHIP REQUIREMENTS
DOES REGISTERED OR LEGAL OWNER CLAIM ?
N
RELEASE PROCESS
& NOTE: POLICY-
EITHER REGISTERED OR LEGAL OWNER MAY CLAIM VEHICLE, PROVIDED:
A. THEY ARE FIRST TO CLAIM
B. SATISFY PROOF OF OWNERSHIP REQUIREMENTS
C. SATISFY PERSONAL/BUSINESS IDENTIFICATION REQUIREMENTS
D. IF LEGAL OWNER IS NOT REGISTERED OWNER, MUST EXECUTE "HOLD HARMLESS" DOCUMENT
PROOF OF OWNERSHIP SATISFACTORY ?
N
DENIED UNTIL SATISFIED
Y
PERSONAL I.D. SATISFACTORY ?
N
DENIED UNTIL SATISFIED
Y
COPY ALL I.D. AND OWNERSHIP DOCUMENTS
ATTACH W/ ORIG. F-U
PREPARE RELEASE FORM 202-7
& NOTE: IF VEHICLE STORED IN P.D. "IMPOUND FEES" CLAIMANT MUST PAY TOW & STORAGE BEFORE VEHICLE WILL BE RELEASED.
CLAIMANT MAY PROCEED TO "RECOVERY PROCESS" F-4
FILE PROCESS:
1. FILE F-U ORIGINAL COPY IN 10 DAY PENDING & REMAINING IN VEHICLE/CENTRAL FILES
IS VEH TO BE HELD ?
Y
N
& INSTRUCT CLERK IF OWNER WANTS VEH. HELD IN EXCESS OF 120 HRS:
1. EXPLAIN VEH. SECT. OF "HOLD"
2. EXPLAIN VEH. SECT. OF AUTH. RELEASE ORIG. OR,
3. IF NEEDS VEH. SECT. THAT SPECIFIC RELEASE AUTHORIZATION MUST BE OBTAINED
& NOTE "HOLDS" BY AUTO THEFT PER SEC. 10751 C.V.C. "ALTERED OR NO VIN"
1. AUTO THEFT INVESTIGATES & AUTH. RELEASE, OR,
2. REQUESTS VEH. SECT. QUERY 5U3 TO DETERMINE IF STOLEN
3. IF "YES" - SWITCH TO "RECOVERY PROCESS",
4. IF "NO" - NORMAL RELEASE PROCEDURES
DISTRIBUTION F-U: ORIG.-VEH. SECT. COLD-DISPATCH PINK-SENTRAL FILES
ACTION SUSPENDED FOR 120 HRS.
& NOTE UNLESS SPECIFIC "HOLD" ON VEH., VEH. SECT. 1. ENTERS DESC., TIME & "HOLD" NOTED ON F-U
2. INITIATES OWNER NOTIFICATION PROCESS (F.100-BL)
SPECIFIC "HOLD" ON VEH. ?
Y
DISPO OF VEH. DELAYED UNTIL AUTHORITY
N
WAS VEH. REQ'D CLAIMED ?
Y
SWITCH TO "RELEASE PROCESS"
N
VEH. SECTION COMPLETES F.100-BL - DISTRIBUTES
DOES REG. OR LEGAL OWNER CLAIM ?

B-23

PLATE XX

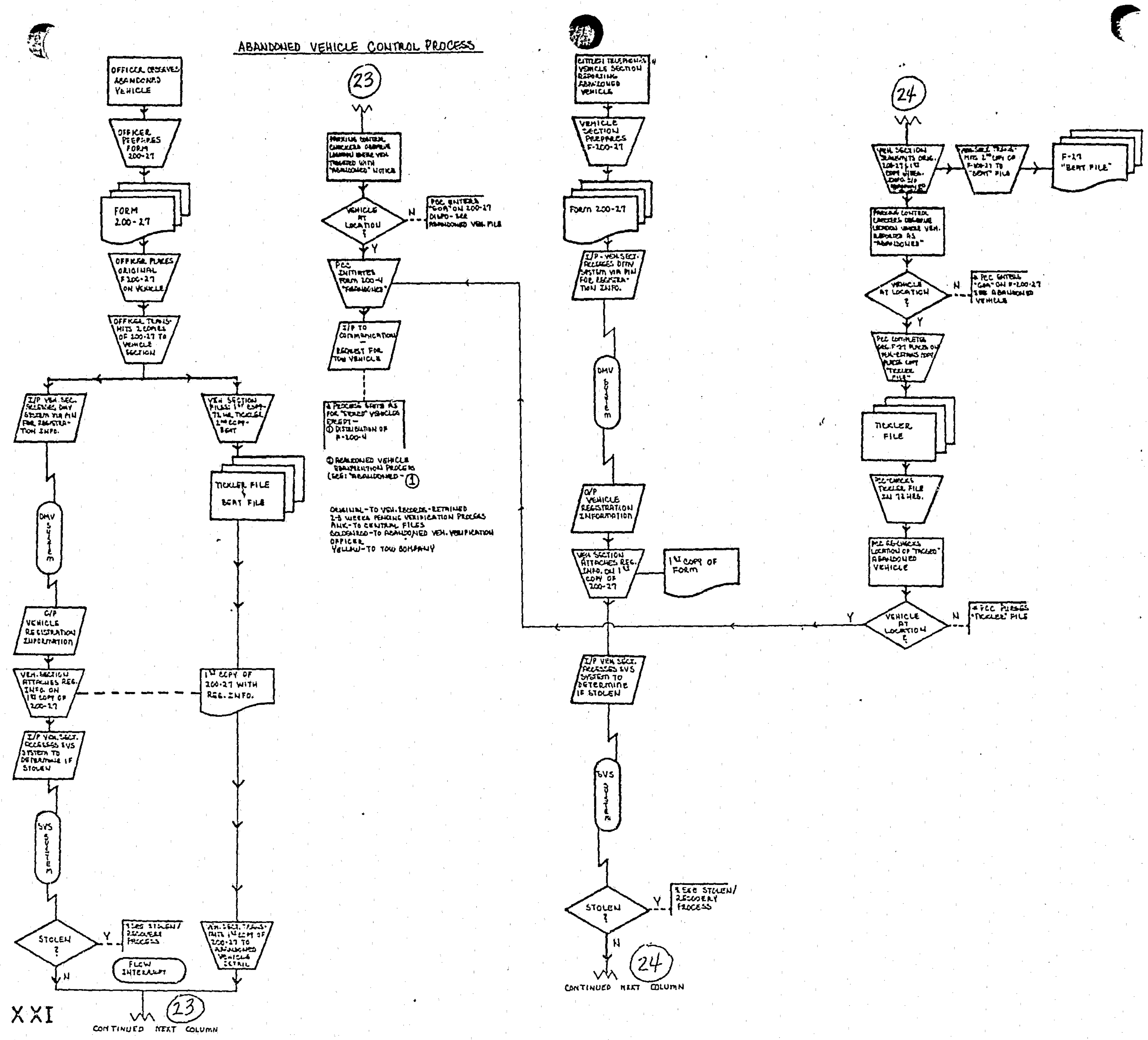


PLATE XXI

3-79

CONNECTOR INFORMATION

A Includes:
Stand - ups
Taped interviews
Fingerprints
Mug shots

B Report distribution and
system processes - See vehicle reports
after records sort
Pink copy to central case file

C All forms that flow as an
offense report(1,2,4,16,19,JCR,DUI)

D Per directive in Police manual

E Currently being converted
to automated system

F Officers' file copy for court testimony
constitutes offense report for traffic cases

G If muni code violation, dismissal & citation
forwarded to asst.chief; prepares letter to
city attorney for dismissal

H Physical descriptors, charge information,
date/time of offense, case number entered
from cite

I All types of report forms

J Day shift - before 8:00a.m & 10:30a.m
Swing shift-
Mid shift-

K Clerical process to facilitate data
entry-CJIC flagged booking pending
on bookable cites

L Identify & detail process of PIN correction
when CII rap return

M Refer to indexing distribution procedures

N Records stamps with D.A.,court or
do not reproduce

O If it fits supervisor sign - off
criteria, & has not been signed - off
sent to quality control

P Physical evidence retained by Latent fingerprint
section - exception, too bulky? All homicide
evidence, latents, 200-10c,10g reports,
elimination prints kept in case folder
until ajudicated

Q 13b is also the packaging & cannot be
separated from contraband

R Action dependent upon Bureau involved;
no follow-up by property

S If currency, take to police records safe; return
F13 to property area; leave xerox w/13

T Refer TAPS log process

U Refer case number correction process

V Refer missing report process

(1) A "case" requires one or more of the forms
identified below

(2) By instructors from records command
content of report may not be
altered by records clerks with the
exception of beat number & case number

Un-named suspects & vehicles associated
w/those suspects have limited indexing,
refer to procedure entitled "Hierarchy of
categories for indexing."

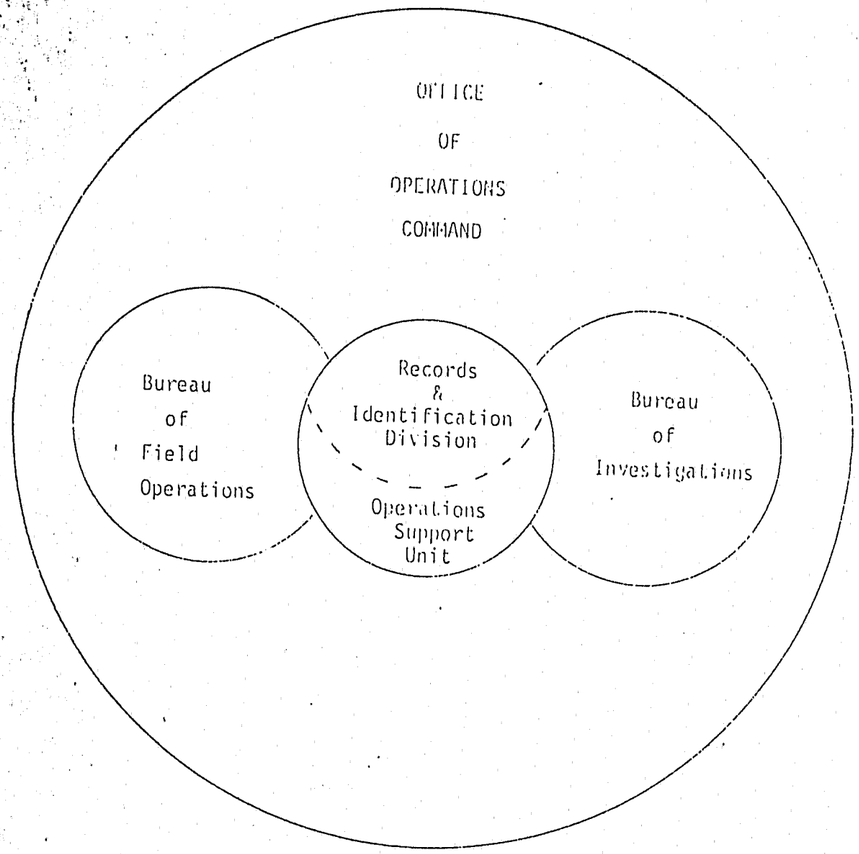
PLATE XXII

3-79

APPENDIX C

SCHEMATIC DIAGRAMS

OPERATIONS SUPPORT MODEL



SAN JOSE POLICE DEPARTMENT

OPERATIONS SUPPORT MODEL

ORGANIZATIONAL CONCEPT

The Informational Support "Link"

SAN JOSE POLICE DEPT.
RECORDS DIV/OSU
ORGANIZATION CHART

RECORDS DIVISION
INTERIM ORGANIZATIONAL CHART
JULY, 1980

RECORDS DIVISION COMMANDER
CAPTAIN

OPERATIONS
SUPPORT UNIT
LIEUTENANT

DAY SUPERVISOR
SERGEANT

SHIFT
SUPERVISORS
SERGEANTS (3)

CASE CONTROL
SUPERVISORS
SERGEANTS

WARRANT
OFFICERS

CASE CONTROL
OFFICERS

(NIGHT SUPERVISION ONLY)

CITATION
SECTION

SPRC

WARRANTS
SECTION

IDENTIFICATION
AND
COMMUNICATIONS
SPRC

AUTO DESK
SECTION
SPRC

FINGER PRINTING
AND
BOOKING SPRC

LATENT PRINTS
SECTION

REPORT
PROCESSING
SECTION

CASE REVIEW
AND
ENRICHMENT

ANALYSIS
SECTION
STAT. ANALYST

INFORMATION
COORDINATION
SECTION
POLICE OFF.

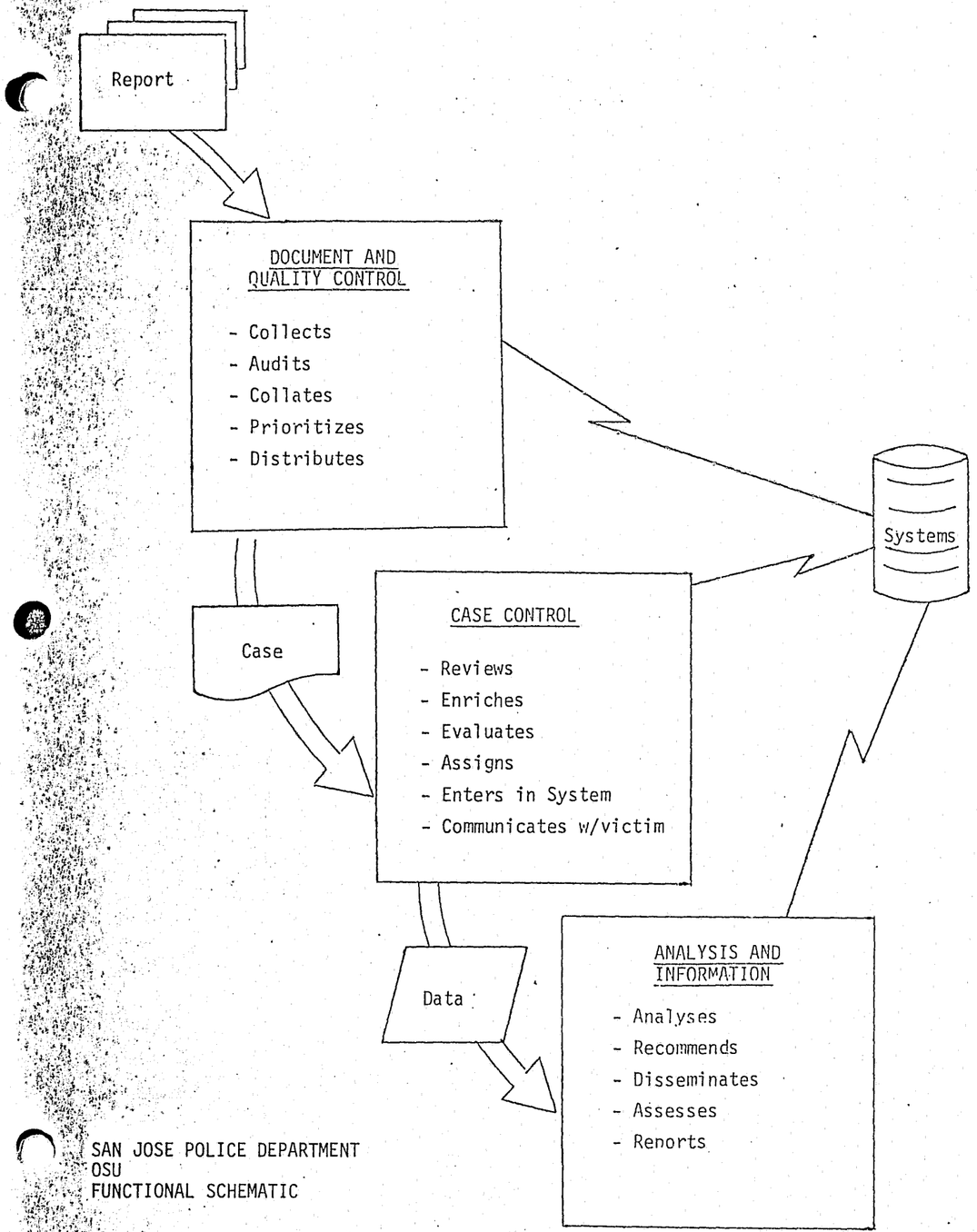
FI
FILES

WARRANTS UNIT

SERVICES UNIT

CASE CONTROL

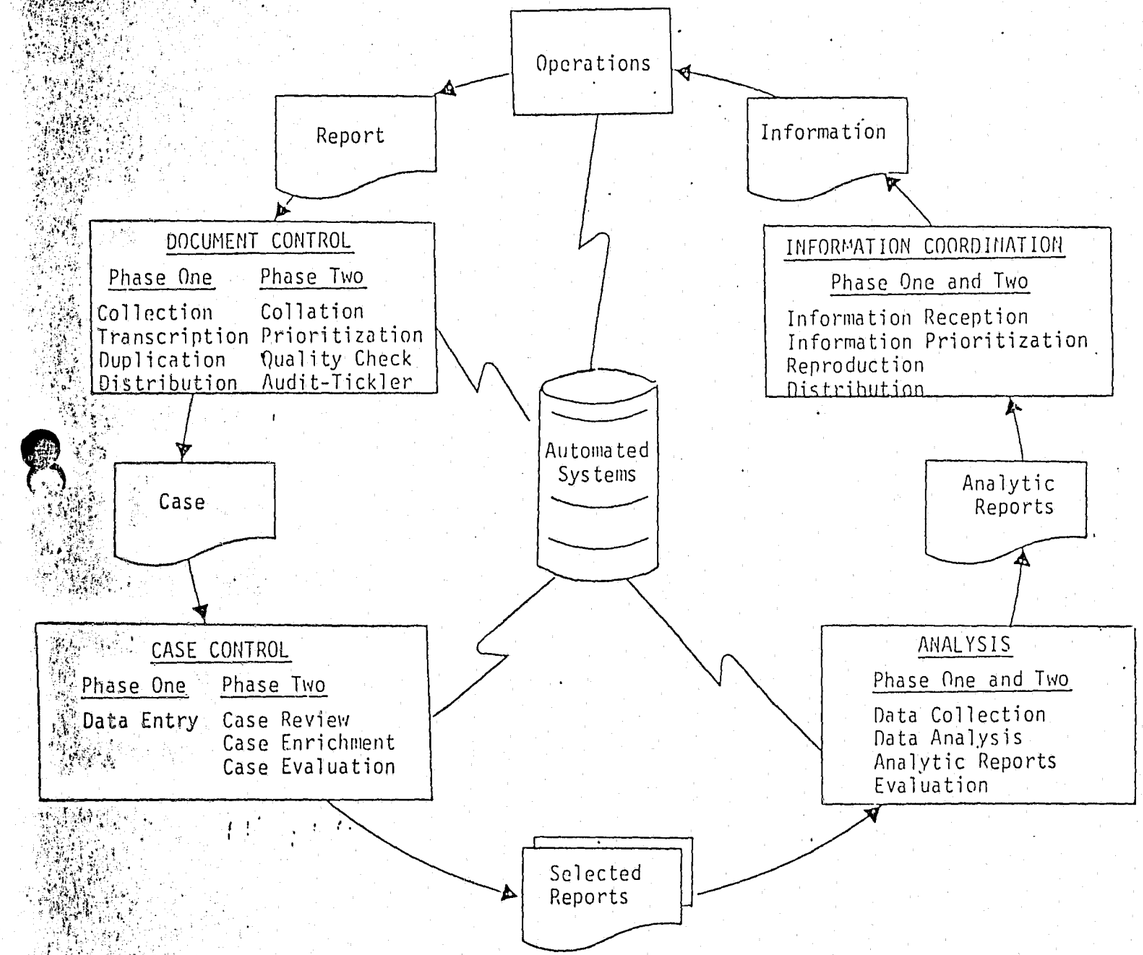
OPERATIONS SUPPORT UNIT



SAN JOSE POLICE DEPARTMENT
OSU
FUNCTIONAL SCHEMATIC

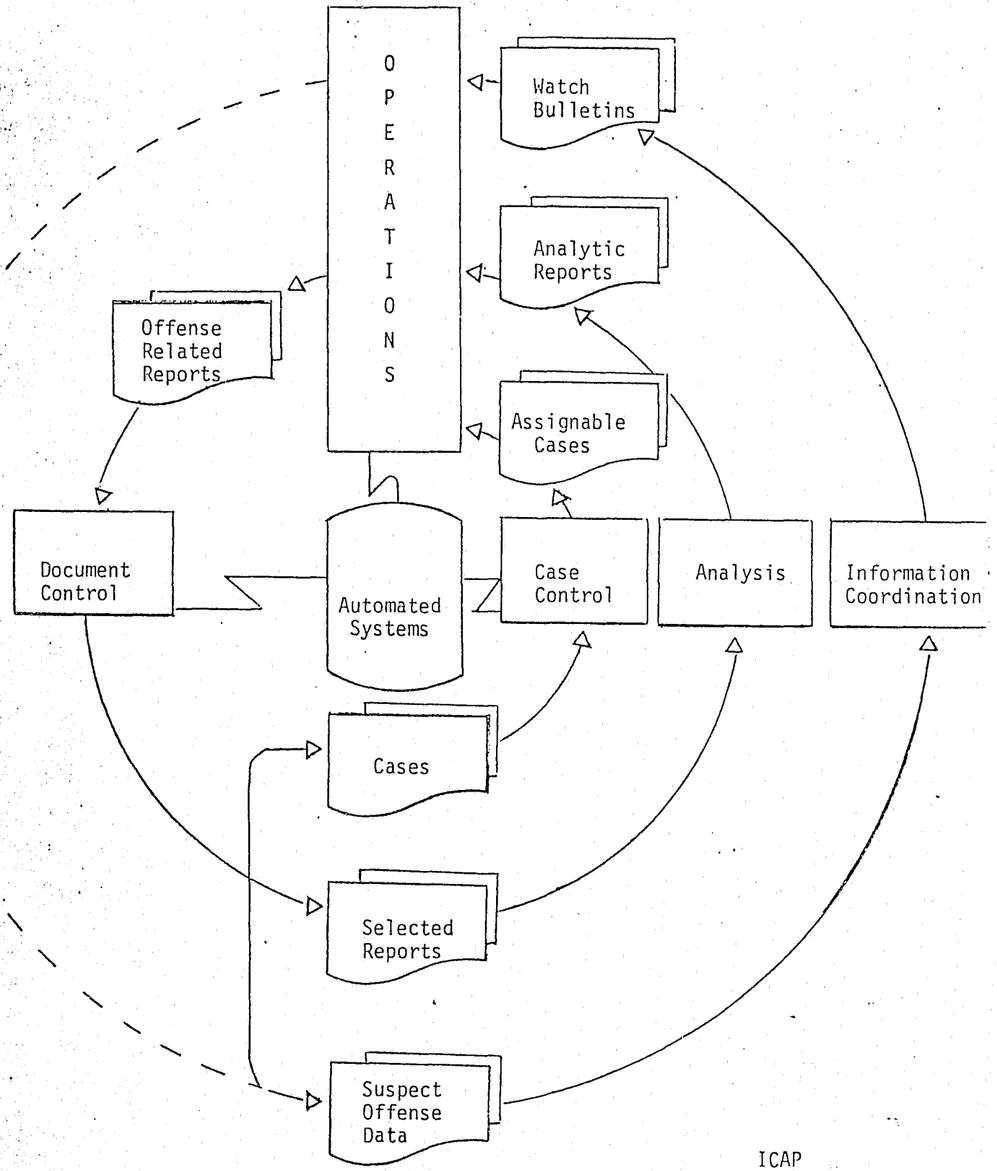
OPERATIONS SUPPORT MODEL

SCHEMATIC CHART



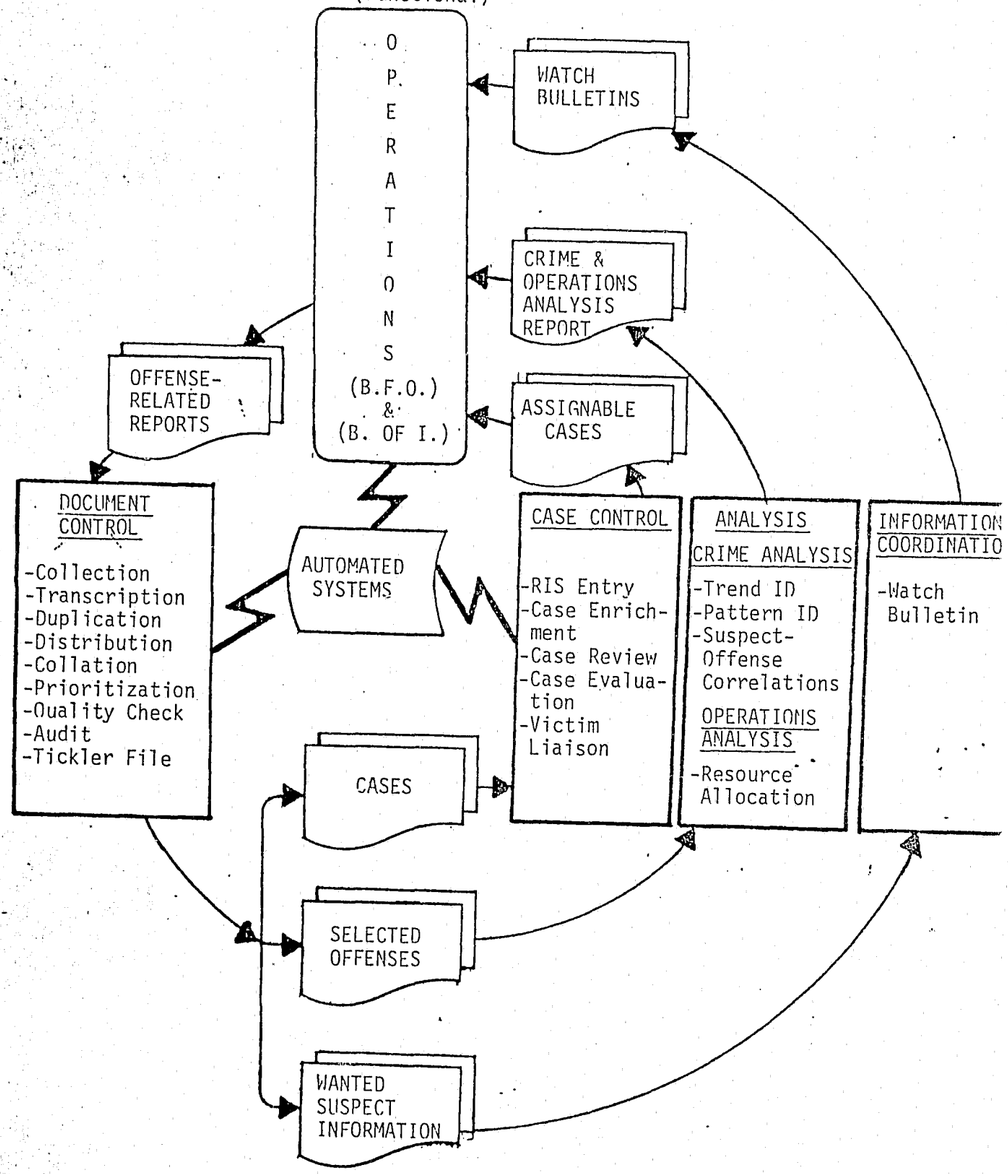
OPERATIONS SUPPORT MODEL

SCHEMATIC CHART
(Structural)



ICAP
6/79

OPERATIONS SUPPORT MODEL
SCHEMATIC CHART
PHASES I & II
(Functional)



