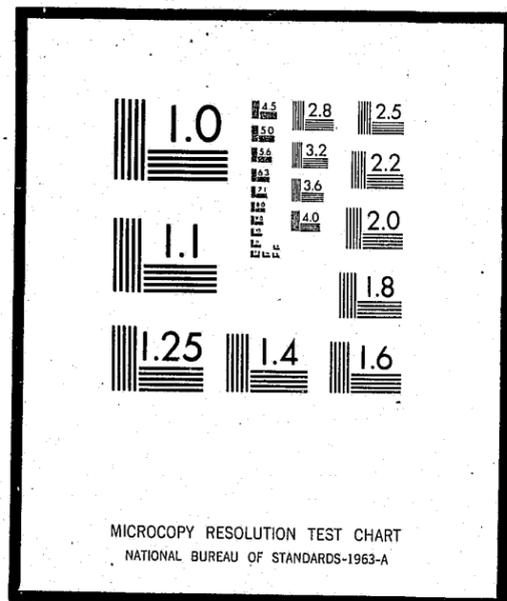


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U.S. DEPARTMENT OF JUSTICE  
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION  
NATIONAL CRIMINAL JUSTICE REFERENCE SERVICE  
WASHINGTON, D.C. 20531

Date filmed 6/3/75

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 NCIC (NATIONAL CRIME INFORMATION CENTER)  
 RECORDS SECTION  
 SYSTEMS ANALYSIS  
 CRITIQUE  
 COMPUTER AIDED OPERATIONS

ANNOTATION:  
 ANALYSIS OF POLICE PROCEDURES AND FORMS TO PROVIDE FIELD OFFICERS WITH MORE TIMELY AND COMPREHENSIVE INFORMATION.

ABSTRACT:  
 DEVELOPMENT OF THE PROJECT - THE GRANT APPLICATION, PERSONNEL, STAFFING, AND STUDY METHODS - IS DISCUSSED IN DETAIL. MAJOR OPERATIONAL PROCEDURES ARE IDENTIFIED. AN INFORMATION ELEMENTS CATALOG IS DESCRIBED. SAMPLE INSTRUCTION AND CODE SHEETS AND REPORTS ARE INCLUDED. AID (ANALYSIS OF INCIDENTS AND DEPLOYMENT) SYSTEM WHICH PROVIDES FIELD COMMANDERS WITH THE ABILITY TO ASSIGN PERSONNEL TO ALL AREAS OF THE CITY BASED ON COMPUTER PREDICTIONS OF MANPOWER NEEDS IS FULLY OPERATIONAL. A UNIFIED REPORT FORM REPLACES SIX FORMS PREVIOUSLY USED. SYSTEM DESCRIPTION IS CONTAINED IN NCJ-00111.

The National Criminal  
Justice Reference Service

# loan document

LEADS PROJECT-VOLUME I  
PROJECT DESCRIPTION

NCJRS, 955 L'ENFANT PLAZA WASHINGTON, D.C. 20024

LEADS PROJECT  
POLICE RECORDS AND DATA SYSTEM STUDY  
CITY OF PHOENIX, ARIZONA

FINAL REPORT  
VOLUME I  
PROJECT DESCRIPTION

This project was supported by LEA Grant No. 050 awarded by the Attorney General under the Law Enforcement Assistance Act of 1965 to the City of Phoenix, Arizona. Persons or organizations undertaking such projects under Government sponsorship are encouraged freely to express their professional judgment, findings, and conclusions. Therefore, views or opinions stated in this document do not necessarily represent the official position or policy of the U. S. Department of Justice.

0110

VOLUME I \*  
PROJECT DESCRIPTION  
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\*This is Volume 1 of a 2 volume report. There is also a Summary Report which is a condensed narrative of volumes 1 and 2.

SECTION A  
CITY APPLICATION AND GRANT

On June 2, 1966, the City of Phoenix submitted an application to the Office of Law Enforcement Assistance, U. S. Department of Justice, for the purpose of obtaining Federal funds to conduct a police records and data systems study.

The formal grant application submitted to OLEA consisted of:

- A. The completed grant application forms.
- B. Estimated project budget including budget narratives.
- C. A project plan and supporting data.

The application and proposal submitted envisioned a research study of approximately 12 months duration, which would require financial assistance of \$92,485. The City of Phoenix agreed to contribute \$51,211 of "in-kind" services consisting of staff assistance, advisory personnel and office facilities, supplies and equipment.

The total cost of the study, through both City and Federal funding, was estimated to be approximately \$143,696.

The Office of Law Enforcement Assistance approved the City of Phoenix proposal and agreed to provide the necessary funds. The project was designated LEADS (Law Enforcement Assistance Development Study) and an advisory committee was selected.

In the original proposal to OLEA, the City of Phoenix stated that the services of a consulting firm would be obtained to direct and coordinate the project. To this end, specifications for the project scope were detailed and sent to nine major consulting firms with a request for a submission of proposals. Seven of these firms responded. Of these, four were eliminated as they did not meet the overall standards required. The remaining

three firms were interviewed by the LEADS Advisory Board for the purpose of clarifying proposals and presenting the staff that would be responsible for managing the study.

The Advisory Board recommended the firm of Griffenhagen-Kroeger, Inc. of San Francisco as being the most qualified and on August 12, 1966, this recommendation was presented to the City Council for the approval which resulted in a contract being awarded to Griffenhagen-Kroeger, Inc. to manage the study.

The Office of Law Enforcement Assistance concurred with the contract with the consultant firm and awarded grant number 050, as authorized by the Law Enforcement Assistance Act of 1965 (PL 89-197).

The study was undertaken with the anticipation of a project duration of 12 months. However, it soon became apparent that the LEADS tasks could not be completed in this length of time. In July of 1967, an application for a four-month extension of time was submitted to OLEA as provided for in the grant. OLEA approved the extension and re-scheduled the project completion date to January 15, 1968. A further extension to April 30, 1968, was granted for the preparation, review and printing of the final report.

The City's application for grant and grant award documents follow.



U.S. DEPARTMENT OF JUSTICE  
OFFICE OF LAW ENFORCEMENT  
ASSISTANCE

APPLICATION FOR GRANT

Application is hereby made for a grant under the Law Enforcement Assistance Act of 1965 (PL 89-197) in the amount and for the purposes indicated in the following application.

(Leave Blank)  
Application Number

Date Received

1. Short Title of Project: (Do not exceed one typed line)

Police Records and Data System Study

2. Type of Application: (Check one)

Original  Revision  Continuation of Grant No. \_\_\_\_\_

3. Project Duration:

Total length . . . 12 . . . months

From . . . 6 weeks after grant . . .

Through 12 months thereafter . . .

4. Total LEAA Support Sought: (Complete for all projects)

\$ 92,485

5. Request for First Year: (Projects exceeding 16 mos.)

Not Applicable \$ \_\_\_\_\_

6. Applicant Agency or Institution (Name, address, and telephone)

City of Phoenix  
901 Municipal Building  
251 West Washington  
Phoenix, Arizona 85003  
Telephone No. 602-262-6721

7. Project Director (Name, title, address, and telephone)

Gordon Selby, Police Captain  
Field Services Bureau  
Police Department Telephone No.  
City of Phoenix 602-262-6166  
17 South Second Avenue  
Phoenix, Arizona 85003

8. Financial Officer (Name, title, address, and telephone)

John L. Williams  
Finance Director  
911 Municipal Building  
251 West Washington  
Phoenix, Arizona 85003  
Telephone No. 602-262-6201

9. Official Authorized to Sign Application (Name, title, address, and telephone)

Robert Coop, City Manager  
901 Municipal Building  
251 West Washington  
Phoenix, Arizona 85003  
Telephone No. 602-262-6241

10. Type of Agency or Institution:

Public  Local Government  Private nonprofit

11. Federal Tax Exemption Determination

Yes, Date \_\_\_\_\_  Not Applicable  No  Pending

12. Assurance of Compliance With Civil Rights Act of 1964

The Applicant hereby agrees that it will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to Regulations of the Department of Justice (28 CFR Part . . . ) issued pursuant to that title, to the end that no person shall on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant receives Federal financial assistance from the Department; and gives further assurance that it will promptly take any measures necessary to effectuate this commitment, as more fully set forth in the Department's Grant Conditions heretofore furnished to the Applicant. This assurance shall obligate the Applicant for the period during which Federal financial assistance is extended to it by the Department and is given in consideration of and for the purpose of obtaining the grant for which application is hereby made, and the United States shall have the right to seek judicial enforcement of this assurance.