ICAP
7/79

APPENDIX D

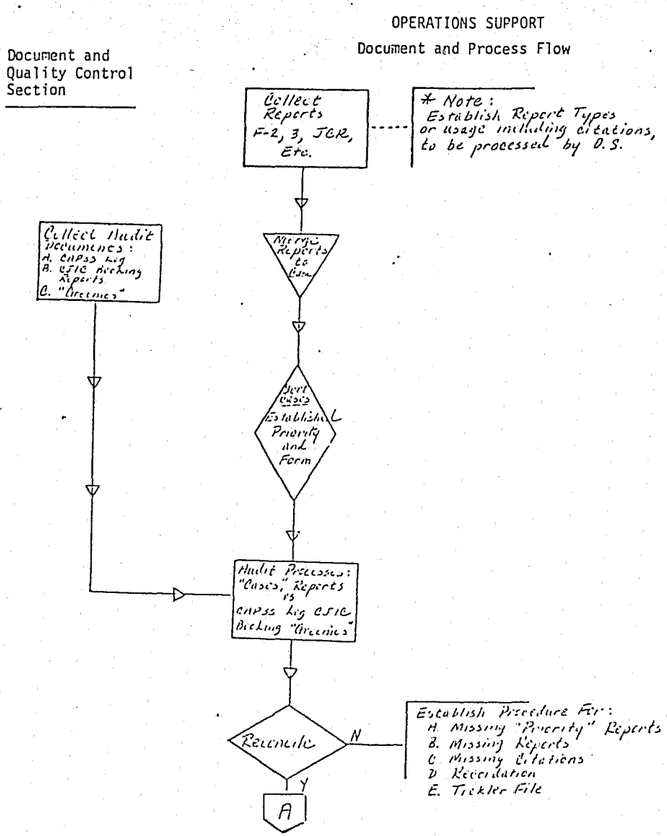
OPERATIONS SUPPORT MODEL

FLOW CHART

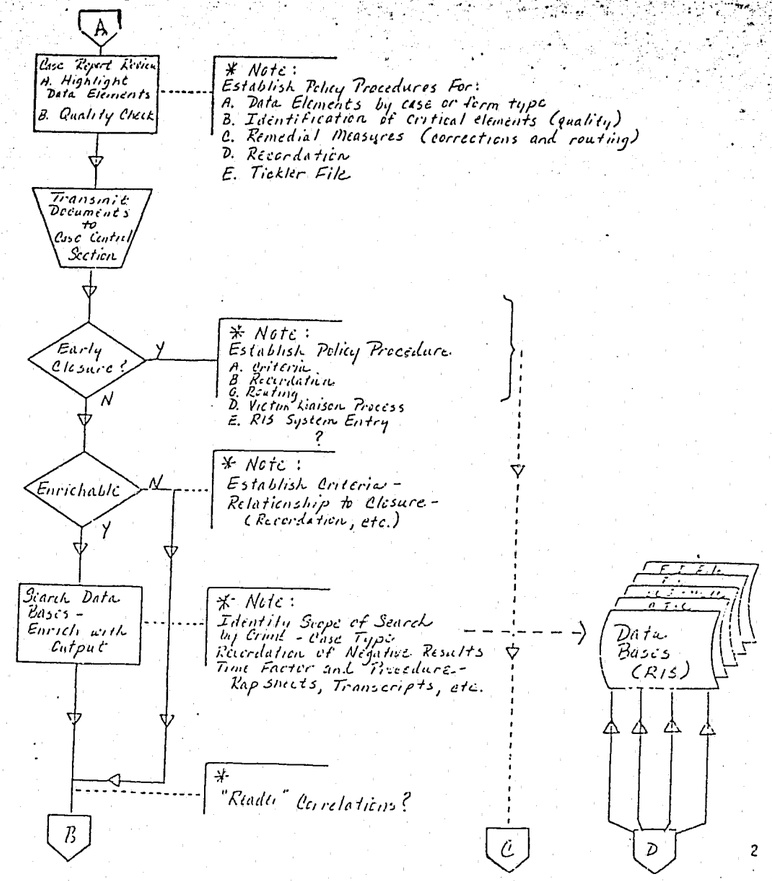
OPERATIONS SUPPORT

Document and Process Flow

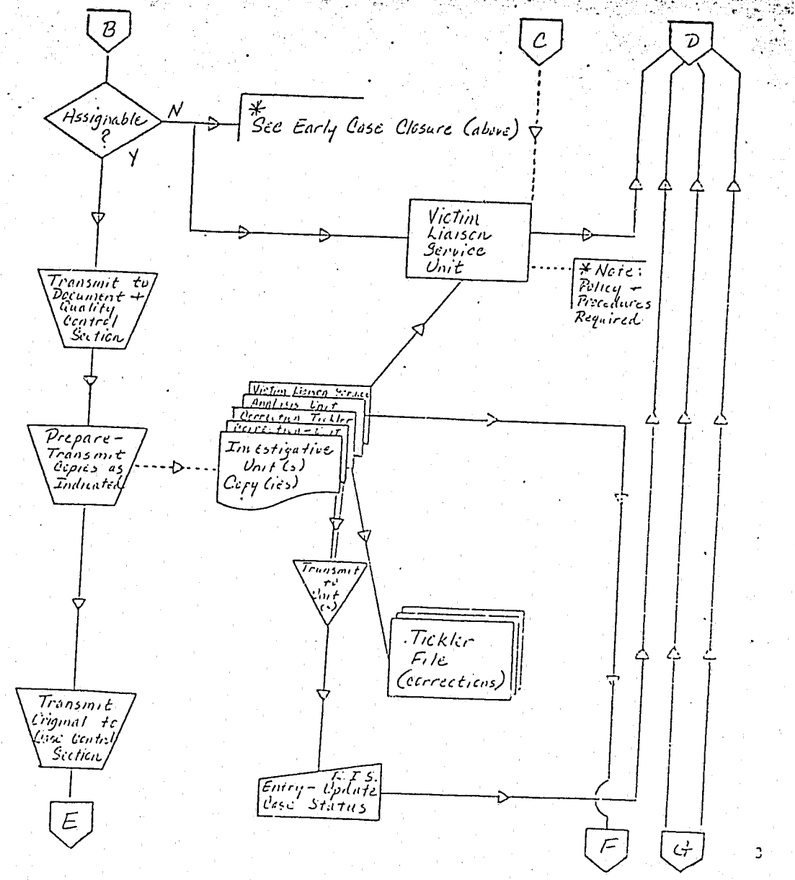
Document and Quality Control Section



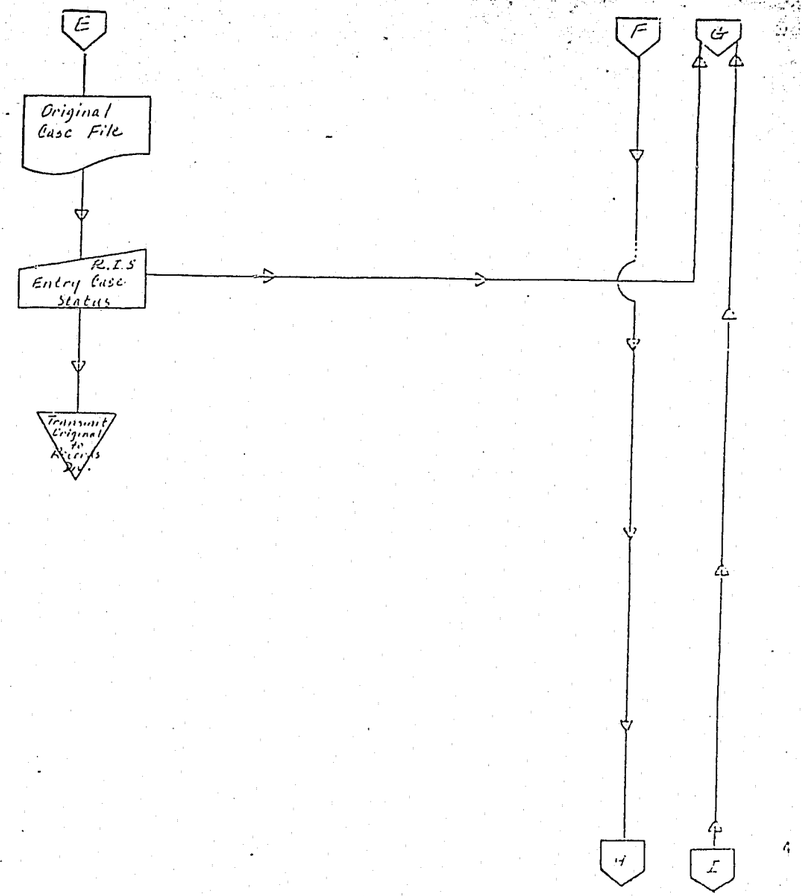
Case Control Section



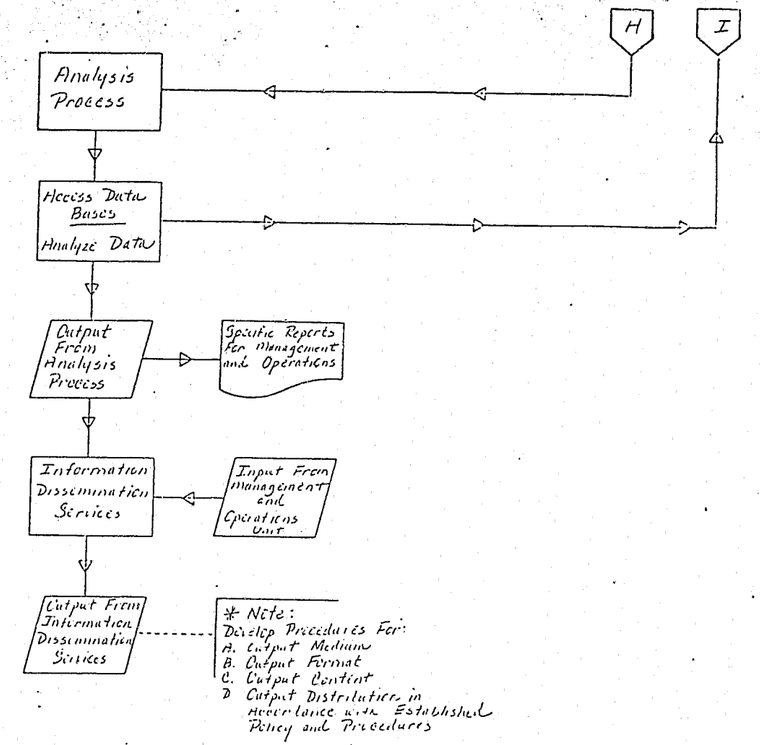
Document and Quality Control Section



Case Control Section



Analysis and Information Section

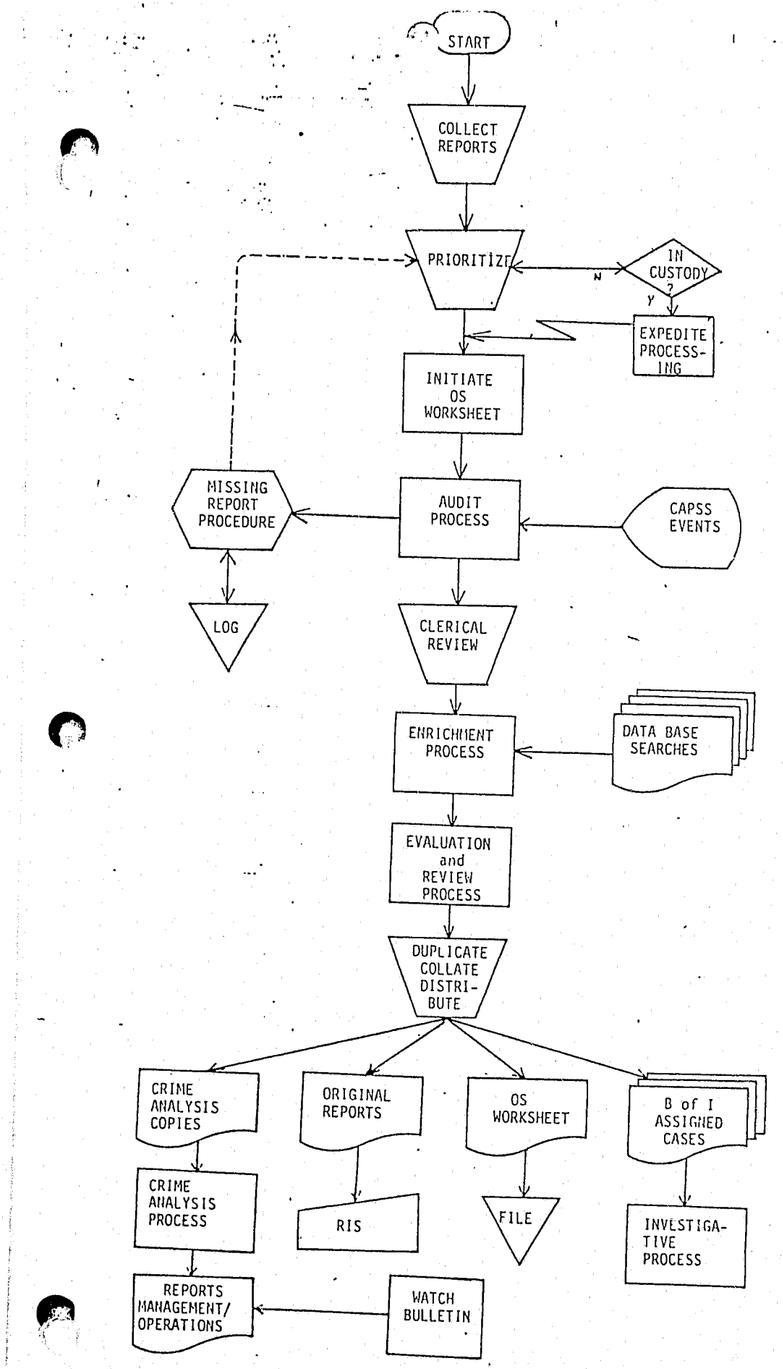


Appendix E

Operations Support Unit

As Implemented

Appendix E



Appendix F

Report Processing Studies

ANALYTIC STUDIES OF

SAN JOSE POLICE DEPARTMENT

RECORDS DIVISION

Conducted By

Integrated Criminal Apprehension Project Staff

July - September

1979

8/3/79

Summary of Environment Profile Study conducted in the Records and Identification Division, Operations Command, San Jose Police Department.

Purpose of the study: To obtain a profile of staffing, the reliability of machine support systems, and interruptions and influences that impact upon the work of the Police Records Clerks (PRC's) assigned to report processing.

This study is a part of a broad work measurement study being conducted by Operations Support staff of ICAP (Integrated Criminal Apprehension Project). Prior to initiation of the survey, supervisors on each of the three shifts were consulted and briefed on the purpose and details of the questionnaires. The survey was initiated on Thursday, July 26th, after a one-day trial run. Data was collected for one week on each shift. An extra day of data was collected for the day shift as one sample day was adversely affected by an eight hour power outtage. Samples of the questionnaires circulated among supervisors and PRC's are attached to this report.

Survey Findings

Day Shift

Positions assigned per shift: 3 - 8
Average number of positions filled: 6.7
Interruptions, other duties and activities
Phone calls/Average per day;
Sworn: 13 calls/6 minutes per call
Non-sworn: 33 calls/6 minutes per call
City/Dept.: 4 calls/4 minutes per call
Walk-in requests: Average 7 requests /6.6 minutes
Training: One 1-hour training period reported.
An average of 69.5 percent of PRC's time per day devoted to report processing.

Swing Shift

Positions assigned per shift: none - 2.
Average number of positions filled: 1
Interruptions other duties and activities

Phone calls/Average per day
Sworn: 7 calls/7 minutes per call
Non-sworn: 6 calls/3 minutes per call
City/Dept.: 1 call/6 minutes per call
Walk-in requests: Average 2 requests/4 minutes
Other duties:
Relieve other stations, translating, etc., average of 2.56 hours per day per position.
Training: None reported.
An average of 41% of PRC's time per day devoted to report processing.

Midnight Shift

Positions assigned per shift: 5 - 8
Average number of positions filled: 6
Interruptions other duties and activities
Phone calls: Average per day;
Sworn: 1 call/7 minutes per call
Non-sworn: 1 call/4.5 minutes per call
City/Dept.: Less than 1 call/2 minutes per call
Walk-in requests: 2 requests/3 minutes per call
Other duties: Average of 1 hour per day per position
Training: 3 training periods reported, average time 40 minutes per period.
An average of 81% of PRC's time per day devoted to report processing.

Support Systems*

Percent of time non-operative in 24 hour period

Days	Copiers	CRTS	Mini-trieve	Other
1	0	.6	0	0
2	33.3	5.3	33.3	0
3	25.0	10.0	17.3	0
4	100.0	48.3	48.3	33.3
5	9.3	8.8	12.5	8.3
6	0	0	0	0
7	0	3.3	0	1.6

* Several power outtages occurred during the survey period.

Day 3, Midnight shift, 2 hours 15 minutes
Day 4, Day shift, 8 hours
Swing shift, 3 hours
Day 5, Day shift, 2 hours
Swing shift, 30 minutes

Conclusions

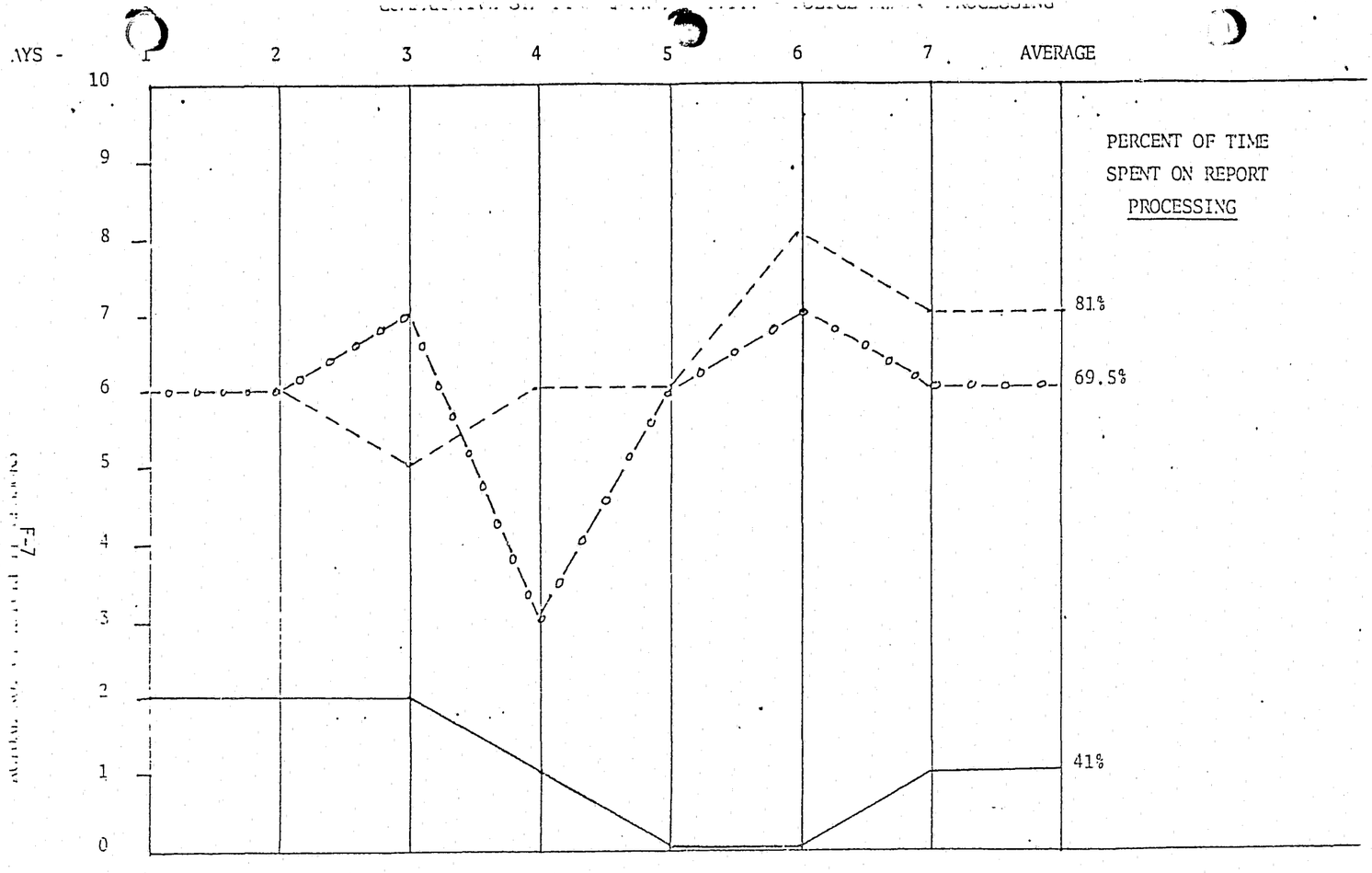
Report processors on the day shift experienced the greatest number of interruptions from phones; an average of 50 calls per shift, also, the greatest number of walk-in requests; 7 per shift.

Midnight shift report processors were the least disturbed by interruptions; 3 phone calls per shift, less than 3 walk-in requests per shift.

Interruptions on the swing shift had the greatest impact on report processing considering no more than two PRC's were ever assigned to this task. Phone calls averaged 9.5 per shift. Time taken up by walk-ins was nominal. Swing supervisors reported a training program is currently being conducted on this shift. Report processing is performed only if there is an overlap from days and if there is adequate personnel present.

During the test period several power outtages occurred. Supervisors report such occurrences are not unusual. In addition, any of the machines that break down on swing or midnight shift are inoperative for the balance of that 24 hour period, that is until the following day when service personnel can be called.

Attachments - Graph: Comparitive Staffing and Productivity.
- Supervisor's Records and Identification Profile Questionnaire form.
- Police Records Clerk Questionnaire form.



ICAP WORK MEASUREMENT PROJECT

JULY - AUG 1979

-o-o-o-DAY SHIFT
— — —MIDS
_____SWINGS

DATE _____

Records and Identification Profile

Shift _____ Briefing Time _____ Duration _____

Special problems presented at briefing:

_____

_____

_____

_____

WORK FORCE ASSIGNED TO REPORT PROCESSING.*

NO. PRC POSITIONS ALLOCATED _____

NO. PRESENT THIS SHIFT:

Full Time: _____

Part Time: _____

Status of Support Systems:

	NO.	NO. OPERATING	NO. NOT-OPERATING	% OF SHIFT-IT NOT OPERATING
IBM COPIERS				
CRTS				
MINI-TRIEVE				
OTHER SYSTEMS (describe)				

Summarize any interruptions to work flow.

	NO.	TOTAL TIME
Incoming info. request/business calls		
Walk-in officer info. requests		
Individual training/spec. directions		
Other (DESCRIBE)		

Describe any unusual occurrances, e.g. power outtage, bomb threat, etc.

_____

_____

Completed by:

_____ _____

Name Title

* Do not include library, micro-film processing or front counter personnel

Police Records Clerk

Name _____ Date _____

Work Station _____ Shift _____

As part of the Records processing workload study please assist us by tallying and summarizing work activities performed in addition to your regular processing duties.

	No.	Total Time (min.)
Phone calls:		
Information requests		
Sworn		
Non-Sworn		
Inter-city/Dept. Business calls		
Special directions from supervisors		
Training sessions		
Other activities: (Describe)		
_____		
_____		
_____		
Walk-in requests		

Thank-you,

Operations Support Unit Staff

ICAP PROJECT PHASE I AUG. 21, 1969

Report Processing Document Count

Purpose of the study: It was the purpose of this study to identify the pattern by which reports are submitted for processing and to discover how this pattern impacts on the workload of report processing personnel. This data will be used to assist in developing detailed recommendations for Phase I processing adjustments.

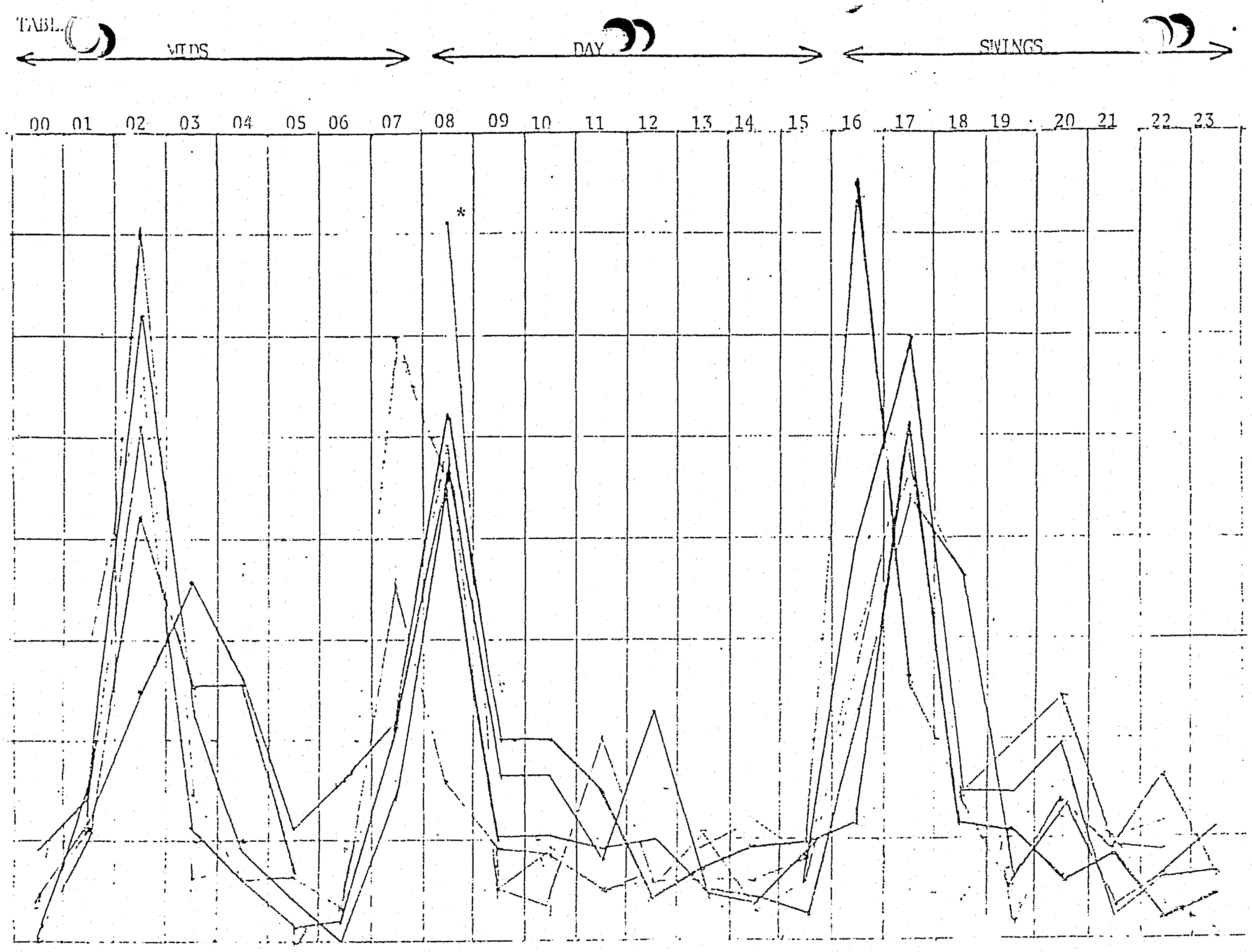
Procedures: An hourly log was kept of all reports retrieved from the BFO report depository, the front counter, the mail box, and the sworn report writing desk. The measurement period began August 13 at 0800 hours and ended August 20 at 0600 hours. Tabulation was made each hour by type of report. Two time gaps occurred, one of three hours, one of two hours when reports were not retrieved. These gaps were closed by taking a document count during the week following the study at appropriate times.