**U.S. DEPARTMENT OF JUSTICE  
OFFICE OF LAW ENFORCEMENT  
ASSISTANCE**

**APPLICATION FOR GRANT**

**13. Budget Summary for Total Project (omit for projects of less than 16 months duration)**

Budget Categories—LEAA Funds	1st Year	2d Year	Beyond 2d Year _____ Months	Totals
Personnel (Employees and Consultants)				
Travel (Transportation and Subsistence)				
Supplies, Communications, and Reproduction				
Equipment		NOT APPLICABLE (Project duration less than		
Other: Miscellaneous		16 months)		
Indirect Costs				
Total LEAA Funds Requested				

Total Grantee Contribution

**14. Explanation of Grantee Contribution. Describe nature, sources, and project utilization of the Grantee Contribution as specified in Item 13 or Budget Item F, page 3.**

The estimated City of Phoenix "in kind" contribution for the proposed project is \$51,211. See continuation page "2a" for itemized total budget of grantee contribution.

The budget of the grantee contribution reflects that Police Captain G. Selby, City staff Project Director, and two Secretary II's will devote full time to the project. The balance of the City staff listed as part of the grantee contribution will be available to the Project Director as the study progresses and a defined need arises for their assistance. It is the intent of the City of Phoenix to assign top priority emphasis to the proposed project to guarantee successful completion of the study.

15. Federal Support. Will other Federal support be available for any part of this project? Yes  No  X  
If yes, identify and explain \_\_\_\_\_

16. Federal Submissions. Have other Federal agencies been contacted for assistance on this or similar projects? Yes \_\_\_\_\_ No  X If yes, identify and indicate status \_\_\_\_\_

**17. Applicant's Agreement**

It is understood and agreed by the Applicant: (1) that any grant received as a result of this application shall be subject to the Grant Conditions and other policies, regulations, and rules issued by the Department of Justice for the administration of grant projects under the Law Enforcement Assistance Act of 1965; (2) that funds awarded are to be expended only for the purposes and activities covered by the Applicant's approved plan and budget; (3) that the grant may be terminated in whole or in part by the Attorney General or his designee at any time; and (4) that appropriate grant records and accounts will be maintained and made available for audit as prescribed by the Department.

18. Date: June 2, 1966

20. Signature of Authorized Official

19. Total Pages in Application: 26

Estimated Budget

CITY OF PHOENIX IN-KIND CONTRIBUTION

Personnel	Percent of Time	Annual Salary	Fringe Benefits	Total Annual Salary	In-Kind Contribution
<b>1. Employees:</b>					
Police Captain (G. Selby)	100%	\$9,792	\$2,291	\$12,083	\$12,083
Two Secretary II (Unknown)	100%	4,056	507	4,563	9,126
Police Lieutenant (C. T. Blaine)	25%	8,496	497	8,993	2,248
Police Lieutenant (F. Kurth)	25%	8,496	497	8,993	2,248
Police Sergeant (L. Hicks)	25%	7,056	413	7,469	1,867
Police Sergeant (H. Ennis)	25%	7,056	413	7,469	1,867
Police Sergeant (R. Murphy)	25%	7,056	413	7,469	1,867
Police Lieutenant (J. Allen)	25%	8,496	497	8,993	2,248
Administrative Assistant II (A. Pasquan)	25%	11,232	351	11,583	2,896
Computer Programmer II (J. Hanna)	25%	7,056	221	7,277	1,819
Police Administrative Intern (D. Aultman)	25%	5,880	184	6,064	1,516
Systems and Procedure Analyst I (D. Willis)	25%	6,456	202	6,658	1,664
<b>Total Personnel</b>					<b>\$41,449</b>

Travel - Provision for City staff travel is included on Page 3 -- Item B and Page 4 - last sentence of paragraph 5.

**Supplies**

Postage	\$ 400
Telephone & Telegraph	1,600
Office Supplies	1,300
<b>Total Supplies</b>	<b>3,300</b>

**Other**

Office Space Rental  
1,400 sq. ft. at \$3.60 per  
sq. ft. for 12 months (includes  
custodial and maintenance services) \$ 5,040

**Office Equipment Rental**

2 - Standard Electric Typewriters at \$25 ea. per month for 12 months	600
2 - 10 Key Adding Machines at \$18.50 per month for 12 months	222
1 - Friden-STW10 Calculator at \$50 per month for 12 months	600
<b>Total Other</b>	<b>6,462</b>

Total Grantee Contribution

\$51,211



U.S. DEPARTMENT OF JUSTICE  
OFFICE OF LAW ENFORCEMENT  
ASSISTANCE

APPLICATION FOR GRANT

Detailed Project Budget

Complete Project

First Year Only (projects exceeding 16 months)

Period from 6 weeks after grant

Through 12 months thereafter

A. Personnel (Employees and Consultants)	Percent of Time Devoted	Annual Salary	Requested of OLEA	Category Total
(1) Employees (list each position)				
Not Applicable				
(2) Consultants (list by individual or type)		Fee		
General Management Consultant (See Continuation Sheet "3a" for itemized total budget)				
(3) FICA, Retirement, etc. (employees only)				\$ 42,300
B. Travel (Transportation and Subsistence) (Itemize)				
General Management Consultant (See Continuation Sheet "3a" for itemized total budget)				\$ 10,000
C. Supplies, Communications and Reproduction (Itemize)				
Part of "in-kind" grantee contribution				\$ -
D. Other (Equipment, Miscellaneous and Indirect Costs) (Itemize)				
General Management Consultant:				
1. Overhead (80% of Direct Labor)			33,840	
2. Fixed Fee (See Continuation Sheet "3a" for itemized total budget)			6,345	
E. Total Amount Requested (Sum of Categories A through D above)				\$ 92,485
F. Total Grantee Contribution (Page 2, Item 14)				\$ 51,211

The following itemized request for the total amount of funds requested from the Office of Law Enforcement Assistance was prepared in consultation with Griffenhagen-Kroeger, Inc., general management consultants. Their estimate of direct and indirect costs relate to charges allowed by Federal audit and are used as the basis for the City of Phoenix to request funds from the Office of Law Enforcement Assistance.

Itemized Request for Total Funds from LEAA  
For Services of General Management Consultant

Direct Labor Costs

General Supervision, Executive Vice President	\$ 2,500
Project Manager	18,000
Systems Analyst	15,000
Police Specialist	2,500
Special Features Specialist	2,500
Clerical (home office)	<u>1,800</u>
	\$42,300
Travel and Subsistence	10,000
Overhead (80% of Direct Labor)	33,840
Fixed Fee	<u>6,345</u>
Total Amount Requested from LEAA	\$92,485



U.S. DEPARTMENT OF JUSTICE  
OFFICE OF LAW ENFORCEMENT  
ASSISTANCE

APPLICATION FOR GRANT

**Budget Narrative**

Begin below and add as many continuation pages (4a, 4b, etc.) as may be needed to complete the required justification and explanation of the project budget.

The following is an explanation of the direct labor costs shown.

The item for general supervision by the Executive Vice President is for approximately one-man month of professional time directly allocable to the planning of the project and evaluation of results, as distinguished from general administrative support, the latter being covered as a part of overhead costs.

The salary shown for the Project Manager and Systems Analyst are on the basis of one year at full time.

Amounts shown for the Police Specialist and the Special Features Specialist are based on an estimated 25 working days each at \$100 per day each.

The item for clerical service at the home office is included on the assumption that not all of the work may be done in Phoenix where clerical help will be provided by the City, but that some of it will be done at consultant's home office. This is based on an estimated four months at \$450 per month.

Travel and subsistence is difficult to forecast precisely. It is intended to cover reimbursement for actual and necessary expense incurred by this staff in part while working in Phoenix on travel status away from headquarters, and in part while traveling to other cities throughout the United States, either for consultation concerning current projects in police record improvement or in consultation with leading producers of electronic data equipment. Consultant will bear cost of travel of accompanying City representatives in latter case.