Findings

Table I shows the number of reports submitted by hour of the day and day of the week. The three shifts are also indicated to assist in illustrating relative workload. Within the period of the study, the greatest number of reports was submitted between 1500 hours and 1700 hours on the fifth day of the study, Friday. The next highest peak had occurred at 0200 hours of the same day. The high of 71 reports at 0800 on the first day of the study probably contained a number of reports accumulated in the early hours of that morning and is therefore not a truly accurate measure.

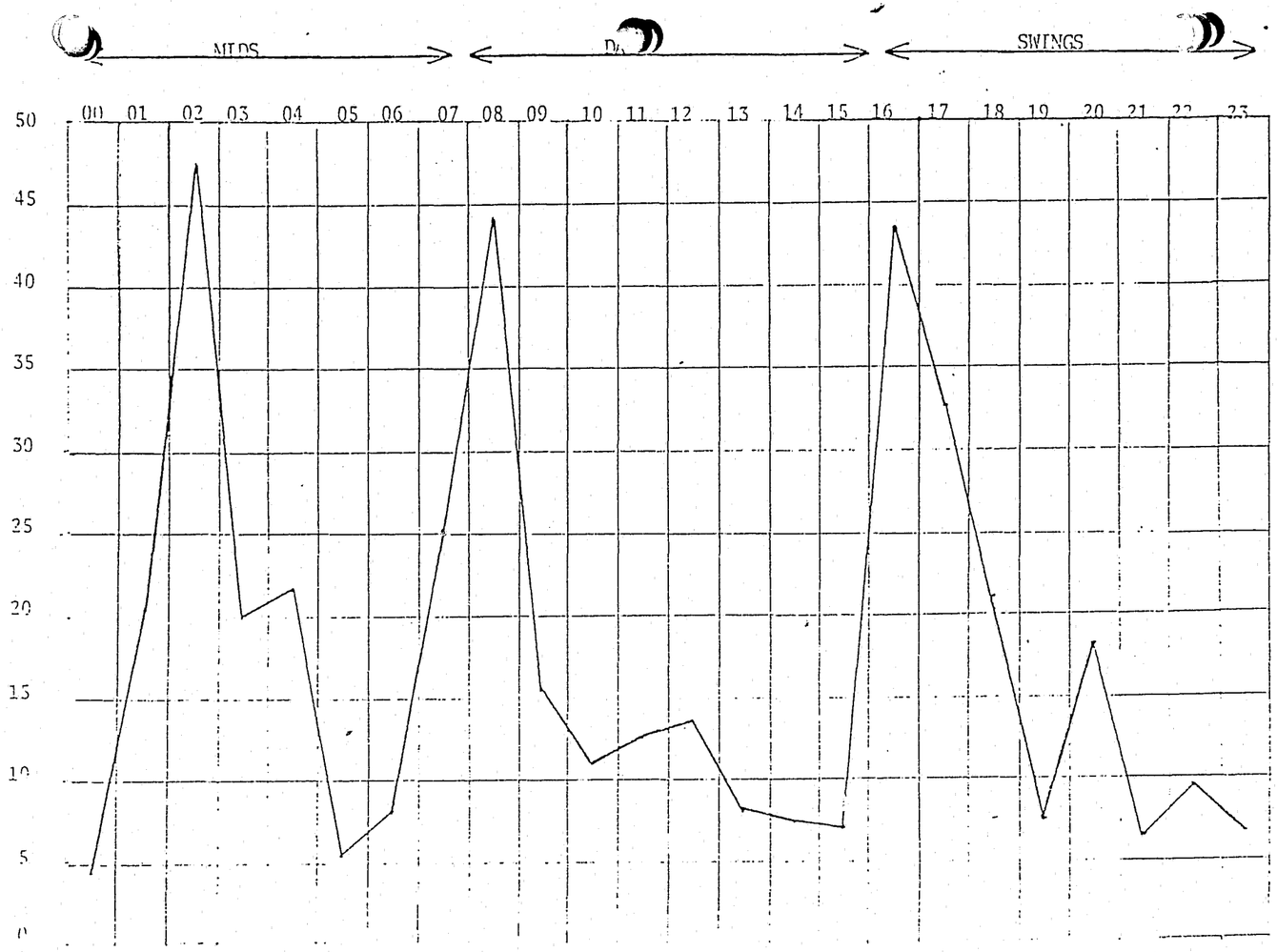
From the data it appears each shift has a distinct peak period for report retrieval; Days between 0600 and 0800, Swings between 1500 and 1700, with Mids between 0100 and 0200. This trend is more apparent in Table 2, Median Number of Reports by Time of day.

F-11



FIRST DAY — FOURTH DAY
SECOND DAY — FIFTH DAY
THIRD DAY — SIXTH DAY

NUMBER OF REPORTS SUBMITTED BY HOUR OF THE DAY AND DAY OF THE WEEK



MEDIAN NUMBER OF REPORTS SUBMITTED BY HOUR OF THE DAY

August, 1979
A.W.

Report retrieval distribution was fairly even between shifts. Of a total of 2698 separate reports tabulated, 994 or 37 percent were retrieved on Swing shift, 957 or 35 percent were retrieved on Mid shift, leaving 747 or 28% retrieved on Day shift.

Table 3

REPORTS BY TYPE AND DAY OF THE WEEK

TYPE	M	T	W	TH	F	S	S	TOTALS
F1	65	61	65	58	48	45	40	382
F2	143	158	130	147	119	99	108	904
F4	12	14	15	16	11	14	18	100
F16	48	46	48	36	46	60	27	311
F19	16	10	26	21	18	22	21	134
JCR	36	29	37	30	25	32	19	208
DUI	10	6	14	21	26	33	12	122
OTHER	65	72	54	59	92	109	86	537
	395	396	389	388	385	414	331	2698

F1 - INCIDENT REPORT - Crimes against property only
F2 - Crime Report
F4 - Vehicle report
F16 - Traffic Collision report
F19 - Traffic Collision report, short form
JCR - Juvenile Contact Report
DUI - Driving Under the Influence
OTHER - Includes; Pre-booking forms, supplemental crime reports, supplemental traffic collision reports, Chemical analysis reports, property descriptions, etc.

As shown in Table 3 for the period studied, the greatest number of reports were submitted on Saturday. However, the variance is not marked from day to day. The median number of reports submitted per day is 373 a variance of 42^{+}_{-}.

Following current report processing procedures, all reports must be stamped in, marked for routing, duplicated and copies distributed to a variety of locations depending on the crime type, indexed, stamped, and filed. Processing time varies with the skill and experience of the operator and with the amount of work interruptions. The recent Environment Profile Study, completed 8/3/79, showed most interruptions occur during the day shift.

Table 4

Comparison of Current Shift Hours with Peak Report Retrieval Time

Shift			Peak Hours
I	Mids	23:30 - 7:30	0200
II	Days	7:30 - 16:30	0800
III	Swings	16:30 - 23:30	1600

Current shift times accommodate the peak report submission times quite well. A thirty minute delay is possible between day and swing shifts in initiating processing of reports at the peak hour of 1600. An alternative schedule employing two 10-hour shifts is shown in Table 5.

Table 5

Alternative Shift Schedule

Shift		Peak hours
I	0700 - 1700	0800 and 1600
II	1700 - 0300	0200

This schedule provides for the major portion of report processing to be accomplished on Shift I. A carry over of some process steps would occur from the end of Shift I to the beginning of Shift II. However, most of the report "handling" could be accomplished on the 0700 - 1700 shift. Indexing would then be completed during the first part of shift II.

There are indications that the concentration of report indexing on an evening shift would result in a reduction in entry errors as well as terminal time. Given an experienced operator, reports could be indexed more quickly. Both the Environment Profile Study and the Terminal Response Time study support these contentions. Reports with high priority would be fully processed at the time received. All others would be indexed in accordance with a priority procedure, to be established, but with the bulk of reports assigned to the evening hours.

Under this alternative shift schedule, no civilian personnel would be present during the hours 0300 - 0700. Experience and the current study show these are the least active hours for report submission.

The impact of an extended shift time on productivity would need to be assessed along with the apparent merits of this plan. Some of the tasks related to report processing require intensive attention to detail and productivity could be affected by longer hours. Utilization of part-time employees could be a solution to a fatigue problem. However, this

too would need to be considered for possible effects on supervisory and administrative tasks and implications for group morale both positive and negative.

DOCUMENT COUNT

Purpose: To count when and how many reports are turned in for Records Processing.

Frequency: This count will be done hourly during each shift for a seven day period.

Directions:

1. Pick up all reports at the following locations:
   a) BFO lock box
   b) Records Report Writing Room
   c) Front Desk
   d) Records Mail Box

2. Bring the reports to Records.

3. Count the number of each kind of report (for example, how many JCR's were in the pile of reports?)
4. Write the total for each type of report on the tally sheet.

5. If there were no reports of a particular type, put a zero (0) on the tally sheet.
6. If there were no reports on any of the four locations, put zeros in each space on the tally sheet.

7. Stack the reports on the indexer's desk.

8. At the end of shift, put the tally sheets back in the folder for the next shift to use.

Thanks for your help.

ICAP Staff
x4106

Analysis of Report Processing Procedures in the Records Division, San Jose Police Department.

Introduction. This study was undertaken in support of a general plan for the development and implementation by the ICAP Project of an Operations Support Unit, in the Police Records Division. Early in the development of the project it was recognized that in order for management decision making, impacting all areas of police operations, to be effective and efficient it must be based on the consistent and timely availability of quality information. It has been generally acknowledged that information now available for crime and operations analysis is often inadequate, of mediocre if not poor quality, and not always timely. A principal objective of Phase I of the project is to identify those conditions that contribute to the inadequacy and poor quality of information available to managers as well as to line personnel in the Department. Based on this and related studies performed by the ICAP staff, Phase II of the project will be concerned with resolution of these inadequacies and the development of a reliable and timely information system with an emphasis on quality reporting.

Purpose of the Study. This study had a very specific purpose: to identify in detail the current processes applied to the retrieval, distribution, automated system entry, updating and quality check of all reports submitted to the Records Division for processing and to determine the approximate time required to perform each task. In concert with other studies recently completed by the ICAP staff, it is expected this report will assist in determining optimal staffing requirements, task and equipment allocation, and serve as a base for future modification and improvement in the methods now employed in processing reports. In anticipation of a Case Control and Analysis Section in Phase II of the ICAP Project, a thorough understanding of report processing methodology is considered imperative by the Operations Support staff.

Design of the Study. Based on a comprehensive flow chart developed by ICAP analysts during the past year, a detailed outline of processing tasks was developed. The outline was divided into sections describing the normal processing of each type of report, steps in the quality control of each type of report, related activities such as transcribing, indexing,

filing, making corrections and additions, and the handling of photos and other miscellaneous data. Two Operations Support Analysts had principal responsibility for the study. Time and motion measurements were performed for each processing step described in the outline. These measurements were made with the cooperation of Police Records Clerks and their Supervisors on each of the three shifts; Day, Swing, and Mids. Personnel participating in these task measurement studies varied from individuals with long years of experience to others who had recently completed training. It was anticipated this cross section approach to the selection of subjects would give a realistic measure of average times required to perform specific tasks. Due to staffing shortages plaguing the Police Records Division currently, analysts in actuality were limited to measuring performance of the incumbents in particular positions regardless of their level of expertise.

Measurements were made over approximately a month. Critical measurements were compared and evaluated for reliability by the two analysts and the final few days of the measurement phase were spent in verifying results as being reasonable and accurate within the time and staffing constraints of the study.

Results of the time and motion measurements were compiled on the data collection form described previously and are located in the Appendix of this report. Data usually recorded in seconds was translated to minutes required per task, per twenty-four hour period based on calculated averages of reports submitted. A summary report was developed highlighting principal tasks, a narrative description of the task, and time in minutes required for completion. This summary may also be found in the Appendix. General task groupings to be found in the summary are;

1) Processing of Reports with investigative priority.
2) Normal report processing and distribution by type.
3) Quality control of reports.
4) All other tasks associated with report processing.

Total hours were computed for each of the above tasks, followed a grand total for all report processing activities measured in this study.

Findings and Recommendations

At the time this study was conducted essentially the same staffing was observed as during the Environment Profile study, (8/3/79). In this study the average number of positions filled on each shift was; Days 6.7, Swing 1, Mids 6. The Document Count study completed in mid-August indicated there are three peak periods in the 24-hour day for report submission, 0800, 1600 and 0200 hours. Median number of reports received respectively was 44, 43, and 48 with a secondary influx of one-half to one-third this number occurring at 1200, 2000 and 0400 hours. If, as observed in this study, no report processing is being done on the 1630 to 2330 shift, the burden of processing all reports submitted in the late afternoon and evening hours, which would routinely be processed on swing, is held over for the next shift, Mids, possibly with a progressive delay extending on to the day shift.

The day shift, subjected by far to the most interruptions of routine processing duties as currently structured, is not well equipped to clear up this stack of accumulated reports. The document study indicated that current shift times are quite well adapted to peak report retrieval times if all shifts are adequately staffed. It is therefore recommended that through the recruitment of new Police Records Clerks and the shift transfer of incumbent personnel a balance be maintained on all shifts.

An alternative schedule was offered for consideration in the Document study employing two 10-hour shifts and still accommodating the peak report submission times noted. This schedule provides for shifts beginning at 0700 hours and 1700 hours with no civilian personnel present from 0300 to 0700 hours. Under this plan it is suggested the majority of report indexing would be performed on the second shift taking into account the high incidence of interruptions on days. However, daytime interruptions of routine processing should not be regarded as irremediable. Responsibility for screening incoming calls and handling walk-in officer requests could be assigned to one clerk as his/her primary task. Presently no clear-cut procedures for handling calls and requests appears to be followed.

Choice between the retention of the eight-hour shift or the adoption of the two shift plan should be based on productivity and efficiency considerations such as which would provide for optimum supervisory control, optimum utilization and performance of terminals and other support systems, and effect on employee

morale. Use of part-time employees might also be considered as a possible means to increased flexibility in the implementation of any schedule.

An analysis of police report processing procedures revealed the following time averages per shift devoted to the major tasks performed.

1) Forty-five minutes is devoted to stamping reports.
   - o All Reports are time and date stamped in as soon as retrieved.
   - o Approximately 22 percent of crime reports are stamped "Court" and "D. A.".
   - o All indexed reports are stamped "Indexed" and initialed as this process is completed.
   - o All reports are time and date stamped out.
2) Thirty-five minutes is devoted to sorting reports.
   - o Reports are first sorted to determine investigative priority.
   - o After reports are marked and copied, copies are sorted for distribution.
   - o The Records copy is arranged in case number order prior to indexing and filing.
3) Twenty-five minutes is spent marking reports for distribution.
4) One hour is required to distribute reports to various pick-up stations and filing locations
5) One hour and twenty-five minutes is spent making copies of reports for distribution.
6) Six hours is spent at a computer terminal, indexing, making corrections and additions, querying the Driver's License system, etc.

These averages were computed from data collected during the course of this study. Total time required to perform each task was divided equally between the three shifts. Due to understaffing problems these time estimates do not accurately reflect current operations. As previously mentioned little or no report processing is being accomplished on the swing shift.

Processing costs have been estimated in previous staff reports, most recently in Captain Horton's response, (4-20-79), to the Assistant Chief's directive to a group of Captains and Lieutenants to identify problems

and recommend solutions in the Records Division. The following cost estimates were reported in connection with Offense Report and related crime reporting forms.

1) A conservative estimate for preparation is 30 minutes or $7.00 x 100,000 (the number of reports submitted in one year) = $700,000 per year.
2) Records processing (at present staffing level) to collect, duplicate, index, distribute, file, etc., costs $500,000 per year or $5.00 a report. This does not include reproduction costs - 5¢ a page or Vehicle Records staff.

By the time a report leaves Records, it has already cost $12.00 or a total cost of $1,200,000 a year.

With due regard to the serious understaffing problem now existing in Records, the feasibility of staffing and procedural modifications cannot be realistically anticipated in the very near future. However, the continued drain on the Department's fiscal resources cannot be tolerated indefinitely either.

Police Report Processing

PRINCIPAL TASK	NARRATIVE	TIME CONSUMED (MINUTES)* Per Shift	24 Hour Total
RETRIEVE ALL REPORTS	Reports are retrieved 3 times per shift on each of 3 shifts.	15.0	45.0
	All Reports are then time and date stamped	8.8	26.5
Determine If REPORTS HAVE INVESTIGATIVE PRIORITY.	Reports are sorted to determine priority	2.2	6.5
PROCESS HIGH-PRIORITY REPORTS	Priority reports are then marked for distribution, copied, stamped Court and D.A. time-stamped out as completed, and distributed	20.7	62.0
	TOTAL	46.7	140.0
PROCESS REMAINING REPORTS BY TYPE: FORM 1 INCIDENT REPORT	F-1 form is burst; White is Records copy, Pink copy to BFO. If crime type is malicious mischief the pink (Beat) copy is destroyed	2.3	6.9
	If another crime type, the form is marked for distribution, copied and distributed	4.7	16.0
	TOTAL	7.3	22.9
FORM-2 CRIME REPORT	Form 2 is burst, carbon and supplemental page removed (if blank)	5.5	16.5
	Forms are marked for distribution, copied, stamped for court and D.A. and distributed	55.0	165.0
	TOTAL	60.5	181.5

* TIMES BASED ON CALCULATED AVERAGES OF REPORTS SUBMITTED.

PRINCIPAL TASK	NARRATIVE	TIME CONSUMED (MINUTES)* Per Shift	24 Hour Total
(JCR) JUVENILE CONTACT REPORT	If crime type is 601 all copies are transmitted to the S. C. County Juvenile Probation Dept. (JPD).	12.5	36.9
	If another type crime, the original is retained for Records, copy is transmitted to JPD.	2.5	7.5
	TOTAL	14.8	44.1
(DUI) DRIVING UNDER THE INFLUENCE	All reports are copied	.3	1.0
	DL system is queried for driving history. System output copied or second copy obtained from system.	15.0	45.0
	Chemical Analysis form copied	2.5	7.5
	All forms merged (DUI, CLETS, Chemical Analysis) with Pre-Booking report and Transmitted to Accident Investigation Bureau (AIB)	3.2	9.5
	TOTAL	21.0	63.0
Form 4, Vehicle Report Form	Transmitted twice per shift to Auto Desk	3.0	9.0
Form 19 Collision Information Notice	All copies marked for distribution, copied and distributed per procedures	5.3	15.8
	TOTAL	5.3	15.8

* TIMES BASED ON CALCULATED AVERAGES OF REPORTS SUBMITTED

PRINCIPAL TASK	NARRATIVE	TIME CONSUMED (MINUTES)* Per Shift	24 Hour Total
Form 16 Traffic Collision Report	All copies marked for distribution, copies made (3/5 in reduced size), then distributed per procedures.	18.0	54.0
	TOTAL	18.0	54.0
Further Processing; All reports	Prior to distribution all F-1, F-2, 16's and JCR's are date and time stamped	6.1	18.2
	Each group of reports processed is put in case number order for Quality Control review and filing.	4.2	12.
	TOTAL	10.3	30.9
Reports entered in Records Index System, RIS.	Reports entered by type		
	F-1	60.0	120.0
	F-2	102.6	308.0
	16	32.6	98.
	DUI	9.8	29.5
	JCR	20.7	62.2
	Estimated terminal delay	7.6	22.
	Estimated 10% re-entry	2.0	6.0
	TOTAL	215.5	646.4
Final Processing after RIS Entry	All names are underlined on report, stamped "Indexed" and initialed by PRC.	11.1	34.2
	Reports are then sorted into accident, non-accident and distributed to the appropriate quality Control Desk.	4.3	13.
	TOTAL	15.7	47.

* TIMES BASED ON CALCULATED AVERAGES OF REPORTS SUBMITTED.

PRINCIPAL TASK	NARRATIVE	TIME CONSUMED (MINUTES)* Per Shift	24 Hour Total
TOTAL REPORT PROCESSING AND DISTRIBUTION	TOTALS IN HOURS	6Hr 58Min	20Hr 55M
Quality Control of CRIME REPORTS: by type, F-1	Distribution marking is checked for accuracy. If omissions found, copies are made and distributed.	2.1	6.3
	Underlined names checked. If errors found, screenface is called up and correct entry made.	3.1	9.3
	If other indexing errors found, report is re-indexed.	2.0	6.
	Julian date matched. If error, correct date is entered.	1.3	3.9
	Reports are stamped with PRC's N # and filed upright for merging and CLETS	1.2	3.
	TOTAL	9.7	28.9
F-2	Distribution marking is checked for accuracy. If omissions found, copies made and distributed.	8.8	26.5
	Underlined names checked. If errors found screenface called up and correct entry made.	23.6	70.
	Where 2nd and 3rd page entered, info. checked for accuracy and errors corrected.	5.2	15.6
	Julian date matched, if error , correct date is entered.	3.2	9.
	Report checked for cross referenced cases. If omissions found, additions made to note field.	18.6	56.
	Stamped with PRC N # and set aside for CLETS pickup	2.4	7.1
	TOTAL	61.3	184.1

* TIMES BASED ON CALCULATED AVERAGES OF REPORTS SUBMITTED.

PRINCIPAL TASK	NARRATIVE	TIME CONSUMED (MINUTES) * Per Shift	24 Hour Total
TRANSCRIPTION	Transcription full page Supplemental reports	248.3	744.8
	Transcription for ½ page reports.	29.8	89.4
	Entry made in log book	10.5	31.5
	TOTAL	288.6 (5Hrs,15Min)	865.7 (14Hrs,
Quality Control of Form 3 from TRANSCRIPTION	Reports are retrieved from transcription area, sorted by type and time stamped.	4.4	13.
	Reports arranged in case number order.	1.1	3.3
	Reviewed for transcription errors.	26.0	79.
	Checked for CN #, if omitted, query in RIS.	1.8	5.4
	Single sheets copied, multicopies separated.	4.2	12.7
	Copies marked for distribution, stamped with N # and sorted	2.5	7.4
	"Official Copy" stamped on BFO, Records copy time-stamped, distributed	2.8	8.4
	TOTAL	43.4	130.2
Form 3 Indexing	Form 2 is called up on the terminal to determine if Form 3 reconciles. If yes, enter in RIS.	26.3	92.3
	If no, this procedure is followed; Query RIS Review CAPSS log Enter corrections in RIS and on report	12.5	37.
	Make copies of corrected report and distribute	10.6	32.0
	TOTAL	55.8	161.

* TIMES BASED ON CALCULATED AVERAGES OF REPORTS SUBMITTED

PRINCIPAL TASK	NARRATIVE	TIME CONSUMED (MINUTES) * Per Shift	24 Hour Total
Quality Control of Form 3b	Form 2 is called up on the terminal to determine if Form 3b reconciles.		
	If not, CAPSS log is reviewed for Case #	1.1	3.3
	If a match, form is stamped in, copied, marked for distribution, copies distributed.	1.5	4.6
	Report entered in RIS, N # entered on report, interfiled with FORM 3's.	.6	2.3
	TOTAL	3.2	10.2
Permanent Suspect Form Processing	RIS is queried for case #		
	If no match, detective is called (infrequent)	.06	.2
	If match, suspect is entered as permanent together with other data. Form is time stamped,		
	stamped indexed, one copy marked "Records".	.5	1.
	Original transmitted to detective.	.9	2.7
	Filed upright by case #.	.3	1.0
	TOTAL	1.8	5.4
Case Number Card Processing	Card retrieved from front counter, arranged by number, blanks discarded, filed.	5.0	15.0
Tracking of Missing Report	The following procedure is followed when a report is discovered to be missing as a result of a no-match with F-3, 3b, permanent suspect form or citizen call-in		
	Name queried in RIS (CRQN). CAPSS log searched for IR and page copied.		
	Form 202-59 prepared and copied CAPSS log page and 202-59 merged.	6.8	20.5
	The original and a copy of the log transmitted to BFO.	1.7	5.

* TIMES BASED ON CALCULATED AVERAGES OF REPORTS SUBMITTED

PRINCIPAL TASK	NARRATIVE	TIME CONSUMED (MINUTES)* Per Shift	24 Hour Total
	Form 202-59 placed in tickler file which is checked periodically	.3	1.0
	If report received, it is then processed normally		
	If not received, 202-59 process is repeated	1.1	3.3
	IF THEN NOT RECEIVED, Supervisory Sergeant is called. TOTAL	10.0	30.0
Quality Control of Form 16	Correct distribution is verified	3.2	9.8
	If incorrect; report is marked correctly, copied, out-stamped on last page and distributed	22.0	66.0
	Correct case # is verified (Visual)	1.2	3.7
	If incorrect; CAPSS log is checked and page copied. Correction entered in RIS, corrected copy transmitted to AIB	2.3	6.9
	RIS entry verified	14.0	42.0
	If incorrect; correction entered	.5	1.5
	If reports are under investigation;		
	The face sheet is copied and filed in suspense file, original in "Under Investigation" file	13.3	40.0
	Reports are verified for officer error.	4.7	14.0
	If error discovered, a kickslip is prepared, copied, transmitted to BFO.	1.2	3.6
	Copies are pulled pending officer info, stapled, corrected and distributed.	5.0	15.0
	If error is lack of cross street; CAPSS log is checked and report corrected.	.4	1.2
	Reports are filed in suspense file	7.0	21.0
	TOTAL	74.7	224.1

* TIMES BASED ON CALCULATED AVERAGES OF REPORTS SUBMITTED

PRINCIPAL TASK	NARRATIVE	TIME CONSUMED (MINUTES)* Per Shift	24 Hour Total
Quality Control of Form 19	Correct distribution is verified.	1.5	4.4
	If incorrect, copied and distributed	1.7	5.1
	Correct case # is verified (visual)	.6	1.9
	If incorrect, CAPSS log is checked and case # corrected	1.0	2.9
	Reports are verified for officer errors	2.1	6.3
	If error discovered, a kickslip is prepared, copied and transmitted to BFO.	53.3	160.0
	Copy of kickslip and facesheet stapled and distributed	.3	1.0
	If error is lack of cross street, CAPSS log is checked and report corrected	.9	2.7
	Reports are filed by case number	.5	1.5
	A list of 16's and 19's CN's typed.	3.3	10.6
	TOTAL	65.2	195.8
Quality Control of Accidents; Releases and Supplementary Reports	Original reports are pulled from "hold" box. Incident up date queried (CRUI)	93.6	280.9
	RIS updated and checked for additional info and input and referenced to case.	12.2	36.7
	Supplementary reports marked for distribution, copied, and distributed.	4.1	12.4
	Original merged into suspense file	18.1	54.4
	TOTAL	128.0	384.4

* TIMES BASED ON CALCULATED AVERAGES OF REPORTS SUBMITTED.

CONTINUED

2 OF 3

PRINCIPAL TASK	NARRATIVE	TIME CONSUMED (MINUTES)* Per Shift	24 Hour Total
Processing of Photographs	Set of negatives are counted, placed in envelope, number and N # marked on envelope. F-16 marked with quantity of negatives.	1.8	5.3
	Negatives are filed.	.8	2.5
	TOTAL	2.6	7.8
Summary of Quality Control	Total time in hours	6 hrs 26 min	19 h 1[illegible]
Summary of transcription, additional indexing and processing of miscellaneous reports	Total time in hours	6 hr 15 min	18 h 5 m
Summary ALL POLICE RECORD REPORT PROCESSING	Total time in hours	19 hrs 6 min	59 h 18 m

* TIMES BASED ON CALCULATED AVERAGES OF REPORTS SUBMITTED.

RECORDS REPORT PROCESSING *

TIME / TASK

	Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
Retrieve all reports (all areas - 3 x per shift)	T=5 min x	9	-	45.0
Time & Date stamp in (1,2,16,19,JCR,DUI,Other)	4.3	368	1582.4	26.37
Determine if any reports have investigative/ processing priority	65	6	390	6.50
If yes: Mark priority reports for distribution (Av # F-2 24.7; Av # 16's 5.6)	15	303	454.5	7.58
Make copies F-2's = 60 sec x 24.7	60	24.7	1650	27.50
16's = 30 sec x 5.6	30	5.6		
Stamp copies with Court & D.A. 24.7 reports av, 2.5 pages av each	10	61.75 pages		
Stamp copies out w/Time/Date stamp	3	30.3	90.9	1.52
Distribute report copies	30	30.3	909	15.15
If no priority reports present: process reports by report type				
Form 1 (Av. 50/24 hr.)				
Burst form	7.5	50	375	6.25
Determine if crime type is malicious mischief	.03	50	1.5	.03
If yes: Destroy pink copy	3	14	42	.70
If other crime type:				
Determine distribution	11.25	36	406	6.75
Make copies	1	36	36	.60
Distribute copies	11.25	36	405	6.75

* Excluding functions of front counter, library, and microfilm

REPORT PROCESSING (continued)

	Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
Form 2 (Av. 132/24 hr.)				
Burst form	7.5	132	990	16.5
Mark reports for distribution	15	132	1980	33.0
Make copies as appropriate	60	132	7920	132.0
Mark copy DA; court				
Distribute copies				
JCR (Av 33/24 hr.)				
Determine if crime type is 601 only	66	38	2178	36.3
If yes: (10.76% of JCR's) transmit all JCR copies to	10	3.6	36	.60
If no:				
tear off and retain original	7.5	29.4	2205	3.68
transmit JCR copies to Juvenile	7.5	29.4	2205	3.68
DUI (Av. 15/24 hr.)				
Make copies of reports	3.5	15	52.5	.88
Query DL System for driving history	120.0	15	1800	30.0
Wait for DL response	30	15	450	7.5
Copy DL output	30	15	450	7.5
Copy chemical analysis form (accompanies DUI)	30	15	450	7.5
Merge copy DL output, chemical analysis copy and pre-booking with copy report	30	15	450	7.5
Transmit copies to AIB	7.5	15	112.5	1.88
Form 4 Transmit to Auto Desk (twice/shift)	90	6	540	9.00
Form 19 (Av. 19/24 hr.)				
Mark for distribution	10	19	190	3.17
Make copies of report	10	19	190	3.17
Distribute copies per procedures	30	19	570	9.50

REPORT PROCESSING (continued)

	Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
Form 16 (Av. 42/24 hr.)				
Mark for distribution	20	42	840	14.00
Make copies of report 25 sec regular	25	42		
15 reduced size	15	42	1680	28.00
Distribute copies per procedures	120	6	720	12.00
Further processing for all reports except those done previously as investigative priority.				
Stamp 1's, 2's, 16's, JCR's, with date & time stamp	4.3	253.4	1089.62	18.16
Case number order reports for QC & filing	3.0	253.4	760.2	12.67
Enter reports in RIS				
1	106	50	5300	88.33
2	140	132	18480	308.00
16	133	42	5586	93.1
Supplemental (Prelim.-2a,3a,16a)	60	5	300	5.0
DUI	118	15	1770	29.5
JCR (less 601's)	127	29.4	3773.8	62.23
Determine if RIS accepted entry	5	275	1375	22.92
If no: (arbitrary 10%) re-index	13	2.75	357.5	5.96
Underline names on reports (Av. 2.5 names)	2	645	1290	21.50
Stamp 'indexed'; initial	3	253.4	760.2	12.67
Sort into accident/non-accident	2	253.4	760.2	8.44
Transmit to QC & Accident QC (3x/shift)	30	9	270	4.5

Non-Accident Quality Control

Form-1 QC	Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
Check routing for accuracy	6	50	300	5.0
If no: Make copy	4	5	20	.33
Reroute	6	5	30	.50
Check to see if underlined properly	10	50	500	8.33
If no: Query for name (CRON)	6	5	30	.50
Check indexing	5	50	250	4.17
If no: Change screenface & re-index	15	7	105	1.75
Check Julian date match	4	50	200	3.33
If no: Enter correct date of #	5	5	25	.42
Stamp N #	3	50	150	2.50
File copies upright for merging & CLETS	20	3	60	1.0

Form-2 QC	Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
Check routing accurate	10	132	1320	22.0
If no: make copies				
distribute copies	90	3	270	4.5
Check indexing accuracy by looking for underlined names	27	132	3564	59.4
If no: call up screenface; correct/enter info	15	45	675	11.
Check 2nd, 3rd page info by looking for underlined items (75% reports have 2.5 pgs.)	6	99	594	9.
If no: call up screenface; enter info	10	34	340	5.
Check Julian/date match	4	132	528	8.
If no: call up screenface; enter correction (Av. CN correction/day = 1)	8	7	56	.
Check for presence of cross refenced case #'s	25	132	3300	55
If yes: Average 2-3/day cross reference #'s query all #'s involved	5	3	15	
check note field; put reference #	6	3	18	
Stamp N #	3	132	396	6.
Set aside for CLETS pickup	10	3	30	

TRANSCRIPTION					
Transcribe F-3's	full page	14:32	912	49	44688	744.
	½ page	6:23	384	14	5362	89.3
Log # sheets transcribed all forms			30	63	1890	31.5

		Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
Form 3 QC (from transcription)					
Retrieve reports from transcription		105	3	315	5.25
Sort reports by type		75	3	225	3.75
Time stamp 3's in		4	63	252	4.20
Put in Case # order	T = 3 min	17		197	3.28
Review report for transcription errors	full ½	90 27	49 14	4410 378	73.50 6.30
Check for CN # presence on report		5	63	315	5.25
If no: Run name in RIS to get CN #		5	2	10	.17
Xerox single sheet F-3's		6	14	84	1.40
Separate edgings from multicopies		13	52	676	11.27
Mark all F-3's for distribution		7	63	441	7.35
stamp with N #; sort into piles according to distribution					
Stamp BPO copy with "official copy" and annotate		8	2	16	.27
Distribute copies		100	3	300	5.0
Time stamp Records copy out		3	63	189	3.15
Form-3 Index					
Call up F-2 screenface					
Determine if F-3 reconciles with F-2 by comparing data		6	63	378	6.30
If yes: Enter F-3 into RIS (full page)		82	19	1558	25.97
short 3	(½ page)	24	14	336	5.60
If no: RIS inquiry		7	21.5	150.5	2.51
Review CAPSS log for #		73	21.5	1569.5	26.16
Enter correct # on report		18	21.5	387	6.45
Enter correction RIS		5	21.5	107.5	1.79
Prepare copies of report with corrected #		1	21.5	86	1.43
Distribute copies		85	21.5	1827.5	30.46

	Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
Form 3b (Av. 3/day)				
Retrieve from transcription basket	included w/F 3's			
System Query to check case # correct	6	3	18	.30
If no: Review CAPSS log for case #	75	2	150	2.5
Stamp form in	2	3	6	.10
Make copies	7	3	21	.35
Mark distribution: distribute copies	6	3	18	.30
Distribute copies	77	3	231	3.85
Enter report ("3b") into RIS	4	3	12	.20
Put N # & indexed on report	5	3	15	.25
Interfile with 3's	26	3	78	1.30
Permanent Suspect Form				
Query RIS for case #	6	2	12	.20
If no: Call detective (infrequent)				
Enter suspect permanent & other info	3	2	6	.10
Time stamp form	1	2	2	.03
Mark indexed	3	2	6	.10
Make copies	5	2	10	.17
Mark copy as Record's	4	2	8	.13
Distribute original to Detective	80	2	160	2.67
File in upright by case #	30	2	60	1.0
Case Number Cards				
Retrieve cards from front counter				
Put cards in number order				
Throw away blanks				
File in drawers	15 min - T 1			15.0

(This process takes 20-30 minutes when cards come down from County Communications.)

MISSING REPORT PROCESS

Quality Control when report determined missing after receipt of F 3, 3b, or permanent suspect form or by citizen call-in.	Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
Run names in system (CRON, RIS)	5	5	25	.42
Identify IR from CAPSS log	108	5	540	9.0
Copy CAPSS log page	7	5	35	.58
Prepare form 202-59	90	5	450	7.50
Make copy of 202-59	26	5	130	2.17
Merge original 202-59 & copy CAPSS log	10	5	50	.83
Transmit original & copy log to BFO	62	5	3.10	5.17
Put copy 202-59 in tickler file	2	5	10	.17
Check tickler periodically to determine if report received	5	5	25	.42
If yes: Normal processing				
If no: Repeat 202-59 process	T = 3 min 15	195		3.25
If no again: Call supervisory sergeant	-	-	-	-

Missing Person (Form 3)

Bureau of Investigative generated:				
Enter Case # RIS to check accuracy	5	2	10	.17
If yes: Prepare and send copy CII	6	2	12	.20
Interfile original w/F-3's	15	1	15	.25
Information Center generated:				
Time stamp report	3	2	6	.10
Enter Case # RIS to check accuracy and F-2 presence	5	2	10	.17
If no: Check greenies for juv. or walkaway	300	1	300	5.00
Annotate report with findings	2	1	2	.03
Make copies for CII; Juvenile Div.	6	1	6	.10
Route copies	85	1	85	1.42
Afix N#	4	1	4	.06
Interfile w/F-3's	15	1	15	.25

Form 16 QC	Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
Verify distribution correct	14	42	588	9.8
If no: Mark distribution: make copies	61.5	42	2583	43.0
Stamp out last page	33	42	1386	23.1
Distribute copies				
Verify case # correct (visual comp.)	5	42	210	3.5
If no: Check CAPSS log:	86	2	172	2.87
Copy page of log	5	2	10	.17
Input RIS w/correction	17	2	34	.57
Check RIS took entry	7	2	14	.2
Pull copies; correct	76	2	152	2.5
Xerox new page for AIB	14	2	28	.4
Verify RIS entry correct (includes CRUT)	60	42	2520	42.0
If no: Input/correct RIS	23	3	69	1.1
Check RIS took entry	7	3	21	.3
If report under investigation:				
Duplicate face sheet	20	21	420	7.0
File sheet in susp. file	6	21	126	2.1
Put original report "under invest. file"	90	21	1890	31.5
Verify reports have no officer error	20	42	840	14.0
If error: Prepare kickslip BFO	48	3	144	2.4
Copy kickslip and facesheet	14	3	42	.7
Distribute	10	3	30	.50
Pull copies pending officer info: staple; distribute copies correction	300	3	900	15.0

	Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
If error is lack of cross street:				
Check CAPSS log for street; correct report	80	1	80	1.3
File reports suspense file	60	21	1260	21.0
Form 19 QC				
Verify distribution correct	14	19	266	4.4
If no: Mark distribution; make copies	82	2	164	2.73
Distribute copies	70	2	140	2.33
Verify case # correct (visual comp.)	6	19	114	1.9
If no: Check CAPSS log; change case #	86	2	172	2.8
Verify reports have no officer errors	20	19	380	6.3
If error: Prepare kickslip BFO	48	2	96	1.6
Copy kickslip and facesheet	14	2	28	.4
Staple; distribute	10	2	20	.3
If error is lack of cross street: Check CAPSS log for street	80	2	160	2.6
File reports by Case # in box	90	1	90	1.5
Type CN's of 16's-19's on list of #s T =	10 min	-	-	10.
Accident QC - Releases and Supplementary Reports				
Pull original reports from "hold" box	2.5	21	52.5	.9
CRUI case to screenface	8	21	168	2.8
Update RIS release info	19	21	399	6.7
Check for additional RIS info & input	83	21	1743	29.
Go to page 2 RIS mask (3 sec input; response time depends on RIS)	3	10	30	.5
Input referenced case present	16	2	32	.5

	Av. Time (sec.)	Units/ 24 Hrs.	Total Sec.	Total Min.
Mark supps for distribution, if necessary (5/day av.)	10	5	50	.80
Make copies of supps as necessary	105	5	525	8.75
Distribute copies of supps	30	5	150	2.50
Mark report indexed, if supp.	4	5	20	.33
Merge original into suspense file	120	21	2520	42.0
Pull copy (25 sec.); shred (20 sec.)	45	21	745	12.41
Photographs				
Count negatives, mark envelop & N #	60	4.9	294.0	4.9
Mark F-16 with quantity & N #	5	4.9	24.5	.41
File negatives	30	4.9	147.0	2.45

Records Index Response Time Study

Purpose of the study

It was the purpose of this study to systematize a sample of data on RIS response time to determine whether terminal time significantly impacts on report processing.

Methodology

Response times for processing police reports on computer terminals in the S.J. Police Department were analyzed as part of the ICAP report processing study. This study covered response time patterns and level of usage for five common query codes by hour of the day and day of the week. The period studied was one week, July 26 through August 1, 1979. The data source used was an edit program in RIS, titled "Teleprocessing Logtape Analysis, Systems Facilities Usuage." As this data is stored on microfilm, copies were reproduced on the microfilm printer to facilitate the recording of data. CRAI, the add code and CRUI, the update code were analyzed separately. Three case tracking codes, CRQN (Name), CRQI (Incident), CRQB (Business), were grouped and analyzed together. Graphs were developed which show response times and number of queries for each day of the week by hour of the day. Average response times and number of queries are shown on another set of graphs.

Findings

For RIS response by Hour by Day of the Week

CRAI (Add)

Response time:

Max. R/T = 8.9 min. at 2400 hrs. - Friday
Min. R/T = 0.2 min. at 0800 hrs. - Tuesday
Average R/T = 0.7 min.

Number of queries:

Max = 151 at 0600 Wednesday
Min = 0
Average - 34 per hr.

CRUI (Update)

Response time:

Max. R/T - 1.7 min. at 1800 hrs. - Monday
Min. R/T = 0.2 min. at 1700 hrs. - Monday
Average R/T = 0.6 min.

Number of queries:

Max. = 79 at 1500 hrs. - Tuesday
Min. = 0
Average - 21 per hr.

All CRQ's

Response time:

Max. R/T = 12.5 min. at 0600 - Tuesday
Min. R/T = 0.2 min. at 0400 - Thursday
Average R/T = 1.3 min.

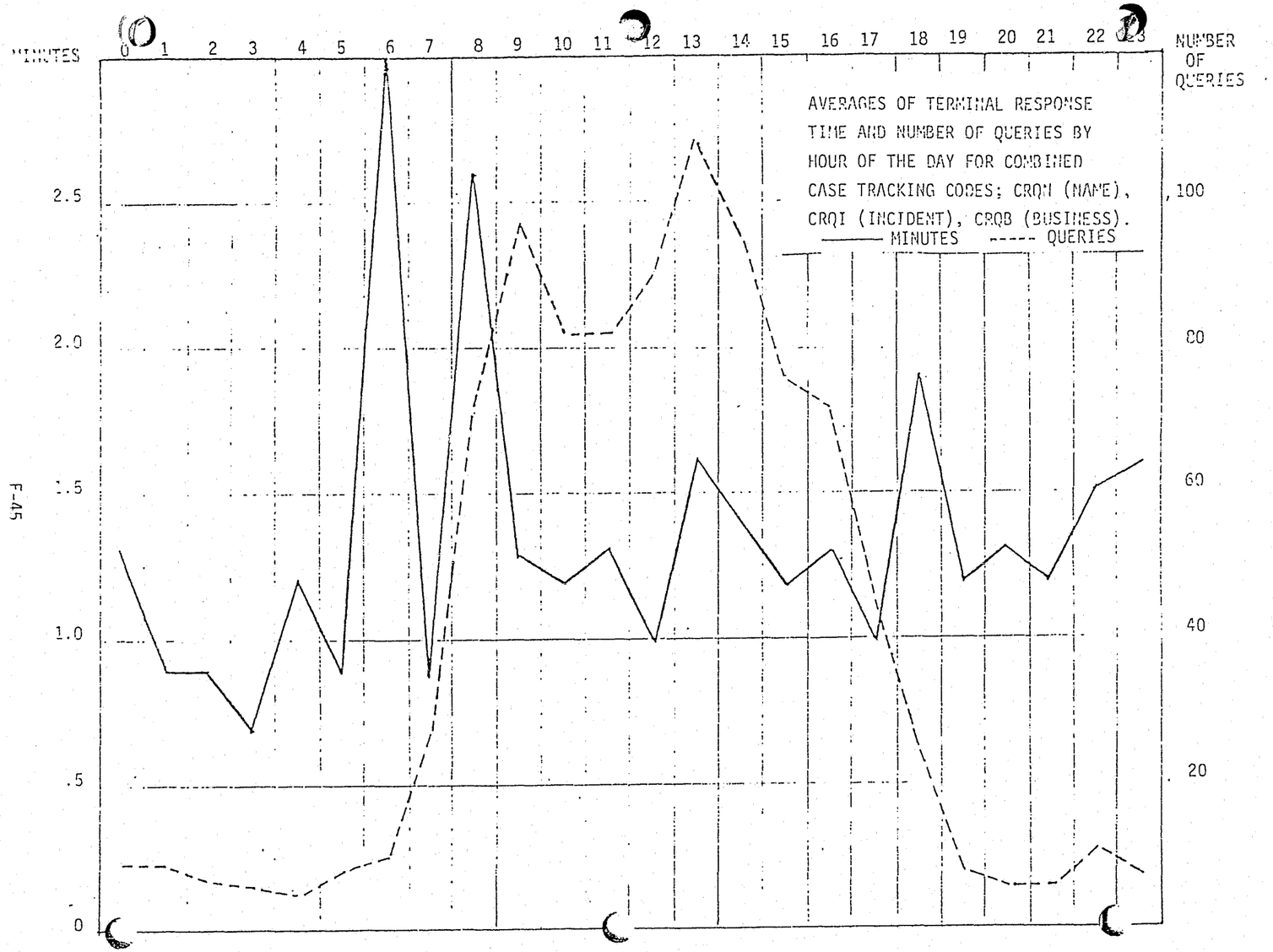
Number of queries:

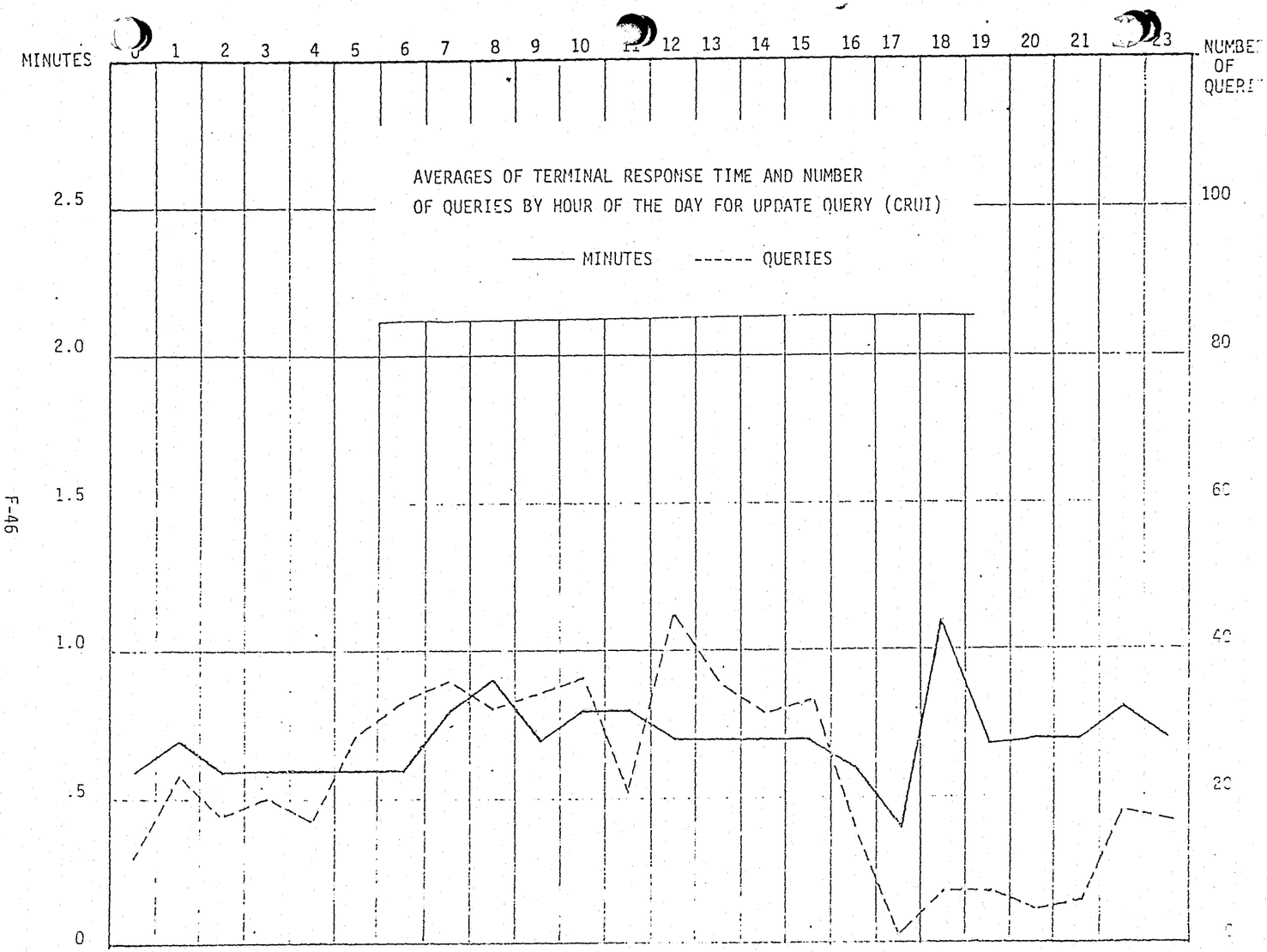
Max. = 208 at 1600 hrs. - Friday
Min. = 0
Average = 40 per hr.

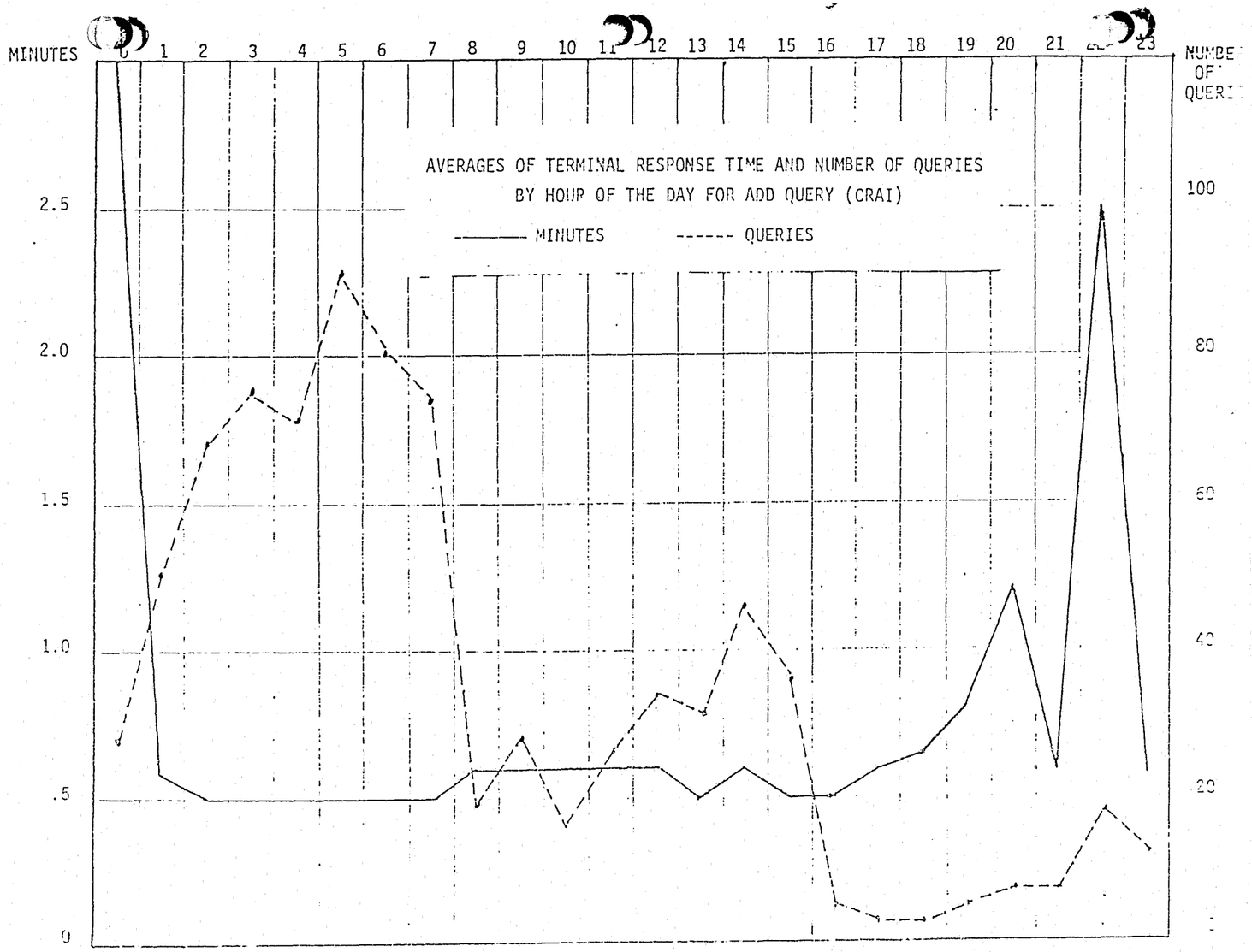
For all queries studied, response times between the hours of 0600 and 1800 appear longer than response times between 1900 and 0500. Response times for all CRQs, the case tracking codes, are significantly longer than for the Add and Update codes. Response times vary least for the update query with a range between 0.4 min. and 1.1 min.