However, the \$10,000 estimate is based on the following—Two-man teams (one from consultant firm and one from Phoenix project staff) will make 3 trips to Washington, D. C., 1 to Chicago, 2 to Los Angeles, San Francisco, or Seattle, and 2 trips to New York City at a cost of \$3,924. Consultant staff will make 4 rd. trips from San Francisco to Phoenix at a cost of \$1,798. The Vice President of the Consultant firm will make 6 rd. trips from San Francisco to Phoenix (once every two months during project) at a cost of \$827. These costs total \$6,549 of which \$5,723 is actual ticket cost; the balance of \$826 is based on a total of 53 days in travel time at an estimated subsistence cost of \$16 per day.

It is also estimated that the consultant staff will be in per diem status in Phoenix for 219 days at \$16 per day for a total additional cost of \$3,504. These two figures total \$10,053 which was rounded to \$10,000 on the budget sheet.

Overhead includes the items set forth in the accompanying excerpt from "Cost Principles" which has been an appendix to Federal contracts under which consultant's have previously and are currently operating. The rate of 80% is based on the most recently completed audit, conducted for the Office of Economic Opportunity by the Defense Contract Audit Agency, East Bay Branch, Building 178, Treasure Island, San Francisco, California 94130. This audit, completed in March 1966, resulted in a report rate of 79.7%.

The fixed fee is based on consultant's normal practice in Federal contracts, providing a fixed fee of approximately 15% of direct labor costs.

Consultant will bill overhead at a provisional rate of 60% subject to audit to establish true applicable rate estimated not to exceed 80% indicated by exact audit.

Excerpt from "Cost Principles" appendix to Federal contracts under which G-K has operated:

"(b) Allowable overhead items will normally include those indirect expenses of the Contractor's home office which are properly allocable to the contract by methods in accord with those generally accepted accounting principles which are applicable under the circumstances. The objective sought in such allocations is to distribute fairly and equitably to the contract, on the basis of the benefit received or in proportion to the cause of the incurrence of the expense, a reasonable share of the cost of each allowable item of indirect expense. Direct costs which are not allowable as such shall not be allowable as indirect costs.

"(c) Examples of items which are allowable may include reasonable salaries paid to partners, principals, officers and other direct employees; social security taxes, workmen's compensation insurance, payments under established pension, retirement, group health, accident and life insurance and incentive payment plans, and vacation, holidays and severance pay, sick leave and military leave pay all to the extent that such items are not included in the direct costs authorized by the contract; also

legal and accounting expense, new business activities, clerical and stenographic work, general accounting, personnel, office and drafting room supplies, depreciation of buildings, office and drafting room furniture and equipment and/or amortization of leasehold improvements, local telephone service, rent of office space and equipment, utilities, non-allocable time of engineers, draftsmen and other technical employees."



U.S. DEPARTMENT OF JUSTICE  
OFFICE OF LAW ENFORCEMENT  
ASSISTANCE

APPLICATION FOR GRANT

**Project Plan and Supporting Data**

This section constitutes the heart of the grant application. It is the applicant's detailed statement of the project—its aims, precisely what will be done, who will be involved, and what is expected to result. Together with the project budget, it constitutes primary evidence to OLEA of the soundness of the project, the care and planning that has gone into its formulation, and the responsibility and qualifications of the applicant and others who will be involved in carrying it out.

Attach to this sheet as many additional pages (8" x 10 1/2" or 8 1/2" x 11" sheets—not legal size) as may be needed to complete the description of Project Plan and Supporting Data. Where the applicant wishes to append documents as supplemental information and these cannot readily be placed on continuation sheets, they should be listed on the last page of the Plan and 12 copies furnished with the application for staff and panel review.

\* \* \* \* \*

Begin this section with a brief summary of the total project not to exceed 200 words in length.

This project is to be concerned with the modernization of police records and data systems, using the latest concepts -- including new means of oral and physical communication -- to reduce the complexity and time required of the field officer for records purposes; to provide the field officer with more comprehensive and more timely information; and to provide a more complete and accurate record to improve local administration, coordination of police activity among the jurisdictions in the metropolitan area, and submission of required reports to State and Federal authorities.

The proposed records and data systems will improve capacity for meeting all present operating, analytical, and reporting requirements, and, in addition, will enable the authorities to relate the specific steps they take to results produced.