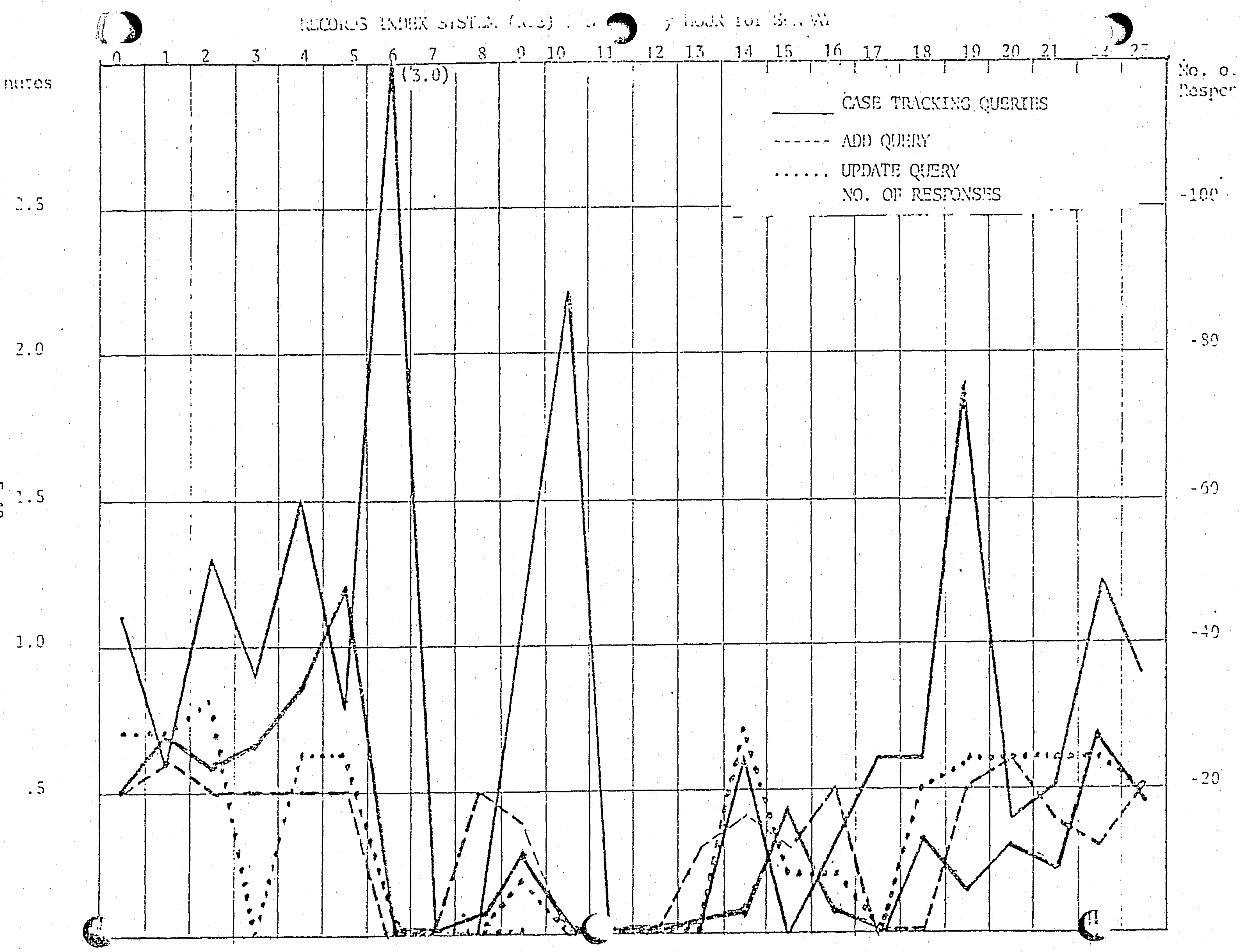
Usage is most clearly illustrated on the averages graphs. For the Add query usage is highest between 0100 and 0700. For the update query usage is up between 0600 and 1600. For case tracking queries most queries were made between 0800 and 1600 hours. All queries drop significantly in the evening and early morning hours.

It is unfortunate that understaffing and scheduling problems have prevented better use of terminals during these hours where response times are generally good. Also, terminals are underutilized on Saturday and Sunday when response times for the Add and Update codes, in particular, are quite satisfactory.

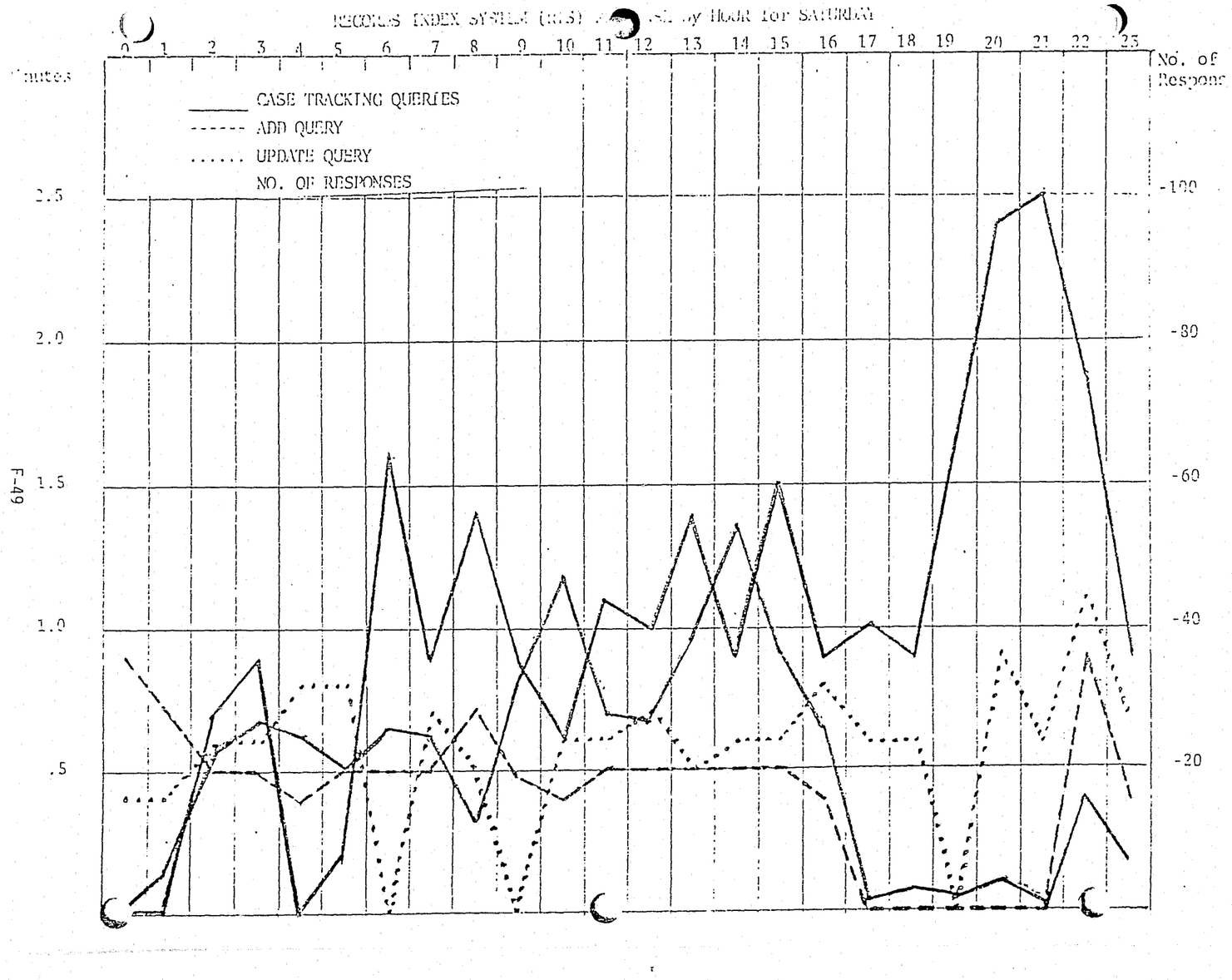

MINUTES
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
NUMBER OF QUERIES
AVERAGES OF TERMINAL RESPONSE TIME AND NUMBER OF QUERIES BY HOUR OF THE DAY FOR COMBINED CASE TRACKING CODES; CRQN (NAME), CRQI (INCIDENT), CRQB (BUSINESS).
MINUTES
QUERIES
2.5
2.0
1.5
1.0
.5
0
100
80
60
40
20


MINUTES
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
NUMBER OF QUERIES
AVERAGES OF TERMINAL RESPONSE TIME AND NUMBER
OF QUERIES BY HOUR OF THE DAY FOR UPDATE QUERY (CRUI)
MINUTES
QUERIES
2.5
2.0
1.5
1.0
.5
0
100
80
60
40
20
0

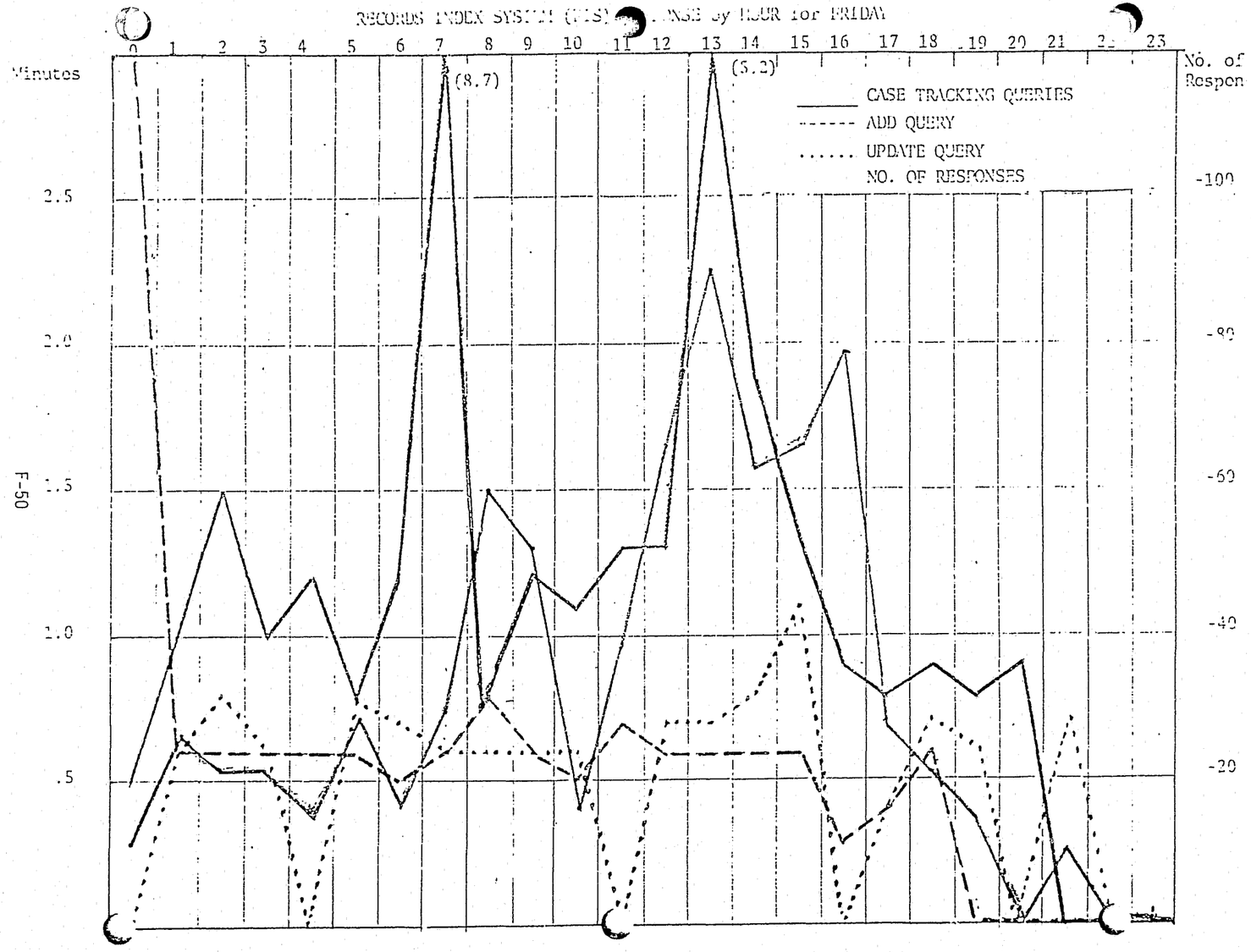

AVERAGES OF TERMINAL RESPONSE TIME AND NUMBER OF QUERIES
BY HOUR OF THE DAY FOR ADD QUERY (CRAI)
MINUTES
QUERIES
MINUTES
NUMBE
OF
QUERI
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
23
2.5
2.0
1.5
1.0
.5
0
100
80
60
40
20



(3.0)
CASE TRACKING QUERIES
ADD QUERY
UPDATE QUERY
NO. OF RESPONSES
2.0
1.5
1.0
.5
-80
-60
-40
-20
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

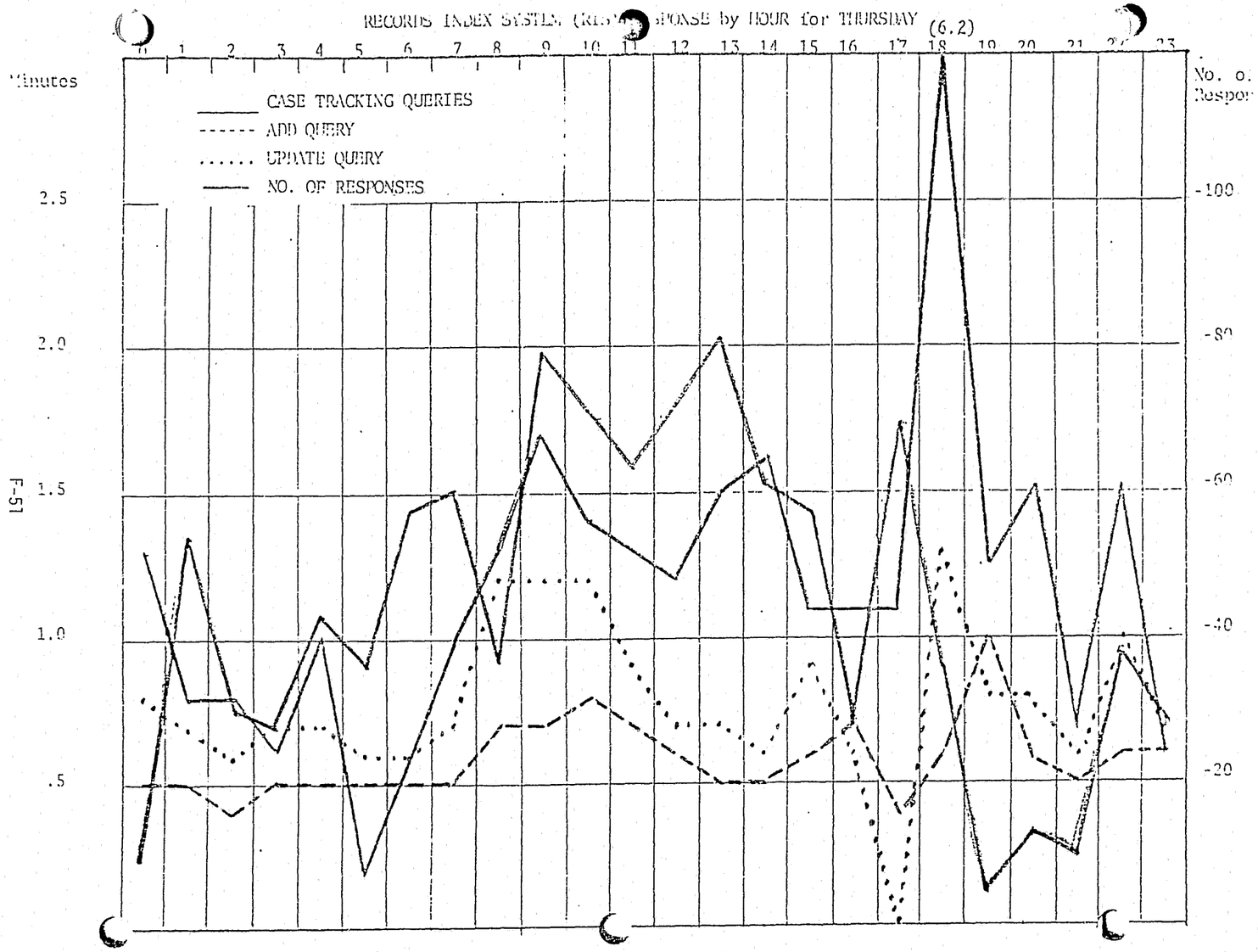

RECORDS INDEX SYSTEM (RIS)
Hour for SATURDAY
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
CASE TRACKING QUERIES
ADD QUERY
UPDATE QUERY
NO. OF RESPONSES
2.5
2.0
1.5
1.0
.5
-100
-80
-60
-40
-20

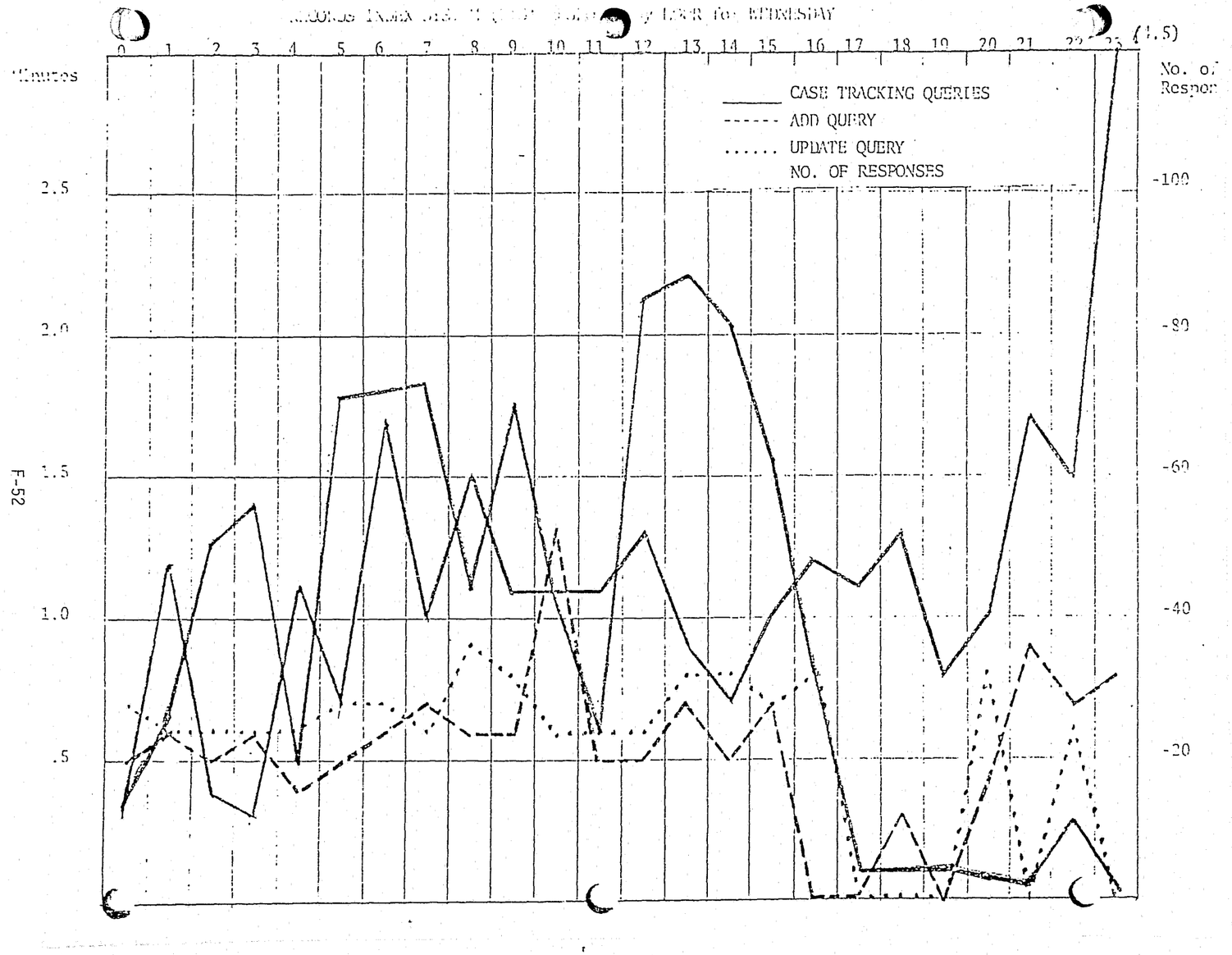
RECORDS INDEX SYSTEM (RIS) ... NSE by HOUR for FRIDAY

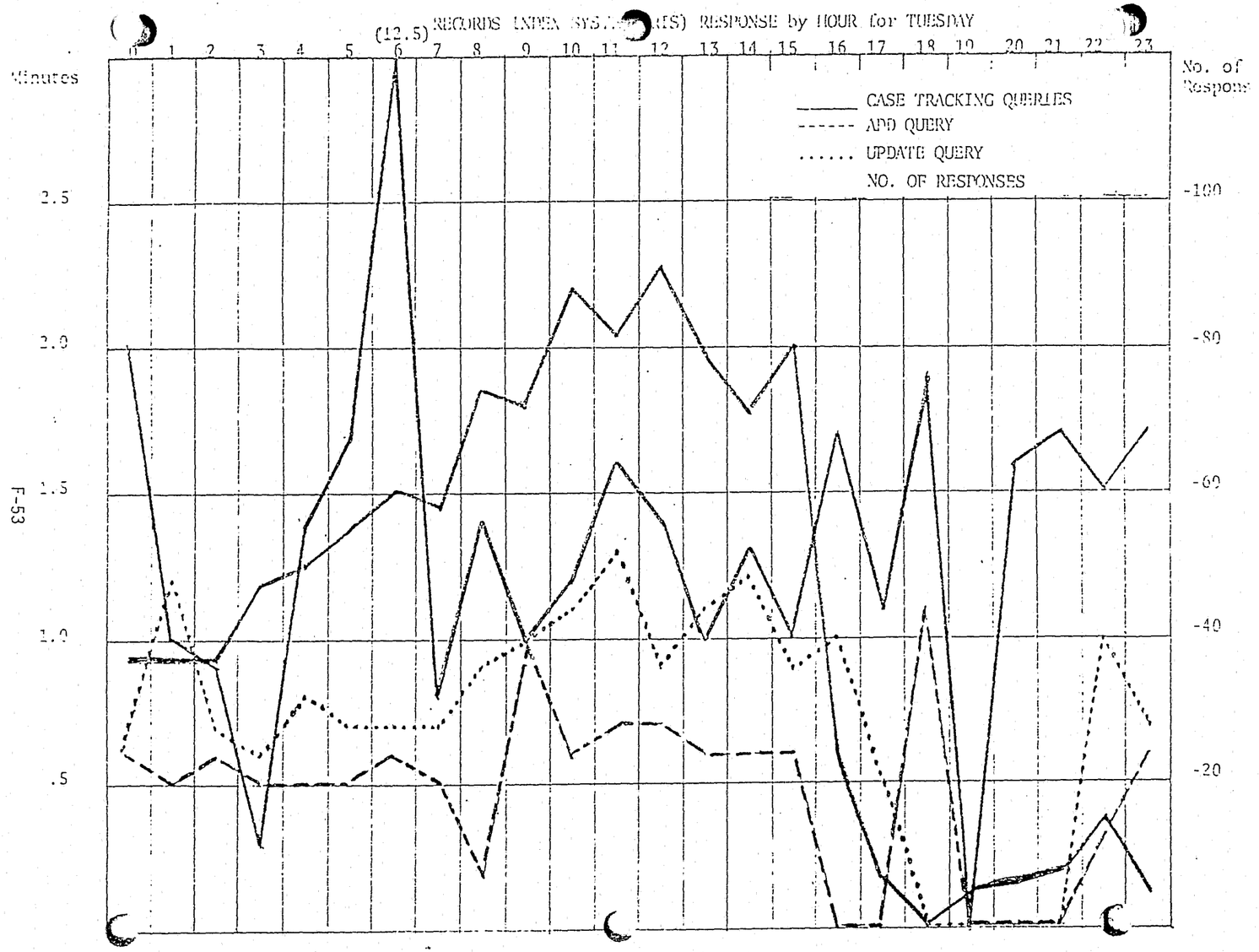


F-50

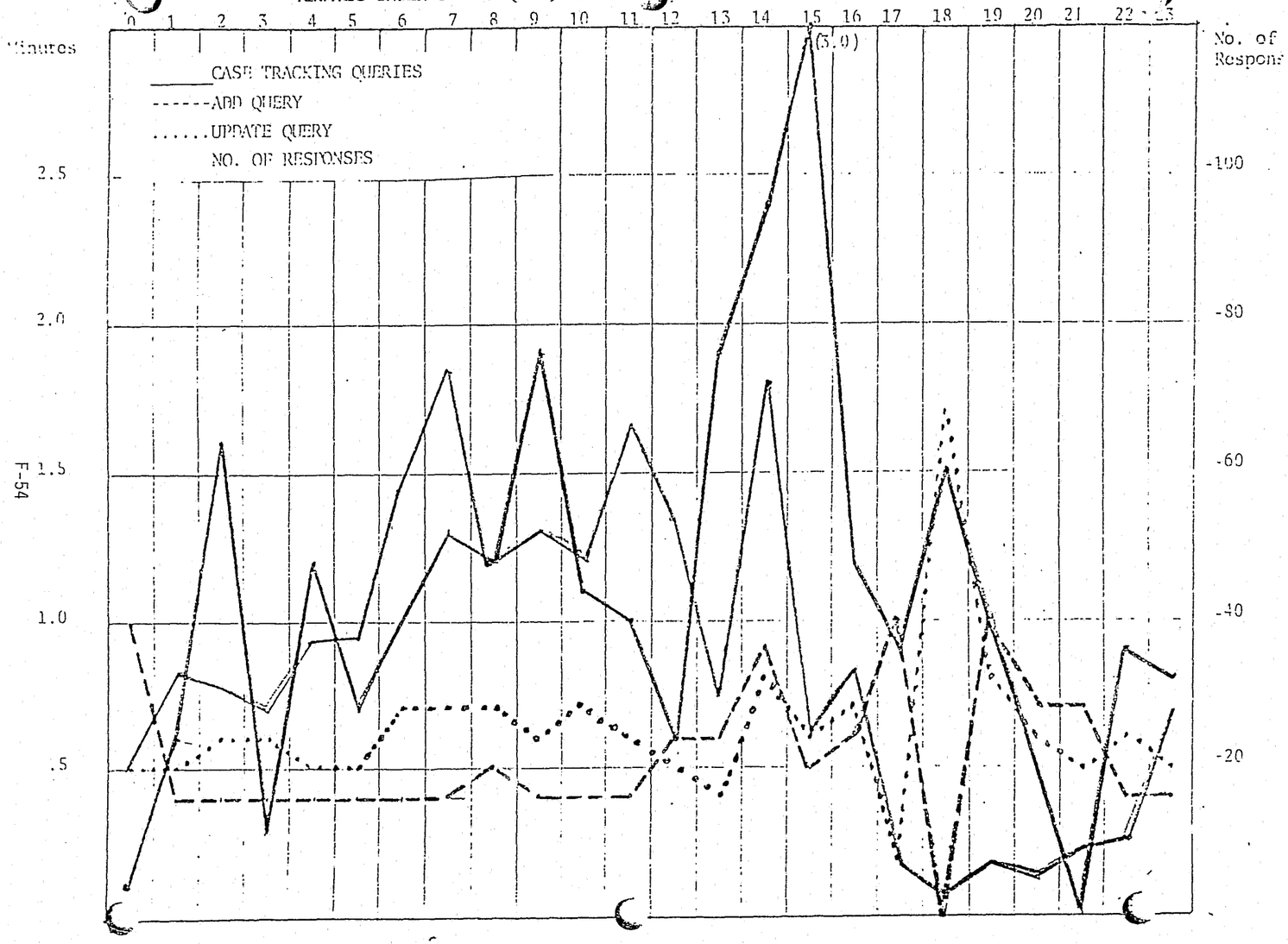
RECORDS INDEX SYSTEM (RIS) RESPONSE by HOUR for THURSDAY (6.2)




CASE TRACKING QUERIES
ADD QUERY
UPDATE QUERY
NO. OF RESPONSES
Minutes
No. of Respon
2.5
2.0
1.5
1.0
.5
-100
-80
-60
-40
-20
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21


RECORDS INDEX SYSTEM (RIS) RESPONSE by HOUR for TUESDAY
(12.5)
Minutes
No. of Respons
CASE TRACKING QUERIES
ADD QUERY
UPDATE QUERY
NO. OF RESPONSES
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
2.5
2.0
1.5
1.0
.5
-100
-80
-60
-40
-20

RECORDS INDEX SYSTEM (RIS) RESPONSE, HOUR for MONDAY



OPERATIONS SUPPORT UNIT

FLOOR SPACE ANALYSIS

NOTES ON FLOORPLAN ALTERNATIVES FOR RECORDS DIVISION

These are givens:

The minitrieve is stationary for now.
The pneumatic tube moves only 1-2 feet.
The transcription console is immobile and needs to be placed for rear access in case of repairs.
The safe will be moved out of the area.
Terminal 43 JA (SLETS) and SJ07 (CJIC) will be relocated in the Identification/Communications Section.
New terminals are to be installed in the corner where the day supervisor of Report Processing is located.
Space for the review, enrichment, and liaison functions in Operations Support must be designated at this time.
Space for Services must be reserved near the Teletype Room
Captain's secretary will remain in present location.

Alternative I:

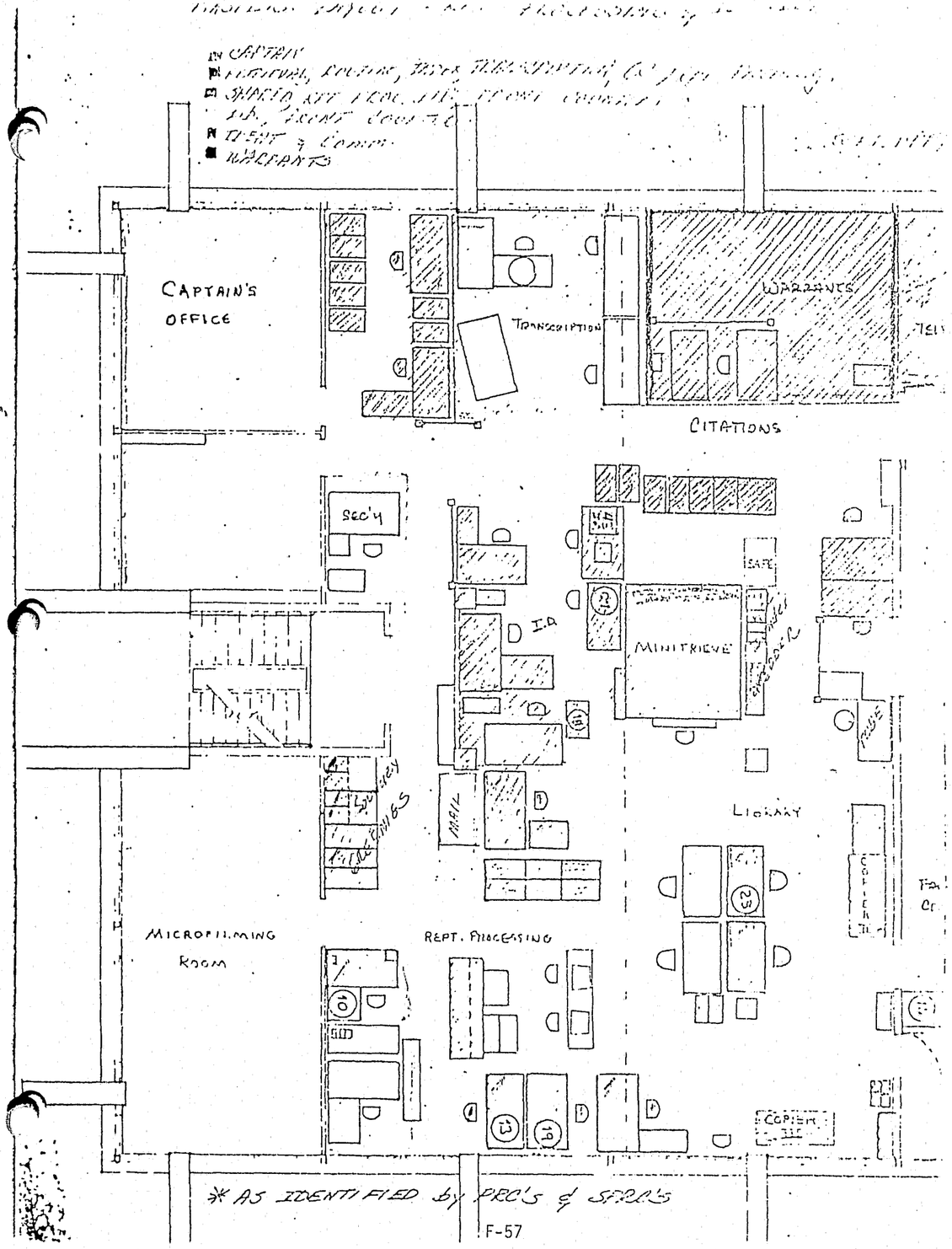
Pro's - Separates functional areas.
Minimizes cross traffic patterns.
Centralizes hard copy & historical documents for easy access and officer walk-in.
Centralizes terminal work space for report processing & enrichment functions.
Transcription isolated in quiet area.
Case review located near enrichment clerks, but not directly in terminal area.
Terminal SJ18 not too far from FI or liaison.

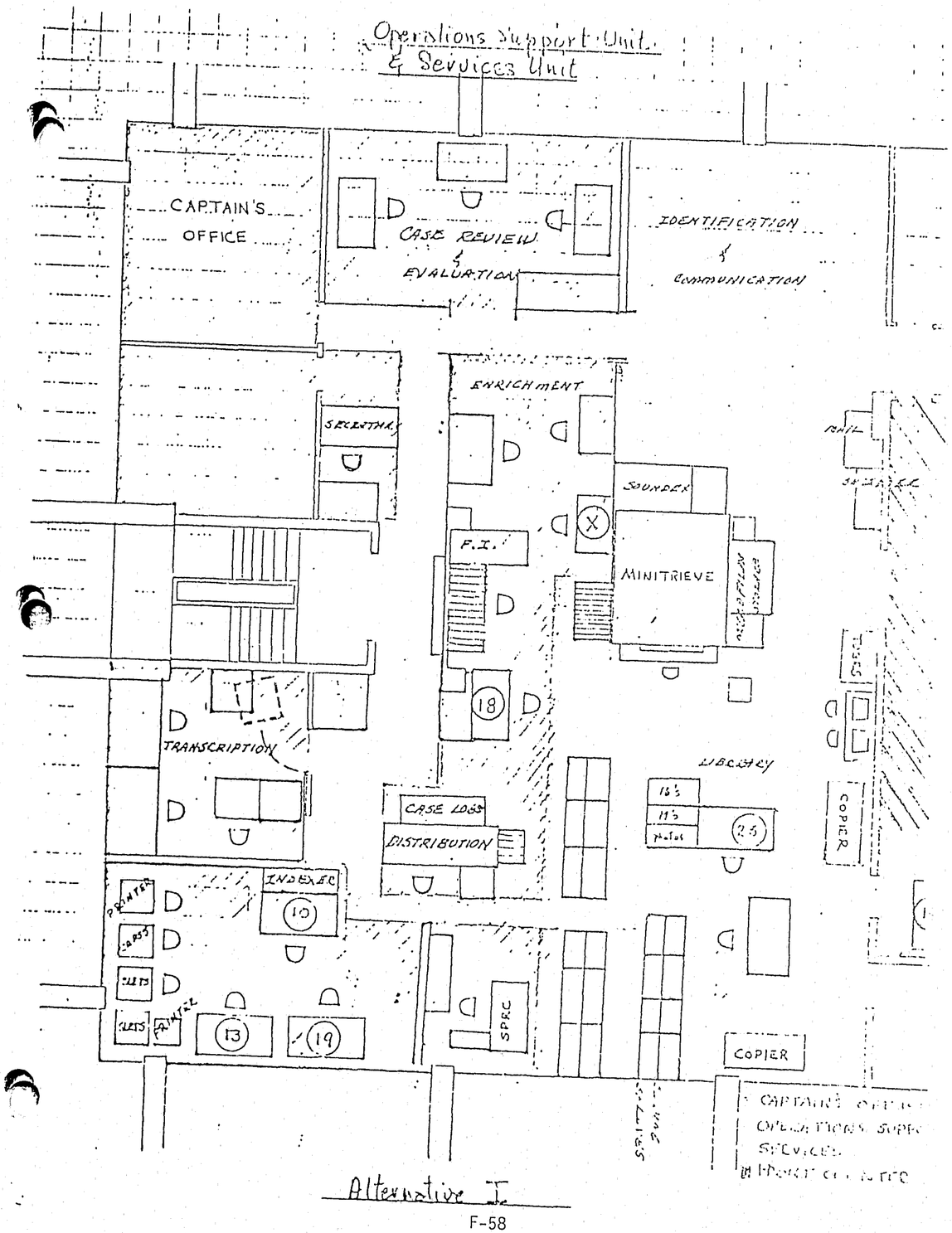
Con's - Terminal area somewhat removed from enrichment.
Distribution somewhat removed from copier.
Case control unit integrity violated by main passageway.

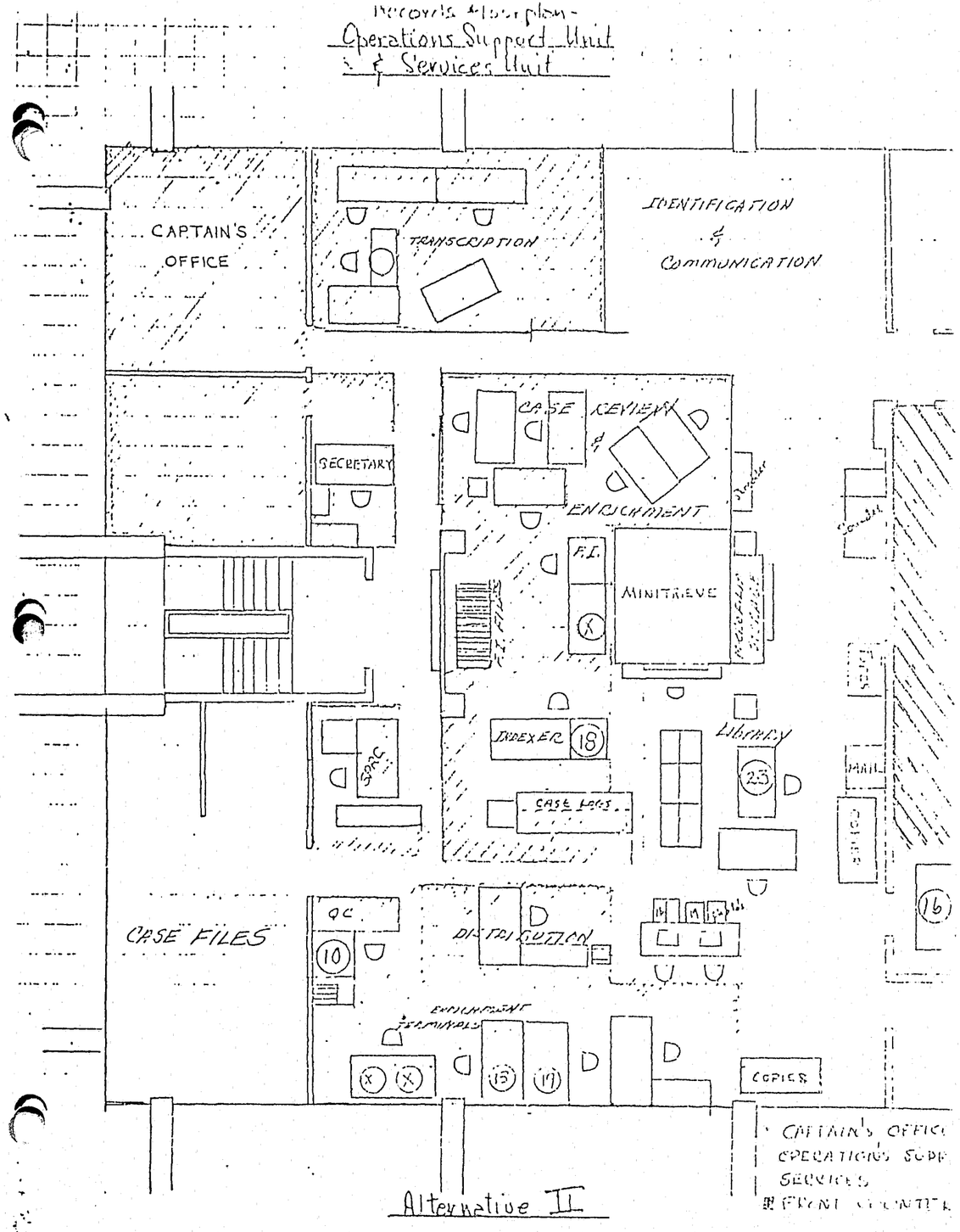
Alternative II:

Pro's - Attempts to separate functions geographically with files & historical documents.
Centrally located SPRC.
Expanded transcription space.
Case control unit integrity maintained.
Moderate change from current configuration.

Con's - Not adequate space for new terminals.
Wasted space in curtained area end of microfilm room.


CAPTAIN'S OFFICE
TRANSCRIPTION
WARRANTS
CITATIONS
SEC'Y
SAFE
MINITRIEVE
LIBRARY
MAIL
COPIER
MICROFILMING ROOM
REPT. PROCESSING
COPIER
* AS IDENTIFIED BY PEC'S & SPR'S


Operations Support Unit & Services Unit
CAPTAIN'S OFFICE
CASE REVIEW & EVALUATION
IDENTIFICATION & COMMUNICATION
SECRETARY
ENRICHMENT
SOUNDEX
F.I.
MINITRIEVE
TRANSCRIPTION
CASE LOGS
DISTRIBUTION
INDEXER
LIBRARY
COPIER
SPRC
Alternative I


Operations Support Unit
& Services Unit
CAPTAIN'S OFFICE
TRANSCRIPTION
IDENTIFICATION & COMMUNICATION
SECRETARY
CASE REVIEW & ENRICHMENT
F.I.
MINITREVE
INDEXER
18
LIBRARIAN
23
SPRC
CASE LOGS
MAIL
COPIES
16
CASE FILES
QC
10
DISTRIBUTION
ENRICHMENT
TERMINALS
15
17
COPIES
Alternative II

Forms

SAN JOSE POLICE DEPARTMENT - REPORT RECEIPT
201 W. Mission St., Records Division, San Jose, California 9511[illegible]

CASE NUMBER: ______________________ DATE: ______________

TYPE OF INCIDENT: ____________________________________

VICTIM: ____

OFFICER(S) ______________________ BADGE NO: __________

INSTRUCTIONS: Retain this report receipt! You will need this information for your contact with the San Jose Police Department, your insurance report and tax purposes. For three or more additional stolen items please report by mail using the above case number. To supply additional information concerning suspects, witnesses or victims phone the San José Police Department Information Center (277-5300). Under the joint powers agreement between the City of San Jose and the County of Santa Clara, for the purposes of investigation and victim assistance, information from your report may be entered into the Records Index System (R.I.S.)

INSTRUCCIONES: ¡Guarde este recibo del reporte! Usted necesitará esta información para cuando se comunique con el Departamento de Policía de San José, para el reporte de su seguro y para el reporte de sus impuestos. Para reportar tres o más artículos robados adicionales [illegible] el correo y referirse al número del caso. Para dar más información con respecto [illegible] testigos o victimas, llame al Centro de Información del Departamento de Policía de San José (277-5300). Bajo el acuerdo conjunto entre la Ciudad de San Jose y el Condado de Santa Clara, para propósitos de investigación y asistencia a las victimas, información de su reporte puede ser incorporada al Records Index System (R.I.S.).

200-45a 2/79

CHIEF OF POLICE

NOTICE TO VICTIMS & WITNESSES OF VIOLENT CRIME

FOR INFORMATION, ASSISTANCE, FORMS AND SERVICE, CONTACT:

The National Conference of Christians & Jews
Santa Clara County Victim Witness Assistance Program
777 N. First Street, Suite 620, San Jose, Calif. 95112
PHONE - 24 HOURS/7 DAYS A WEEK - (408) 295-2656

SERVICE AND ASSISTANCE ARE AVAILABLE TO:
- Help you meet your immediate needs
- Connect you with resources, services and care
- Guide you through the court process
- Facilitate the recovery of your losses

IN ADDITION TO THE ABOVE SERVICE,
You may qualify for cash payment to cover loss of income, medical and/or burial expense, and rehabilitation assistance from the State of California. Section [illegible] et seq. of the Government Code entitles California residents to such assistance if, as a direct result of a violent crime, they either:
- Sustained physical injury;
- Legally depended on the injured or deceased victim for support;
- Legally assumed or voluntarily paid medical or burial expenses of the deceased victim, and
- Suffered a pecuniary loss which cannot be recouped without suffering serious financial hardship

Claims must be filed with the State Board of Control for the State of California within one year of the date of the crime, except for certain extenuating circumstances.

AVISO A LAS VICTIMAS Y TESTIGOS DE CRIMENES VIOLENTOS

Para información sobre fondos publicos para asistir a las victimas pueden llamar al 295-2656

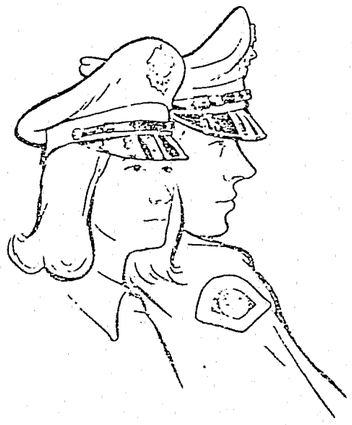
ORIGINAL REPORT RECEIPT USED BY PATROL OFFICERS

OPERATION IDENTIFICATION

The San Jose Main Library and its neighborhood branches have available to you on a free, two week loan, electric engraving tools which may be checked out at the circulation desk. We urge you to take advantage of this service, and etch your driver's license number or California identification card number on valuables.

The problem of ownership identity of stolen goods is widespread. Unidentifiable property is continually being recovered by police departments throughout the state. Without identifiable markings, most of these valuables cannot be returned to the victim/owner.

Remember, "Operation Identification" can help YOU get your stolen articles back. Take advantage of the program by visiting your nearest library and checking out these free engraving tools.



HOME OR BUSINESS SECURITY

Expert security advice can be yours at no cost. Just call and make an appointment with our Crime Prevention Unit. We will conduct a home or business security survey and advise you on ways to make your property less vulnerable to crime. No method is foolproof, but there are techniques you can employ to discourage the would-be intruder. You are in no way obligated to buy expensive devices, but may choose or pass on any or all of the suggestions made. There are many things you can do that cost you nothing.

By request, "Home Alert" meetings are conducted in neighborhoods to inform citizens of security techniques and to encourage cooperative crime prevention efforts such as informing police of suspicious persons or vehicles. Remember, your interests are our interests, and through mutual aid, we can defeat the intruder.

For information contact . . .

SAN JOSE POLICE DEPARTMENT

Crime Prevention Unit

277-4133

JOSEPH D. MC NAMARA
Chief of Police

SAN JOSE POLICE DEPARTMENT

INFORMATION BULLETIN

for the

CRIME VICTIM

IN[illegible]ATION FOR A BURGLARY VICTIM

The officer who took the initial report of your case will file the report at Police headquarters. Your case has been assigned a case number to which you should refer when making inquiries.

Your case number is _____ .
At present, your case is classified as:

☐ "Open, active."
If you have additional information or need to inquire concerning the progress of your case, please call the Burglary Investigation Unit at 277-4401, Monday through Friday, 9:00 a.m. to 5:00 p.m.

☐ "Open, but inactive."
At this time, it appears your case has limited potential evidence for solvability. Be assured every report of a burglary is reviewed by officers concerned with this type of crime and every possible investigative step is taken to identify those responsible for the burglary and to recover your property. If you have additional information from your own observations, from neighbors or others who may have witnessed any suspicious activity in the vicinity, please call the Victim Services Officer, 277-5428 Monday through Friday, 9:00 a.m. to 5:00 p.m.

Each case is important and we will give your case as much consideration as possible. Please be advised you will ordinarily not be contacted unless we need further information, new information has come to our attention, or we have solved your case. The following procedures are utilized in developing investigative leads which may result in the solution of a crime.

ACTIVE AND INACTIVE PROCESSES

- All crime reports are entered into the Police Department's automated Records Indexing System. This system and other state and national systems are queried continually to discover crime patterns; similar crime operations concentrated in particular geographic areas or having distinctive characteristics such as method of entry, type of articles stolen, anything left at the crime scene, etc.
- Arrests of criminals made by the San Jose Police Department or other agencies are closely checked to see if they could be responsible for your offense. Their fingerprints are checked when applicable.
- All serial numbered items are entered into a statewide computer.
- Very valuable items are entered into a national computer. This applies to stolen articles valued at $5,000 or more or coupled with more serious crimes such as murder, rape, and federal violations.
- Teletypes are sent out to other agencies where the items stolen, or the supsects, if known, can be identified.
- Local pawn records are checked periodically.
- Teletypes from other agencies are checked daily.
- Property held by this department or other departments is closely checked in an effort to return it to the legal owner.

YOU HAVE A RESPONSIBILITY TO . . .

- Make every effort to obtain any serial numbers of articles stolen.
- Keep the Police Department advised of any information you may learn that will be of assistance to the investigation.
- Make sure that you list all stolen items in your report as accurately as possible so that officers of this agency or any other police agency receiving our teletypes will have the best possible description of your property.
- If the return of your property, or prosecution of the offender, are important to you, you must keep your police department notified of any change of address you may make.

OTHER POINTS TO CONSIDER

- Take measures to make yourself, your house, apartment, or store, more secure against future attacks or intruders. Consider marking your valuable items with your driver's license number or California identification card number.
- Record serial numbers of items and keep them in a safe place.
- Place valuable items such as jewelry in a safe deposit box.

Keep in mind that your police department will make every effort to locate your property and/or arrest the offender, but officers must rely on you to supply the most accurate and up-to-date information available.

SAN JOSE POLICE DEPARTMENT
OPERATIONS SUPPORT UNIT
WORKSHEET
(O.S.U. Ext. 5428)

ASSIGNED UNIT:

ASSIGNED INVESTIGATOR:

FINAL B.I.S. DISPOSITION _____

___ ACTION
Note checked items/comments
Return corrected forms within ___ days
___ INFORMATION ONLY

QUALITY REVIEW

ATTENTION: _____ ROUTE TO: _____

1. Crime Type/Elements _____
2. Beat/Location _____
3. Case No. _____
4. Names/Descriptor: V, W, RP. _____
5. Names/Descriptor/Suspect/Arrestee _____
6. M.O. Section _____
7. Time Elements _____
8. Property/Evidence _____
9. Missing Reports Needed _____
10. Narration _____

COMMENTS: _____

I.D. No. _____

CASE ENRICHMENT

INQUIRY CODE	ATTACHED	INQUIRY CODE	ATTACHED

TELETYPES REQUESTED FOR: _____

COMMENTS: _____

SOLVABILITY ELEMENTS

ACTIVE ☐ INACTIVE ☐

CE	RPT		CE	RPT	
		SUSPECT(S)			PROPERTY LOSS
		1. Suspect(s) in custody?			11. Property locatable with reasonable follow-up?
		2. Suspect named or namable?			
		3. Suspect identifiable, describable or locatable?			PHYSICAL EVIDENCE
		WITNESS(ES)			12. Evidence technician involved?
		4. Witness with pertinent knowledge of suspect(s)?			13. Significant physical evidence?
		SUSPECT VEHICLE(S)			14. Useable/comparable prints?
		5. License number obtained?			15. Weapon(s) used?
		6. Registration available and useable?			
		7. Vehicle identifiable, describable or locatable?			M.O.
		8. Vehicle traceable to suspect(s)?			16. Specific M.O. identified?
		VICTIM(S)			
		9. Victim(s) attacked by suspect(s)?			OFFICER RECOMMENDATIONS
		10. Major impact on community concern?			17. Follow-up recommended?

NOTE: SEE OTHER RELATED CASE(S):

COMMENTS: _____

REVIEWED BY: _____ I.D. NO. _____

(FOR CITIZEN CONTACTS SEE OTHER SIDE)

CASE NUMBER: _____

INVESTIGATOR COMMENTS: _____

VICTIM/WITNESS CONTACT INFORMATION

Circle: V=Victim W=Witness RP=Reporting Party

Last First M.I.

V W RP _____

Address _____ Ph _____

Bus. Address _____ Ph _____

Foreign language needed? Yes No Type _____

Reason for contact/notes: _____

I.D. No. _____ Name _____

TYPE OF CONTACT:	DATE	REPORT
☐ In Person		
☐ Ph. Citizen Initiated		
☐ Ph. OS Initiated		
☐ Ph. Inv. Initiated		
☐ F/U Letter		
☐ Prop. Release		
☐ Case Status Change		
☐ _____		

Last First M.I.

V W RP _____

Address _____ Ph _____

Bus. Address _____ Ph _____

Foreign language needed? Yes No Type _____

Reason for contact/notes: _____

I.D. No. _____ Name _____

TYPE OF CONTACT	DATE	REPORT
☐ In Person		
☐ Ph. Citizen Initiated		
☐ Ph. OS Initiated		
☐ Ph. Inv. Initiated		
☐ F/U Letter		
☐ Prop. Release		
☐ Case Status Change		
☐ _____		

COMMENTS: _____

APPENDIX H

DISTRICT/BEAT RESTRUCTURING PROJECT

BEAT RESTRUCTURING PROJECT

M. R. "Bud" Bye

ICAP Grant

Elba R. Lu

Operations Support Unit

SAN JOSE POLICE DEPARTMENT

SAN JOSE, CALIFORNIA

March 16, 1981

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I. PURPOSE

The primary purpose of the Beat Restructuring Project was to review the existing forty-three beat configuration and, if the need was identified, to devise an improved beat plan for implementation in January 1981. The secondary purpose was to develop the necessary methodology and provide sufficient documentation to facilitate future projects of the same nature.

II. BACKGROUND

In the San Jose Police Department, the most common and well-known reporting area is the police beat. Patrol officers are assigned to beats and the beat number is captured in most documents generated by the Department. A police district is composed of several beats; a beat, in turn, is composed of several BBB's (Beat Building Blocks).

In 1973, the basic BBB map was developed by experienced Bureau of Field Operations personnel, using natural boundaries such as rivers, railroad tracks, and major thoroughfares, and taking into account personal knowledge of neighborhood characteristics to form neighborhood clusters. Initially, two hundred forty-eight BBB's were devised; these were then revised and finally grouped into a forty beat structure. In 1975, three of the forty beats were subdivided to allow for increases in population and police workload. In 1976, in preparation for the implementation of an automated geo-reference file as part of the CAPS (Computer Assisted Public Safety) system and to facilitate demographic analyses, the BBB's were further split into a total of three hundred thirty-six blocks that stayed within Census Tract boundaries. The forty-three beat configuration remained unchanged from 1975 until 1978, when beats were regrouped from seven into eight districts without altering beat boundaries. The purpose of re-districting was to equalize the District Sergeants' span of control in addition to placing all of the downtown area within one district.

In summary, the initial forty beat structure developed in 1973 has remained basically unchanged for the past seven years except for the subdividing in 1975 of three peripheral beats to allow for population growth. In the meantime, the Department has handled workload increases and changing demands for police services by re-districting, adjusting work hours, prioritizing calls, diverting calls to an Information Desk, and utilizing computer modeling and proportional manning methods to deploy patrol officers. The management philosophy that has evolved is that, in order to preserve area identification and continuity, beats should be designed for the long term, with fairly equalized workload demands but with allowances for size of area and remoteness and considerations of neighborhood integrity. Short-term adjustments such as day-to-day, shift-to-shift, and other changes in workload demand are reflected in manpower allocation plans, which are currently revised every six months.