The project will combine the experience and understanding of needs provided by the Phoenix Police Department and neighboring agencies with the broader experience of a general consulting organization.

The total amount of funds requested from the Office of Law Enforcement Assistance is \$92,485. In addition, the "in kind" contribution by the City of Phoenix is estimated at \$51,211.

Organize the remainder of the Project Plan and Supporting Data as per instructions for this section, under the following headings: I. Goals; II. Methods; III. Results; IV. Resources.

Continuation Sheet -

1. GOALS

The goals sought take on an added significance in the background of unusually rapid growth in Phoenix and the surrounding area within the past decade.

In 1956, the City had an area of 36 square miles and an estimated population of 185,000. Today, the City area totals 242.5 square miles and has a population of 505,666, according to a special census as of October 16, 1965.

Phoenix has moved from the 99th largest city in the United States in 1950 to the 29th largest U. S. city according to the 1960 census. It is anticipated that the population will reach 662,000 in 1970; 851,000 in 1975; and 1,083,000 in 1980.

The Police Department and police activities have necessarily expanded accordingly. Since 1950 the number of police patrol cars has been increased from 20 to 231. The number of traffic signals installed has increased from 85 in 1950 to 336 in 1966.

In 1956, major crimes totaled 6,900 as compared to the past year's totals of 30,673 major crimes and 16,384 traffic accidents. In the same period, the number of police employees has increased from 264 to 810 and Police Department expenditures have increased from \$1,611,855 to \$7,868,000.

A new Municipal Courts Building was opened in July 1961, filling an urgent need for additional traffic court facilities. Five full-time magistrates now are available to handle court appearances and traffic violations procedures have been revamped. A computer was installed in July 1965.

The need is imperative to take full advantage of the most modern equipment and methods to cope with this growth trend.

This project is to be concerned with the modernization of police records and data systems, using the latest concepts -- including new means of oral and physical communication -- to reduce the complexity and time required of the field officer in creating records; to provide the field officer with more comprehensive and more timely information; to provide a more complete and accurate record to improve local administration, coordination of police activity among the jurisdictions in the metropolitan area, and submission of required reports to State and Federal authorities.

As the law and the courts' interpretation of the law restricts the means by which the police can gather evidence and apprehend, hold, and build a case against a suspect, it becomes increasingly important that all available permissible information be used with maximum effectiveness.

Despite political considerations that may cause separate but immediately adjacent political subdivisions to continue to maintain their separate existence, the practical requirements of the war on crime require the centralization and correlation of information and its complete and rapid dissemination back to all of the law enforcement agencies in the area. The criminal element plans and conducts its activities without regard to political boundary lines; the police need the intelligence and data systems to enable them to match this far-ranging activity.

Phoenix and its nearby neighbors seek to create a records system which will improve capacity for meeting all present operating, analytical, and reporting requirements and, in addition, which will enable the authorities to relate the specific steps they take to results produced. The proposed plan should close the gap between when a given measure is taken (i.e. a greater concentration of manpower at a given time and place), and the time when the results of that action, if any, are evident.

It also seeks to relate individual case data more specifically to the other available information about the persons and properties involved.

It is sometimes said that police and other departmental records tend mainly to show how busy the organization has been. We seek instead to be able to determine how successful it has been in its mission.

A primary goal is to improve the value of the records system to the officer in the field. A police record system ought to be a source of information to be used in planning the strategy and tactics for crime prevention and law enforcement. Preserving a record of what has happened and providing such data in a form to satisfy State and Federal reporting requirements should be a by-product rather than the main purpose of the records system.

Whenever a person or place or object has come to the attention of the police for any reason, the necessary identifying information and relevant circumstances should become a part of the record under a system which makes it quick and easy to put the data into the system, provides a speedy and flexible cross-check against all other relevant information already on file, affords an automatic feedback if the latest information in correlation with earlier records requires immediate attention, and otherwise have the data available for any future reference, including future cross-checks with other data which may come in relating to the same person, place, or object.

There is always latent in any police record system a great deal of uncorrelated intelligence. If upon a given occurrence, the records could be immediately scanned and correlated, more cases would be solved, more effective arrests made, fewer wanted persons temporarily in the hands of the police on minor charges would be inadvertently released, and there would probably be more lives saved.