III. CONSTRAINTS

If the Beat Restructuring Project identified a need for a new beat configuration, the only specific management constraints, based on realistic expectations of future personnel resources, were that the new plan require no more than nine districts and no more than fifty beats. This direction, originally based on a management judgement, was later reinforced by analysis.

In addition, it was decided from the onset of the project, that the project staff would work closely with Bureau of Field Operations personnel and with County Communications. The input from the Bureau of Field Operations would insure that plans were operationally sound and feasible; the input from County Communications would insure that plans incorporated radio channel coverage considerations. Any plan submitted to management would have to have the prior approval of the Bureau of Field Operations.

IV. REVIEW OF EXISTING BEAT STRUCTURE

A. OBJECTIVE

The objective of reviewing the existing beat structure was to document any significant imbalances and problems in order to facilitate the decision regarding whether or not a new beat structure was necessary.

B. METHODOLOGY

Review of the existing forty-three beat configuration consisted of:

1) a brief review of changes in population, area, and crime statistics from 1975 to 1979.

2) analyses of workload, response times, queuing of calls and cross-beat dispatching.

3) interviews with patrol personnel to field problems such as elongated travel times, difficult-access areas, isolated neighborhoods, and lack of neighborhood integrity.

The data sources were official FBI statistics, SJPD Annual Reports, SJPD Demographic Data Books, and CAPSS dispatch records for a 52-week period encompassing from 9/17/78 to 9/15/79. For additional documentation, including file layouts and computer programs, please see Appendix A - Technical Documentation: Review of Existing Beat Structure.

C. RESULTS

1. Population, Area and Crime Statistics from 1975 to 1979.

As explained in the Background section, the existing forty-three beat configuration has remained basically unaltered since 1975. Between 1975 and 1979, the City of San Jose has experienced a population growth of 9% or approximately 50,000

persons. Population density (i.e., persons per square mile) has also increased by 4% or by approximately one hundred fifty additional persons per square mile. Many studies have pointed out the high correlation between population density and crime rates. San Jose has been fortunate in experiencing a reduction, albeit a very slight one, in the number of actual reported offenses per thousand population from one hundred twenty-five to one hundred twenty-three in spite of increased population density; however, the nature of the offenses has been changing to include an ever-increasing number of violent felonies, up 71% from 1975 to 1979, which require considerably more patrol and investigative resources than property crimes.

Exhibit 1 displays the city-wide comparative statistics on population, area and crime as cited above. Comparisons on patrol workload in terms of calls for service per hour, actual field strength versus calls for service, or consumed time versus free patrol time would have been desirable, but data was unfortunately not available for 1975. It was also felt that comparing authorized field personnel would be misleading, since actual field strength can fall very short of the authorized number of personnel due to vacancies and long-term disabilities. In July 1980, for example, only 319 out of 407 patrol officer positions were currently filled. It is therefore highly recommended that the Department maintain accurate, systematic statistics on actual field strength, hours worked, consumed time, free patrol time, and number of events handled; evaluation of different beat structures and deployment strategies would be greatly assisted. Much of the information is produced routinely, and thus the cost of maintaining such documentation would be minimal.

While the city-wide changes from 1975 to 1979 were relatively modest, the changes at the beat level fluctuated widely, as seen in Exhibits 2 and 3. Exhibit 2 displays the changes in population by beat, which ranged from an increase of almost 50% in Beat 38

to increases of less than 1% in Beats 24, 25, 52, 75 and 76. Beat 25, with a loss of almost 30%, was an anomaly due to the de-annexation of the western-most part of the City. In terms of sheer numbers, Beat 64 increased by over 7000 persons while Beat 75 increased by less than 50.

Exhibit 3 show the changes in reported offenses by beat, which ranged from an increase of over 110% in Beat 11 to a decrease of almost 16% in Beat 12. Beat 35 increased by the most number of reported offenses (over twelve hundred) while Beat 16 decreased the most (over three hundred).

The picture that emerges from an analysis of Exhibits 1 - 3 is therefore that of a fast-growing city, with population increasing faster than area, and with extremely wide differences in population and crime changes at the neighborhood or beat levels. These large shifts in population and reported offenses mean that demand for police services have also shifted significantly within the city boundaries.

2. Workload, Response Times, Queuing of Calls, and Cross Beat Dispatching.

As expected from the shifts in population and crime, an analysis of calls for service (Priorities 1-4) revealed severe disparity in workload at the beat and district levels. Exhibit 4 shows the number of calls for service (CFS) by beat during the 52 week period; CFS ranged from 2375 per year in Beat 13 to 6765 in Beat 76. Exhibit 5 displays the number of CFS by district; CFS ranged from 19,978 per year in District 2 to 31,989 in District 7.

The Department has corrected for these disparities by reallocating patrol personnel proportionally every few months. This process has provided a capability to respond to CFS levels and maintain average response times to priority 1 and 2 incidents within desired limits. However, addressing CFS disparities only by proportional staffing at the officer level has created a span of control problem at the supervisory levels. For example, field supervisors in

District 2 span four to seven officers; supervision in District 7 span six to nine officers and, since District 7 is a training district, the span of control can double when trainees are graduated from academy classes.

In addition, while city-wide average response times were within desired limits, response times to different parts of the city differed significantly. As shown in Exhibit 6, the city-wide average for Priority 1 CFS was 5 minutes and 7 seconds; however, the average for Beat 25 was 7 minutes and 53 seconds while the average for Beat 34 was only 3 minutes and 31 seconds. Priorities 2 and 3 show similar wide ranges in average response times. Similarly, Exhibit 7 displays an analysis of queued calls which reveals even greater disparities. For example, the desired average response time for Priority 2 CFS is 10 minutes; city-wide, 34% of Priority 2 CFS had to wait longer than 10 minutes, but at the beat level, 52% of the Priority 2 CFS in Beat 67 had to wait longer than 10 minutes compared to only 17% of the Priority 2 CFS in Beat 72.

An analysis of cross-beat dispatching (dispatching a unit other than the beat car to a given beat) during the 52-week period was conducted after excluding traffic events, since policy on dispatching on traffic events was not consistent during the study period. The data is displayed in Exhibit 8. Considering both primary units and fill units, Beat 56 had the least amount of cross-beat dispatching (44%); i.e., 56% of the time, the beat car handled the assignments in Beat 56. In contrast, Beat 13 was assigned a car other than the beat car 76% of the time; i.e., 24% of the time the beat car handled the assignments in Beat 13. The large percentage of cross-beat dispatching (62.4%) is a symptom of imbalanced beats and workloads; the imbalance creates a vicious circle in which a relatively light beat must furnish its beat car to other beats and then must borrow an outside beat car to service its CFS, hence

extending travel times and therefore response times.

In general, the analyses revealed severe imbalances in workload, response times and queuing of calls as well as a high degree of cross-beat dispatching.

3. Interviews with Patrol Personnel

Project staff conducted a series of meetings with patrol supervisors during which the supervisors were asked to identify tactical or response problems with the existing district/beat structure. Meetings were scheduled during working hours of each shift and repeated for each "half" of the work week so that availability was maximized.

PROBLEMS IDENTIFIED:

a) District 3: Beat 35 was identified as being excessively large and heavy in workload. This problem is compounded by Eastridge and the development of Lake Cunningham Park.

b) Beat 36 north of Story Road was identified as being a tactical problem because of limited access from the south from where the district's units normally respond.

c) Beat 38 was identified as an access problem which will compound as residential development continues during the 1980's.

d) District 4: District/beats and radio channel assignments were no longer oriented to the Willow Glen community; it was fragmented by three districts on three radio channels.

e) District 5: The extreme length of this district and the remoteness of the Alviso community was viewed as a substantial problem. Industrial development is heavy in the southern area of the Alviso Beat. Reduction of the north-south length of this district by re-attaching Alviso to the District 1 area was suggested.

f) District 7: Portions of the district which lie east of Hwy. 101 and south of I280 were identified as being tactical problems.

They have limited access from the interior of District 7 (freeway crossings only) which isolated them from the main part of the district and its assigned team(s). District 7 teams were the only operators on the assigned radio channel (SJ 9) which compounded the geographical isolation problem with a communications problem; all district teams bordering the areas in question were normally on other radio channels.

g) District 8: The southern boundary of the district where it meets District 6 was identified as a tactical and communications problem. The assigned radio channel (SJ 3) was not designed to serve the area south of the ridgeline defined by San Ramon, Skyway, and Blom Drives, however no BBB boundary existed which would provide for the use of the subject ridgeline as a district and channel boundary. Access to streets from Skyway north is from the north (D-8); access to streets south of Skyway is from the South (D-6). District 8 units which crossed the ridgeline to reach the southernmost area of their district were forced to change radio channels.

Meetings with GSA-Communications managers revealed channel overload problems on SJ 1 (D-1 and D-3) and SJ 4 (D-4 and D-6). Their view was that these pairings should be changed as soon as possible.

D. CONCLUSIONS

Analysis of the existing beat structure revealed severe imbalances in terms of population, crime, patrol workload, response times, queuing of calls, and cross-beat dispatching. Specific problems were pinpointed by Bureau of Field Operations personnel which could not be addressed with the existing beat structure. It was therefore concluded that a revised beat structure configuration was necessary.

V. DESIGN OF NEW BEAT STRUCTURE

A. OBJECTIVES

The design of the new beat structure had the following objectives:

1. To establish the number of beats which the Department can reasonably expect to staff during the expected life of the plan (approximately 5 years).
2. To reduce the imbalance of calls for service at the beat and district levels.
3. To reorient districts and beats to communities and street layouts in order to provide a more effective police response to people and places needing services.
4. To have a positive impact on response times, cross-beat dispatching, radio operator workloads, and supervisory spans of control.

B. METHODOLOGY

The first step in the design of the new beat structure was to establish the maximum number of beats that the Department could reasonably expect to staff during the next five years. In order to do this, several factors were taken into account: the percentages of actual strength required to staff proportionately by watch or shift, the fact that there were twenty special assignments such as parks and walking units, the Department's policy of assigning a minimum of eighty positions to the third watch (midnight shift) for officer safety considerations, and an estimated 25% absenteeism factor which includes vacations, sick leave, disability leave, and court appearance. The results are shown in the next section.

Before any analyses or beat designs could be attempted, a geo-coded data base was necessary. The same data used in the review of the existing beat system was passed against a geo-reference file in

order to append BBB (Beat Building Block) and state-plane co-ordinate information; any rejects were geo-coded manually. The resulting data base encompassed the 52-week period from 9/17/78 to 9/15/79 and consisted of 190,326 dispatch events. For additional documentation on file layouts and the geo-coding process, see Appendices B and C.

Once the data collection phase was over, a project team was established consisting of sworn officers, civilian analysts and appropriate support staff. The sworn and civilian staff worked in parallel: the sworn staff would design different alternatives based on statistical data and their specialized knowledge of the city and police problems, while the civilian staff analyzed the various alternatives and fed them back to the sworn officers. The process flow is depicted in Exhibit 9.

Most of the beat design was accomplished by manually drawing boundaries on map overlays. A parallel mapping effort was carried out with the assistance of the City's Information Systems on the newly-acquired computer graphics system. Due to the tight timelines of the project and the need to digitize a very detailed base map, the automated maps were not available for use in time to eliminate the need for manually-created maps. The parallel mapping effort served, however, to validate results, to produce a base map which will be very useful, and to create small-scale maps for dissemination; the effort also served to pave the way for a powerful new tool that can be used efficiently in the future. The computer graphics system also produced summary reports that were used to check statistical analyses carried out using SPSS (Statistical Package for the Social Sciences) software.

The initial statistical analysis consisted of aggregating CFS (calls for service) at the BBB level in order to provide the sworn officers with a measure of workload to aid them in beat design. A base map was drawn with BBB boundaries and CFS information.

Each alternative was then drawn on a map overlay. One advantage of this process was that sworn officers increased their awareness concerning inherent access problems as well as particularly busy areas; as a result, the number of feasible combinations was greatly reduced and only ten different alternatives were initially designed. A second advantage of performing the first preliminary designs manually was that it provided a way of eliciting additional input from other patrol officers who stopped by the work area.

While the preliminary design process went on, the question of how to choose the best design was addressed. Analysis using the Hypercube Model could provide a number of useful performance measures, and it was decided to use the model as part of the design process. However, some of Hypercube's constraints, such as the maximum number of atoms or BBB's that could be analyzed at one time and assumption that all cars are available to any call unless busy, violated the Department's established policies. Inputting a great number of combinations into the model was also very time-consuming. For these reasons, it was finally decided to use the Hypercube Model toward the end of the process, when fewer alternatives would be under consideration and beats were being grouped into districts and districts into radio channels. Until the model could be used, it was desirable to have an intermediate process that would allow comparison among the various alternatives in a quantifiable manner.

In order to accomplish this, a new data file was created which consisted of one event record per BBB. The record contained data which would be needed for Hypercube analysis as well as many other variables relating to workload by priority or by time of day or day of week. The data file initially had 336 records and 44 variables per record (See Appendix C for the file layout). A correlation analysis was then performed on all the variables relating to workload. A 42 x 42 correlation matrix

was studied and, as expected, total CFS correlated highly with most variables. Total CFS was therefore considered the primary variable. All variables correlating less than 0.95 with total CFS and with each other were isolated and considered secondary variables; this yielded five variables that could be used in addition to total CFS to judge the various beat and district designs. Finally, in order to be able to compare widely different beat designs with different number of beats, the coefficient of variation was selected as the statistic to be computed for the primary and for each secondary variable. The coefficient of variation is a measure of relative dispersion which expresses the standard deviation of a distribution as a percent of the mean; in other words, the coefficient of variation would allow comparison of the imbalance in, say, a 40-beat design versus a 48-beat design by standardizing the standard deviation relative to the mean or arithmatic average.

At this stage, it was formulated that the intermediate "beat" designs would have the following characteristics:

1. Be acceptable from a tactical point of view;
2. Reduce the existing imbalance at the beat and district level (measured by the coefficient of variation or CV) with regard to CFS and the five secondary variables.

After comparing the initial ten beat designs, minor modifications were made, including the splitting of three BBB's to allow better radio coverage and easier road access within the beat. Three beat designs were identified as the best from both tactical and statistical reasons, and these three designs were presented to a committee from the Bureau of Field Operations (BFO). The BFO committee was composed of command officers selected by the BFO Deputy Chief and of volunteer officers from all ranks. After several meetings, the committee had chosen a specific beat design with some additional recommendations on boundary changes to be evaluated.

The new design was evaluated and then analyzed relative to district and radio channel considerations. The Hypercube Queuing Model was employed at this stage; the model utilizes queuing theory to calculate performance measures such as workloads of units, travel time, and probability of calls having to wait for an available unit. A special FORTRAN program was written to interface between the BBB data file and the Hypercube Model and thus facilitate data input to the model. The FORTRAN program and the data requirements for the model are listed in Appendix C. A final comparison was made on the primary and secondary criteria earlier established as well as on the performance measures calculated by Hypercube. The final design, specifying beats, districts and radio channels, was reviewed by the project staff committee, and finally approved by the Department's command staff.

The last step in the design process was to identify computerized files that would need revision prior to implementation. The two automated systems affected by the beat changes were the dispatch system (Computer Assisted Public Safety System - CAPSS) and the reported offenses system (Reporting Indexing System - RIS). The specific revisions pertained to the following files and programs:

1. Beat centroids (CAPSS)
2. Valid centroids (CAPSS)
3. Recommended units (CAPSS)
4. Geographic reference file (CAPSS)
5. Weekly and monthly batch reports (RIS)

Appropriate Departmental and inter-agency notification was made to insure that the revisions would be completed in time for the project's implementation date. In addition, one satellite receiver change was requested of GSA Communications to correct one weak area of hand radio reception caused by the reassignment of radio channels.

C. RESULTS

Exhibit 10 shows the results of calculating the number of beats

that the Department could expect to staff given different resource levels. The first resource level, 320 positions, was the existing level, and the estimated number of beats staffed (i.e., positions fielded) per day was confirmed by BFO command staff. It appeared then that even the existing 43 beats could not be staffed every day, and it was debated whether beat restructuring should proceed. However, reducing workload imbalance and eliminating some serious access problems still could be achieved by beat restructuring, while the Department was training many new recruits and was embarking on a very active recruiting campaign to bring available strength closer to authorized strength (440 positions). In light of the difficulty in staffing beats, 48 beats rather than 50 beats was considered the maximum number that the Department should consider during the next 5 years.

Exhibit 11 shows the comparative statistics on the primary and secondary variables for the three "best" beat designs. The primary variable was CFS; the five secondary variables (variables that correlated less than .95 with CFS and with each other) were named as follows:

CARS = total number of units assigned
PRI1 = number of Priority 1 CFS
HIBLK = number of CFS from 2100 (Sat) to 0059 (Sun)
EBLK2 = number of Priority 1 & 2 CFS from 0700 to 1559
AEBLK1= number of cars assigned to Priority 1 & 2 CFS from 0100 to 0659

It can be seen that all three alternatives were a vast improvement over the existing beat structure, with the coefficient of variation in the distribution of CFS reduced from 25.90 in the existing design to 5.79 in the "best" case. The secondary variables also were more balanced in all of the proposed new designs.

Similarly, Exhibit 12 displays the comparative statistics for the initial three district designs and the existing district design.

Again, the imbalance in total CFS as reflected by the coefficient of variation dropped from 15.36 to 2.67 in the "best" case, with modest improvements in the secondary variables, as well.

The Hypercube Model was next used to compare the existing structure with the three best alternatives, with radio channel assignment options determined by GSA Communications and project staff. Hand-pack radio testing was carried out in questionable areas. One specific beat/district design and three radio channel alternatives were finally selected; all three alternatives were about 25% better balanced in terms of CFS by radio channel than the existing structure. To make the Hypercube comparisons as valid as possible, the same time of the day (1600 - 2100) was used in all analyses; this time is a stable, high-volume period during which all beats are normally covered.

A summary of the performance measures calculated by the Hypercube Queuing Model is shown in Exhibit 13. The last three performance measures (average travel time, average travel for queued calls, and standard deviation of workload) had to be estimated for the existing structure since one of the radio channels (District 8-Channel 3) exceeded the model's maximum saturation point. This illustrated the danger of having a fairly small district, with few resources, be in a channel by itself with no other district as backup. In real life, of course, out-of-channel units would be dispatched and also units might work without taking lunch or dinner breaks if priority calls were queued. Hypercube computed an average utilization factor of 76%, indicating severe staffing problems. The three new designs all produced about a 10% improvement in queue saturation (i.e., the probability of a call having to wait in queue dropped from 33.1% in the existing structure to about 30% in the alternatives). Improvements were observed in all other performance measures. The three alternatives seemed fairly comparable, with alternative 2 showing the most impact in reducing workload imbalance compared to the other two alternatives.

Alternative 2 was finally chosen by the BFO committee upon the recommendation of the project staff. Exhibit 14 displays the comparison between the existing design and the final proposed design for the coefficient of variation analyses and the Hypercube Queuing Model analyses. It can be seen that the distribution of CFS for the new design was significantly more balanced than in the existing design at all levels: the coefficient of variation dropped from 25.90 to 9.24 (a 64% improvement) for the beat structure, from 15.36 to 10.73 (a 30% improvement) for the district structure, and from 44.22 to 20.78 (a 53% improvement) for the radio channel structure. The improvements in the five secondary variables were also substantial, ranging from 14% to 57% improvement, with only one variable (HIBLK meaning CFS from Sat. 2100 hrs. to Sun. 0059 hrs.) showing a larger relative dispersion. The increase in the coefficient of variation in that case was explained by the decision of maintaining neighborhood integrity in areas such as the downtown core area or the King and Story area, traditionally very busy areas on week-end nights; it was still the consensus of the project staff and the committee that those areas should stay undivided.

Exhibit 14 also shows that the Hypercube Model's performance measures were encouraging: a decrease in the probability of queue saturation from 33.1 to 29.6 (a 10.6% improvement), positive small reductions in percent of out-of-beat dispatching and travel times, and a reduction in the standard deviation of workload by unit from an estimated minimum .017 to .012 (a 29% decrease).

The percent changes in the performance measures are summarized in Exhibit 15, with a (-) change indicating an improvement in the given measure and a (+) change indicating no improvement in the given measure. Over-all, the performance measures indicated substantial improvement. Finally, Exhibits 16 and 17, respectively, show the outline of the existing beat structure and the proposed structure.

D. CONCLUSIONS

The proposed new design was substantially more balanced at the beat, district, and radio channel levels. Given the same level of calls for

service and the same level of resources, it would be expected that the proposed new design could improve performance measures, primarily the probability of a call having to wait for an available unit and, to a lesser extent, travel times and percent of out-of-beat dispatching. Given the same level of calls for service and the same level of resources, patrol unit workload could also be substantially better balanced.

VI. SUMMARY AND RECOMMENDATIONS

The existing structure was a 43-beat configuration grouped into 8 districts and 5 radio channels. Analysis of the existing beat structure revealed severe imbalances in terms of population, crime, patrol workload, response times, queuing of calls, and cross-beat dispatching. Specific problems were pinpointed by Bureau of Field Operations personnel which could not be addressed with the existing beat structure. It was therefore concluded that a revised beat structure configuration was necessary.

The proposed new design consisted of a 48-beat configuration grouped into 9 districts and 5 radio channels. The proposed new design was substantially more balanced at the beat, district, and radio channel levels. Given the same level of calls for service and the same level of resources, it would be expected that the proposed new structure could improve performance measures, primarily the probability of a call having to wait for an available unit and, to a lesser extent, travel times and percent of out-of-beat dispatching. Given the same level of calls for service and the same level of resources, patrol unit workload could also be substantially more balanced.

The present report and the technical appendices provide a detailed account of the methodology employed during the project and sufficient documentation to allow the process to be replicated in the future. Finally, although resource allocation was not within the scope of the Beat Restructuring Project, beat design and resource allocation are inextricably bound together, and the same project staff went on from

this project to provide initial recommendations on resource allocation to the Bureau of Field Operations. While carrying out the Beat Restructuring Project and the resource allocation analyses, the project staff noted significant strengths and weaknesses in the Department's process. These noted strengths and weaknesses are summarized in the following recommendations.

- Future beat designs or resource allocation recommendations should be performed by sworn/civilian teams working in close coordination with the Bureau of Field Operations, the Systems Development Unit in Research and Development, and County Communications.

- Channel overload problems should eventually be resolved by adding a new channel; reassigning areas to channels cannot fully alleviate a very serious problem of channel overload.

- Additional personnel within the Department should acquire skills in computer graphics systems, computer modeling, and complex data manipulation using software packages. Lack of continuity in these analytical skills may be a serious problem in the future.

- Statistics on actual field strength, hours worked, consumed time, free patrol time, and number of events handled should be collected and maintained within one unit or section. Much of the information is routinely made available but scattered throughout the Department or not saved for later analysis.

- Use of the CAPSS Geo-file by County Communications should be encouraged whenever operational needs are not adversely affected in order to avoid dispatching the wrong units to calls for service, thereby lessening out-of-beat dispatching. Geo-coding the project's data base showed that when the geo-file was bypassed, the incorrect beat was often listed.

- The Hypercube Queuing Model should be incorporated into future resource allocation plans in order to optimize the placement of units.

- A staggered watch-start time should be explored in order to alleviate congestion at Central Supply, reduce the time lag until units arrive at their beats, and improve coverage at the beginning and end of shifts. One simple approach might be to have each channel with two districts begin one of the districts one hour earlier than the other district, thereby still maintaining team integrity.

- A flexible "Basic Car Plan" similar to L.A.P.D. should be investigated to avoid leaving beat-sized holes in staffing when not enough resources are available. However, it should be stressed that much planning effort would have to go into implementing such a plan.

INDEX OF EXHIBITS

Exhibit 1

POPULATION, AREA, AND CRIME: 1975-1979

City Totals	1975	1979	1979 vs. 1975 Difference	1979 vs. 1975 % Change
Population	557,700	607,900	+50,200	+9.0%
Area (Square Miles)	149.5	156.6	+7.1	+4.7%
Population Density (persons per sq. mile)	3730.4	3881.9	+151.5	+4.1%
Total Crimes	69,769	74,789	5,020	+7.2%
Total Crimes per 1,000 Population	125.1	123.0	-2.1	-1.7%
Part I Violent Crimes*	1,892	3,236	1,344	+71.0%
Part I Violent Crimes per 1,000 Population	3.4	5.3	+1.9	+55.9%

* Includes homicide, robbery, rape and aggravated assault

Exhibit 2

POPULATION BY BEAT: 1975-1979

BEAT#	1975	1979	DIFF.	% CHANGE	RANK*
11	17,251	19,966	2,715	15.7	13
12	6,266	6,440	174	2.8	32
13	4,514	5,846	1,332	29.5	6
16	21,604	23,045	1,441	6.7	25
18	8,760	12,357	3,597	41.1	3
19	8,899	10,335	1,436	16.1	11
21	11,750	12,019	269	2.3	34
22	16,862	18,242	1,380	8.2	21
23	15,439	15,675	236	1.5	37
24	13,896	14,024	128	0.9	39
25	34,564	24,314	-10,250	-29.7	43
33	7,825	8,333	508	6.5	27
34	12,548	13,700	1,152	9.2	20
35	16,190	22,952	6,762	41.8	2
36	14,802	17,608	2,806	19.0	9
38	10,040	15,016	4,976	49.6	1
41	25,135	26,156	1,021	4.1	29
42	17,057	18,179	1,122	6.6	26
43	18,774	20,218	1.444	7.7	24
44	19,762	21,680	1,918	9.7	19
45	28,841	34,714	5,873	20.4	8
51	6,000	6,173	173	2.9	31
52	7,542	7,606	64	0.8	40
53	8,456	9,139	683	8.1	22
54	8,582	9,789	1,207	14.1	15
55	8,654	10,173	1,519	17.6	10
56	5,383	5,801	418	7.8	23
62	22,132	25,277	3,145	14.2	14
64	20,252	27,331	7,079	35.0	4
65	17,795	20,063	2,268	12.7	16
66	13,564	14,966	1,402	10.3	18

Exhibit 2, cont'd.

POPULATION BY BEAT (cont'd)

BEAT #	1975	1979	DIFF.	% CHANGE	RANK*
67	13,409	14,933	1,524	11.4	17
71	8,151	8,258	107	1.3	38
72	3,640	3,698	58	1.6	36
73	3,836	3,938	102	2.7	33
74	7,169	7,328	159	2.2	35
75	10,605	10,647	42	0.4	42
76	9,076	9,153	77	0.8	40
81	6,037	6,227	190	3.2	30
82	8,402	8,858	456	5.4	28
83	8,540	11,375	2,835	33.2	5
84	18,564	23,390	4,826	26.0	7
85	4,709	5,454	745	15.8	12

*Beats are ranked according to the percentage change from 1975 to 1979. A rank of 1 indicates the highest increase.

Exhibit 3

REPORTED OFFENSES BY BEAT: 1975-1979

BEAT #	1975	1979	DIFF.	% CHANGE	RANK*
11	734	1,549	815	111.0	1
12	1,055	889	-166	-15.7	43
13	838	746	- 92	-11.0	36
16	2,144	1,834	-310	-14.5	40
18	1,620	1,884	264	16.3	13
19	1,833	1,891	58	3.2	20
21	1,397	1,239	-158	-11.3	37
22	1,412	1,413	1	.1	26
23	2,049	2,057	8	.4	25
24	1,304	1,377	73	5.6	19
25	1,745	1,477	-268	-15.4	42
33	2,067	1,819	-248	-12.0	38
34	1,158	1,224	66	5.7	18
35	2,303	3,531	1,228	53.3	4
36	2,070	1,954	-116	- 5.6	31
38	513	981	468	91.2	2
41	1,661	1,525	-136	- 8.2	35
42	1,187	1,308	121	10.2	15
43	1,499	1,396	-103	- 6.9	33
44	1,821	1,763	- 58	- 3.2	29
45	1,581	2,126	545	34.5	9
51	1,098	1,562	464	42.3	6
52	1,260	1,087	-173	-13.7	39
53	1,082	1,112	30	2.8	21
54	1,215	1,031	-184	-15.2	41
55	1,318	1,273	- 45	- 3.4	30
56	1,225	1,726	501	40.9	7
62	1,426	1,753	327	22.9	11
64	2,124	2,655	531	25.0	10
65	2,049	2,248	199	9.7	16
66	935	994	59	6.3	17

Exhibit 3, cont'd.

REPORTED OFFENSES (con't)

BEAT	1975	1979	DIFF.	% CHANGE	RANK*
67	672	1,170	498	74.1	3
71	1,350	2,070	720	53.3	4
72	2,034	1,877	-157	- 7.7	34
73	1,365	1,377	12	0.9	23
74	1,517	1,529	12	0.8	24
75	863	985	122	14.1	14
76	1,431	1,423	- 8	- .6	27
81	1,137	1,060	- 77	- 6.8	32
82	1,060	1,027	- 33	- 3.1	28
83	1,822	1,841	19	1.0	22
84	1,775	2,422	647	36.5	8
85	1,133	1,375	242	21.4	12

*Beats are ranked according to the percentage change from 1975 to 1979. A rank of 1 indicates the highest increase.

Exhibit 4

CALLS FOR SERVICE BY BEAT

(9/17/78-9/15/79)

Beat	CFS	Beat	CFS
11	3703	51	3710
12	3191	52	4141
13	2375	53	3191
16	4360	54	3541
18	4571	55	3691
19	4857	56	5162
21	3549	62	4638
22	4380	64	6164
23	4860	65	6072
24	3507	66	3126
25	3682	67	3642
33	4725	71	5327
34	3316	72	6129
35	5622	73	4894
36	5997	74	5804
38	2527	75	3070
		76	6765
41	3905		
42	3424	81	3886
43	4360	82	3204
44	4374	83	5013
45	5111	84	6353
		85	3753

Exhibit 5

CALLS FOR SERVICE BY DISTRICT

(9/17/78-9/15/79)

District	CFS
1	23,057
2	19,978
3	23,187
4	21,174
5	23,436
6	23,642
7	31,989
8	22,209

Exhibit 6

CURRENT BEAT STRUCTURE:
AVERAGE RESPONSE TIME
(Min:Sec)

Priority	City Total	Highest Beat	Lowest Beat	Range
1	5:07	7:53 (B.25)[1]	3:31 (B.34)[2]	4:22
2	10:17	12:59 (B.67)	7:18 (B.72)	5:41
3	23:07	29:17 (B.67)	19:00 (B.81)	10:17

[1] Beat 25 had 20 Priority 1 calls during the 52-week period.

[2] Beat 34 had 12 Priority 1 calls during the 52-week period.

Exhibit 7

EXISTING BEAT STRUCTURE

Percentage of Calls Waiting Longer than
Desired Average Response Time

PRIORITY	DESIRED AVERAGE	Percentage Waiting Longer than Desired Average		
		CITY TOTAL	HIGHEST BEAT	LOWEST BEAT
1	5 min	36.0%	80.0% (B.25)[1]	8.3% (B.34)[2]
2	10 min	34.2%	51.9% (B.67)	17.2% (B.72)
3	25 min	29.8%	39.1% (B.38)	16.1% (B.72)

[1]Beat 25 had 20 Priority 1 calls during the 52 week period.
[2]Beat 34 had 12 Priority 1 calls during the 52 week period.

Exhibit 8

EXISTING CROSS-BEAT DISPATCHING

Beat	Total Assignments			Assignments to Beat Car			% Assignments to Beat Car		
	Primary	Fills	Total	Primary	Fills	Total	% Primary	% Fills	% Total
11	3431	1159	4590	1692	165	1857	49.3	14.24	40.46
12	2949	1609	4558	1273	156	1429	43.2	9.70	31.35
13	2085	1150	3235	715	63	778	34.3	5.48	24.05
16	4000	1399	5399	1795	130	1925	44.9	9.29	35.66
18	4383	2116	6499	1838	209	2047	41.9	9.88	31.50
19	4400	1912	6312	1763	212	1975	40.1	1.09	31.29
21	3085	1361	4446	1188	82	1270	38.5	6.03	28.57
22	4072	1792	5864	2202	242	2444	54.1	13.51	41.68
23	4401	1824	6225	2407	316	2723	54.7	17.33	43.74
24	3213	1166	4379	1753	179	1932	54.6	15.35	44.12
25	3301	978	4279	2171	177	2348	65.8	18.10	54.87
33	4448	2188	6636	1803	224	2027	40.5	10.24	30.55
34	3003	1242	4245	1399	195	1594	46.6	15.70	37.55
35	6258	2397	8655	2949	368	3317	47.1	15.35	38.33
36	5507	2203	7710	2452	311	2763	44.5	14.12	35.84
38	2405	730	3135	1179	57	1236	49.0	7.81	39.43
41	3415	1244	4659	1580	123	1703	46.3	9.89	36.55
42	3067	1210	4277	1530	110	1640	49.9	9.09	38.35
43	3773	1552	5325	1959	173	2132	51.9	11.15	40.04
44	4070	1706	5776	2136	255	2391	52.5	14.95	41.40
45	4611	1601	6212	2874	285	3159	62.3	17.80	50.85

Exhibit 8, continued

Cross-Beat Dispatching

	Total Assignments			Assignments to Beat Car			% Assignments to Beat Car		
Beat	Primary	Fills	Total	Primary	Fills	Total	% Primary	% Fills	% Total
51	3288	1036	4324	1429	112	1541	43.5	10.81	35.64
52	3777	1667	5444	1704	197	1901	45.1	11.82	34.92
53	2776	1107	3883	1189	107	1296	42.8	9.67	33.38
54	3147	1242	4389	1483	101	1584	47.1	8.?	36.09
55	3409	1212	4621	1789	173	1962	52.5	14.28	42.46
56	4411	1168	5579	2938	163	3101	66.6	13.96	55.59
62	4225	1457	5682	2505	255	2760	59.3	17.50	48.58
64	5603	2029	7632	3072	376	3448	54.8	18.53	45.18
65	5630	2320	7950	2938	359	3297	52.2	15.48	41.47
66	2896	890	3786	1044	83	1127	36.0	9.33	29.77
67	3227	1017	4244	1802	110	1912	55.8	10.82	45.05
71	4653	1920	6573	1885	326	2211	40.5	16.98	33.64
72	5520	2366	7886	2041	324	2365	37.0	13.70	29.99
73	4287	2028	6315	1689	285	1974	39.4	14.06	31.26
74	5243	2326	7569	1880	213	2093	35.9	9.16	27.65
75	2546	1131	3677	980	120	1100	38.5	10.61	29.92
76	5925	2140	8065	2181	320	2501	36.8	14.96	31.01
81	3371	1499	4870	1678	190	1868	49.8	12.68	38.36
82	2777	1163	3940	1229	93	1322	44.3	8.00	33.55
83	4539	2030	6569	2103	222	2325	46.3	10.94	35.39
84	5802	2207	8009	2812	389	3201	48.5	17.63	39.97
85	3537	1325	4862	1810	167	1977	51.2	12.61	40.66
TOTALS	170,466	67,819	238,285	80,839	8,717	89,556	47.4	12.80	37.60

Exhibit 9

DESIGN OF NEW BEAT STRUCTURE: PROCESS FLOW

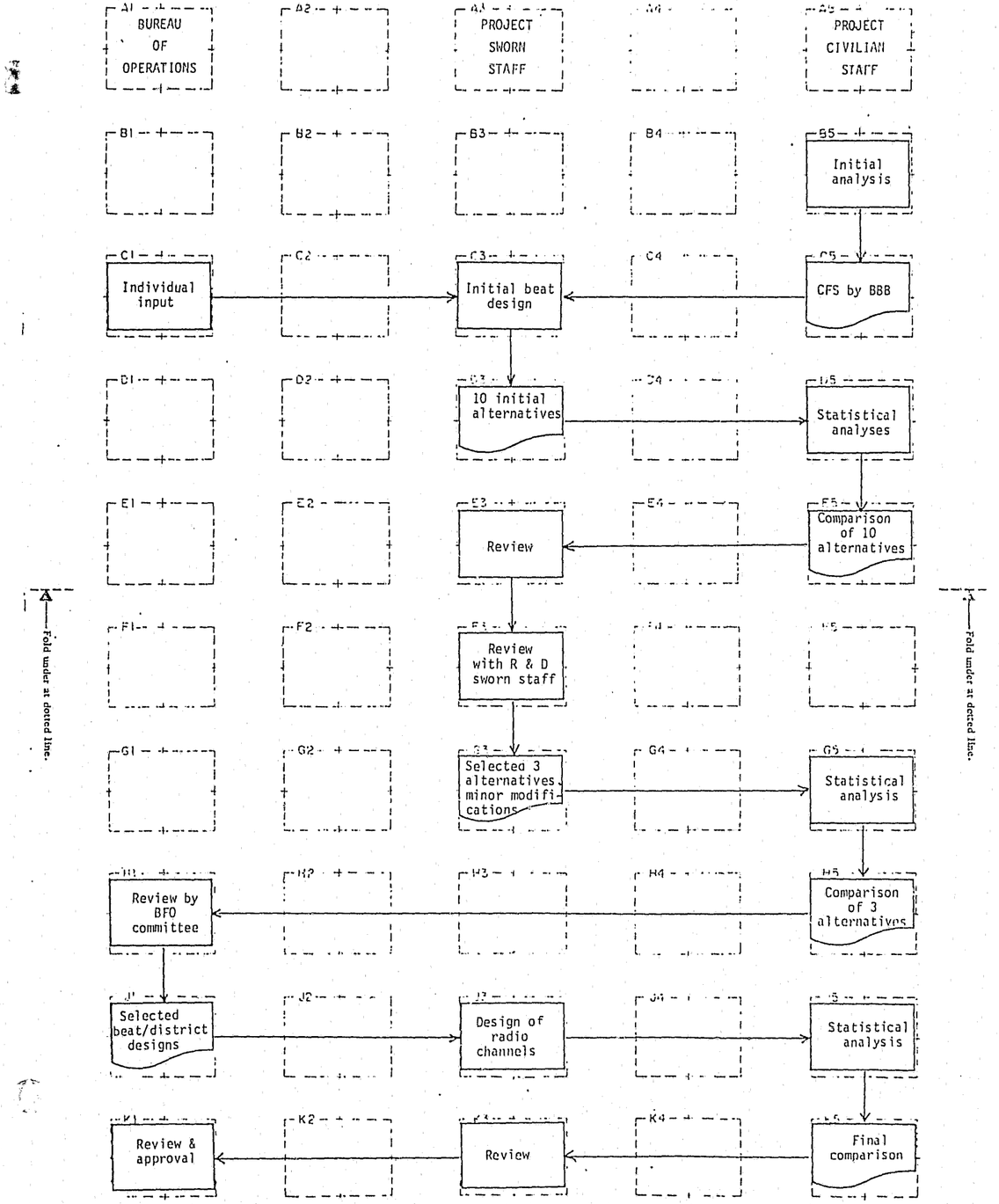


Exhibit 10

CALCULATION OF BEAT STAFFING BASED ON AVAILABLE RESOURCES

Available Resources (Positions)			Allocation by Watch		Work Days per Week		Beats Staffed on
Total	Actual	Watch	Ideal	Actual	Maximum	Expected	Average Day
320	300	1st	88.5	85	340	255	36.4
		2nd	140.7	135	540	405	57.8
		3rd	70.8	80	320	240	34.3
340	320	1st	94.5	93	372	279	39.8
		2nd	150.0	147	588	441	63.0
		3rd	75.5	80	320	240	34.3
360*	340	1st	100.4	101	404	303	43.3
		2nd	159.4	159	636	477	68.1
		3rd	80.2	80	320	240	34.3
440**	420	1st	124.0	124	496	372	53.1
		2nd	196.9	197	788	591	84.4
		3rd	99.1	99	396	297	42.4
474***	454	1st	139.9	140	560	420	60.0
		2nd	222.2	222	888	666	95.1
		3rd	111.8	112	448	336	48.0

* Break-even for Third Watch (provides 80 positions under ideal distribution)
** Current plus vacancies (50) plus 70 new positions
*** Fill 48 beats during Third Watch

Assumptions:

1. Twenty special assignments subtracted from actual available resources.
2. Minimum of 80 officers on Third Watch, the rest proportionally allocated.
3. Percentages for proportional allocation: 29.52% to First Watch, 46.89% to Second Watch, 23.59% to Third Watch.
4. Twenty-five percent absenteeism factor.

Exhibit 11

WORKLOAD COMPARISON FOR BEAT ALTERNATIVES

VARIABLE*	STATISTIC	Alternative EXISTING	A	B	D
CFS	Mean	4387.72	3930.67	4192.71	4288.00
	St D	1136.30	227.44	352.05	676.43
	CV	25.90	5.79	8.40	15.77
CARS	Mean	6244.67	5594.19	5967.13	6102.75
	St D	1629.93	471.35	571.21	987.79
	CV	26.10	8.42	9.57	16.18
PRI1	Mean	45.14	40.44	43.13	44.11
	St D	29.33	22.13	22.53	24.83
	CV	64.98	54.72	52.24	56.29
HIBLK	Mean	171.81	153.92	164.18	167.91
	St D	48.33	29.12	30.37	41.06
	CV	28.13	18.92	18.50	24.45
EBLK2	Mean	528.84	473.75	505.33	516.82
	St D	169.10	82.24	88.74	114.66
	CV	31.98	17.36	17.56	22.18
AEBLK1	Mean	736.07	659.40	703.36	719.34
	St D	216.29	134.47	134.22	161.83
	CV	29.38	20.39	19.10	22.50
No. of Beats		43	48	45	44

*See Section V(C) for explanation of variable names

Exhibit 12

WORKLOAD COMPARISON FOR DISTRICT ALTERNATIVES

		Alternative			
VARIABLE*	STATISTIC	EXISTING	A	B	D
CFS	Mean	23584.00	23584.00	20963.56	23584.00
	S.D.	3621.50	629.40	821.01	2294.61
	C.V.	15.36	2.67	3.92	9.73
CARS	Mean	33565.12	33565.12	29835.66	33565.12
	S.D.	5453.78	1296.28	1283.58	3489.03
	C.V.	16.25	3.86	4.30	10.39
PRI1	Mean	242.62	242.62	215.67	242.62
	S.D.	64.01	48.26	37.35	52.54
	C.V.	26.38	19.89	17.32	21.66
HIBLK	Mean	923.50	923.50	820.89	923.50
	S.D.	140.74	107.33	85.69	96.95
	C.V.	15.24	11.62	10.44	10.50
EBLK2	Mean	2842.50	2842.50	2526.67	2842.50
	S.D.	464.44	188.38	184.09	402.73
	C.V.	16.34	6.63	7.28	14.17
AEBLK1	Mean	3956.38	3956.38	3516.78	3956.38
	S.D.	861.49	470.11	434.86	687.95
	C.V.	21.77	11.88	12.36	17.39
No. of Districts		8	8	9	8

*See Section V(C) for explanation of variable names

Exhibit 13

HYPERCUBE ANALYSES

	Alternatives			
	Existing	I	II	III
Average Utilization Factor	.763	.763	.763	.763
Probability of Queue Saturation	33.1	29.4	29.6	29.4
% of Out-of-Beat Dispatching	62.40+*	60.85	60.95	60.76
Average Travel Time (minutes)	7.0+**	6.8	6.9	7.4
Average Travel Time for Queued Calls (minutes)	10.5+**	9.1	9.6	10.3
Standard Deviation of Workload	.017+**	.014	.012	.014

NOTE: The same time of day (1600-2100) and same number of units (58) were used in all of the above analyses.

* Actual data; hypercube estimates would be higher since priority 3 calls do not wait in queue in the model as in real life.

** Estimated from four out of five existing radio channels.

Exhibit 14

EXISTING DESIGN VS. PROPOSED DESIGN

Coefficient of Variation Calculations

	Beat Design		District Design		Radio Channels	
VARIABLE*	Existing	Proposed	Existing	Proposed	Existing	Proposed
CFS	25.90	9.24	15.36	10.73	44.22	20.78
CARS	26.10	11.19	16.25	11.68	27.10	20.00
PRI1	64.98	55.87	26.38	22.32	34.90	27.95
HIBLK	28.13	19.14	15.24	17.26	32.08	20.33
EBLK2	31.98	19.35	16.34	11.42	30.48	18.79
AEBLK1	29.38	21.60	21.77	14.19	24.24	19.83

Hypercube Model Calculations	Existing	Proposed
Average Utilization Factor	.763	.763
Probability of Queue Saturation	33.1	29.6
% of Out-of-Beat Dispatching	62.40+	60.95
Average Travel Time (minutes)	7.0+	6.9
Average Travel Time for Queued Calls (minutes)	10.5+	9.6
Standard Deviation of Workload	.017+	.012

* See Section V(C) for explanation of variable names.

Exhibit 15

PERCENT CHANGES IN PERFORMANCE MEASURES

Percent Change* in the Coefficient of Variation, Proposed versus Existing

VARIABLE**	Beat Design	District Design	Radio Channels
CFS	-64%	-30%	-53%
CARS	-57%	-28%	-26%
PRI1	-14%	-15%	-20%
HIBLK	-32%	+13%	-37%
EBLK2	-39%	-30%	-38%
AEBLK1	-26%	-35%	-18%

Percent Change* in Hypercube Model Measures, Proposed versus Existing

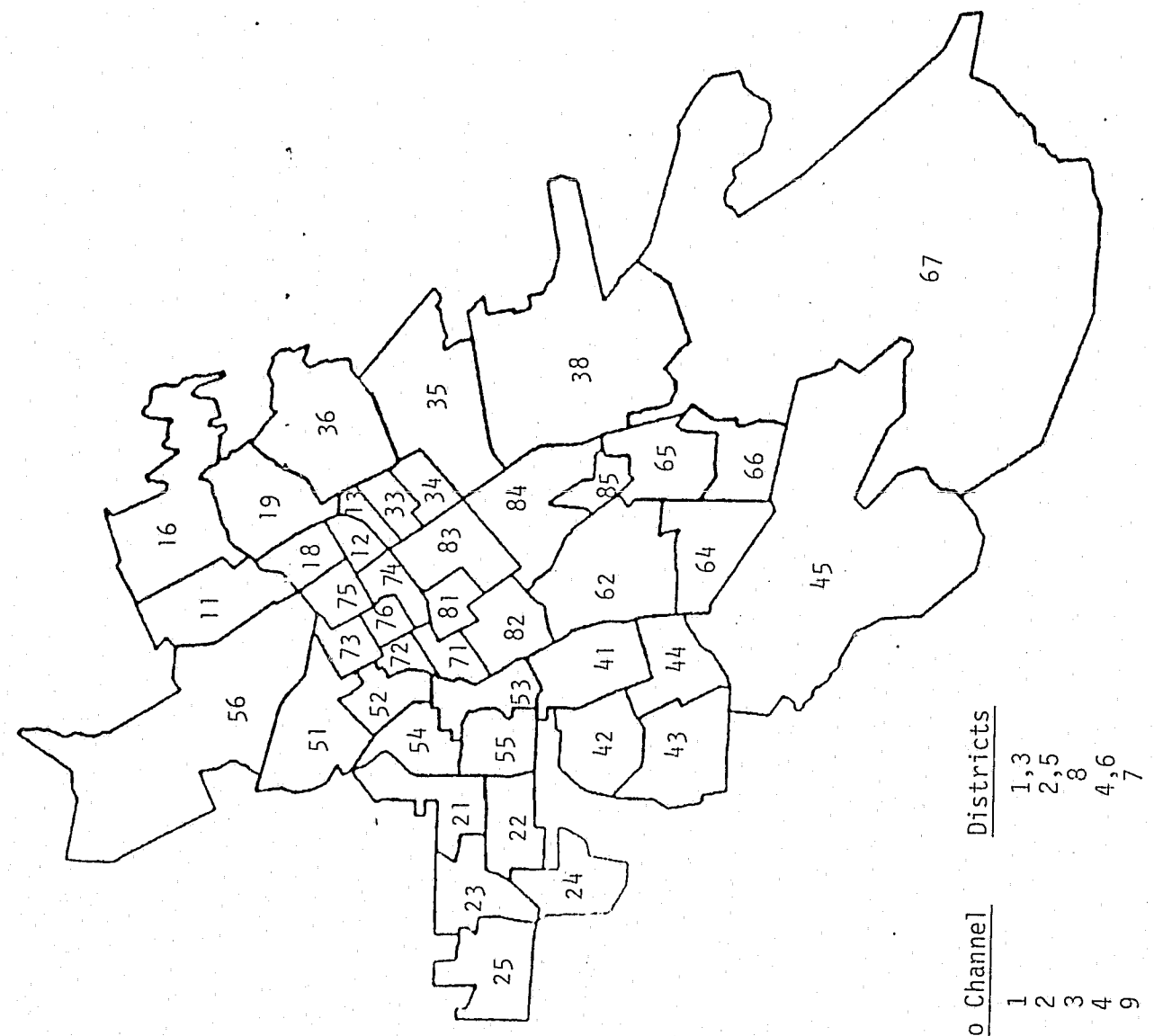
Average Utilization Factor	0%
Probability of Queue Saturation	-10%
% of Out-of-Beat Dispatching	-2%
Average Travel Time	-1%
Average Travel Time for Queued Calls	-8%
Standard Deviation of Workload	-29%

* A (-)% change is an improvement; a (+)% change is not an improvement.

** See Section V(C) for explanation of variable names.

Exhibit 16

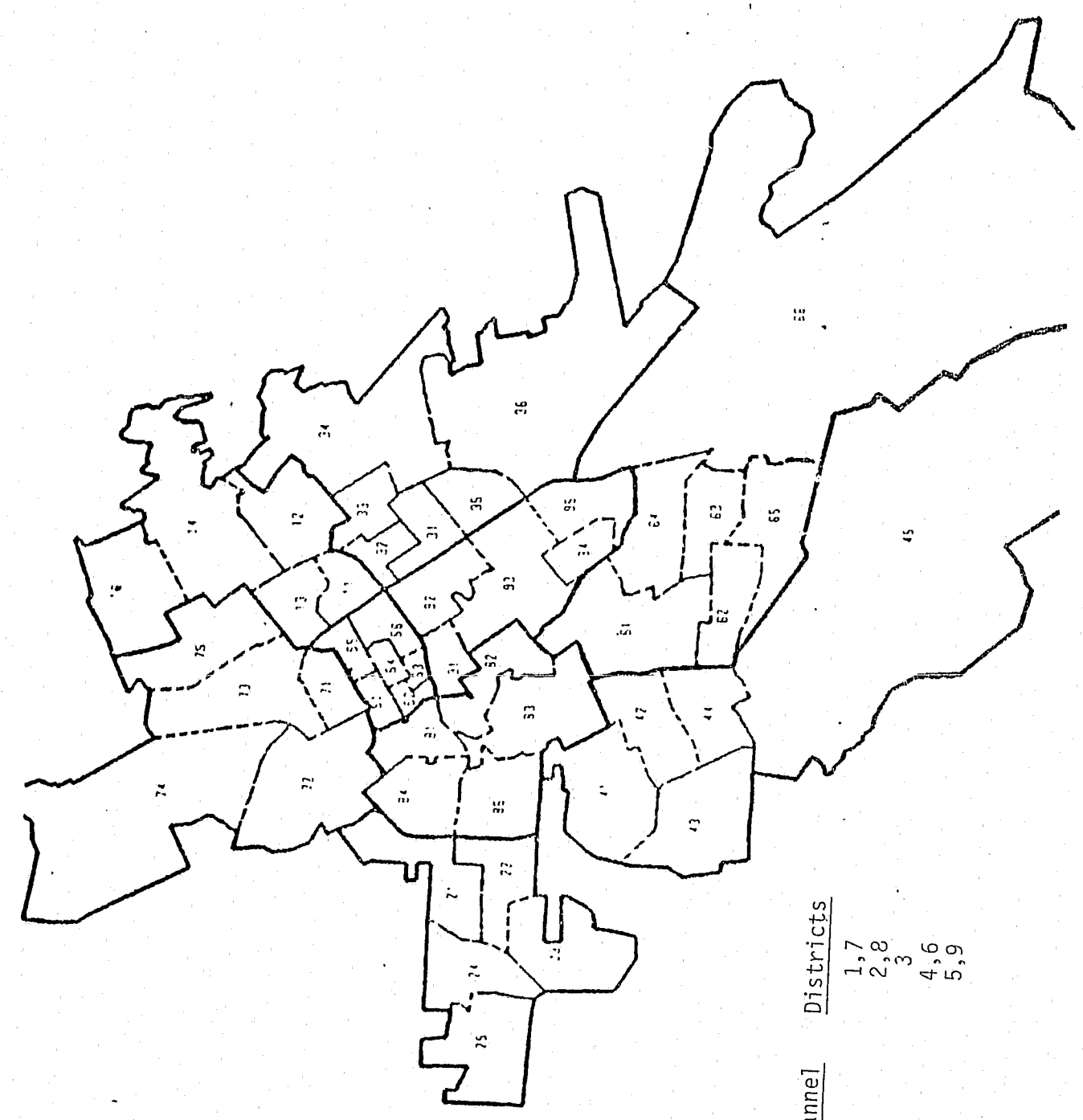
EXISTING BEAT DESIGN



Radio Channel	Districts
1	1,3
2	2,5
3	8
4	4,6
9	7

EXHIBIT 17

PROPOSED BEAT DESIGN



Radio Channel	Districts
1	1,7
2	2,8
3	3
4	4,6
9	5,9

BIBLIOGRAPHY

Bradshaw, R. V., Moore, J., "Man-Machine Interaction for Police Field Manpower Deployment". San Jose Police Department, San Jose, CA, 1974.

Chelst, K., Implementing the Hypercube Queuing Model in the New Haven Department of Police Services: A Case Study in Technology Transfer, The Rand Corporation, R-1566/6-Hud, 1975.

FBI Uniform Crime Reports, Crime in the United States 1975, United States Department of Justice, 1976.

FBI Uniform Crime Reports, Crime in the United States 1979, United States Department of Justice, 1980.

Larson, R., Hypercube Queuing Model: User's Manual, The Rand Corporation, R-1688/2-Hud, 1975.

Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., Brent, D. H., Statistical Package for the Social Sciences (SPSS), McGraw-Hill, 1975.

San Jose Police Department 1975 Demographic Data Book, San Jose Police Department, San Jose, CA, 1976.

San Jose Police Department 1979 Demographic Data Book, San Jose Police Department, San Jose, CA, 1980.

Appendix I

Local Evaluator's Report

(SEE ATTACHED REPORT)

END