Electronic systems, properly designed, will enable the Police Department to correlate each new bit of data with all else in the files and thereby assist in the solution of crimes, in anticipating potential crimes through recognizing emerging patterns of behavior by individuals, and in warning a police officer in the field that a vehicle he is about to approach is stolen, or that a person he is interrogating is wanted or is known to be dangerous.

The police officer in the field can benefit from the proposed plan, if it fulfills its expectation, because he will have to devote less time to creating records or checking them when he needs information; he will get instant responses and more complete information when he needs it; he will be better warned in dangerous situations; and he will benefit generally from the fact that the war on crime will be better planned and better waged.

## II. METHODS

The City of Phoenix as a sponsor of this project will utilize its own resources and those of the State of Arizona, the County of Maricopa, and surrounding suburban cities to gain the widest possible base of information and to demonstrate the advantages of the resulting new record system, both for a major city police department and for neighboring and cooperating agencies. The interest and cooperation of many of these agencies has already been expressed and is evidenced by accompanying letters.

Without necessarily committing the project to this at this point, it may also be possible to gain the cooperation of more distant cities, such as Flagstaff, Tucson and Yuma to demonstrate both the feasibility of more remote communication linkages, and to gain for all participants the advantage of sharing information about the movement of criminals between the metropolitan center and more distant outlying areas.

In addition to maximum participation by interested cooperating agencies, the work plan for this proposed project contemplates that the services of a general management consulting organization will be utilized to bring into play in this undertaking a broader view of police records requirements, a broad experience in inter-governmental relationships, a thorough understanding of new equipment and techniques, and the added specialized staff that neither the City nor any of the other nearby participating agencies are able to provide. The consulting organization will, in turn, be expected to supplement its staff, as necessary, with specialists in particular equipment and techniques, and its own advisors in police administration.

The City of Phoenix will furnish appropriate staff and clerical assistance and office facilities to the general management consulting organization. That organization, however, will be responsible for overall direction and coordination of the study in relation to all other consulting agencies or individuals.

Coordination and direction of the overall study by the general management consulting organization will be kept under close review by an advisory committee consisting of the City Manager, Assistant to the City Manager, Police Chief and Research and Budget Officer. The advisory committee will be appointed by the City Manager to serve in this capacity through the implementation and documentation of the model records and data system to be provided under this project.

The first step in the project, after its authorization and organization of the committee and staff, will be for the consulting organization to undertake a thorough analysis of the information and records requirements of a metropolitan police department, not starting with the question of how to convert present systems to more efficient machines, but rather making a completely independent determination of the kind of information needed for departmental operations, for crime prevention and for law enforcement, for analytical, operational, and reporting purposes. Due emphasis will be given both to the

requirements of the City as the administrator of a police department, and to the requirements of the officer in the field as the representative of that department in relations with the general public and in confrontation with the potential and known criminal.

The analysis made of requirements in Phoenix will be checked by the consultants by discussions with other major law enforcement agencies in the country.

Upon agreement among the consultants, the advisory committee, the Phoenix Police Department, and the cooperating agencies as to information and data objectives, the consultants will proceed with the general design of a system which can best serve these needs, utilizing the most modern of known equipment or, if possible, the new generations of equipment nearing the market, with special attention to means to facilitate input and output, to reduce the time required of the officer in the field to make reports, and utilizing the media of communication now available or which could be made available between the record system and the man in the field.

Following this general systems design, the consultants, in cooperation with the others, will make determinations about the feasibility of utilizing existing computer and allied equipment used by the City of Phoenix; and as other alternatives, will consider the possibilities of contracting for computer time elsewhere, or acquiring other equipment particularly suited to law enforcement needs.

On the basis of whatever decision is made about equipment, consultants will then direct and assist and participate in the application of the proposed design to a substantial sample of each kind of information required to go into the system in order to test the feasibility of the plan.

The system design and the mechanisms for input and output will be further refined on the basis of experience until a workable plan can be demonstrated.

At that point, the City of Phoenix will make its decision about whether it can fully implement the plan immediately on its own resources, whether to seek additional grants to facilitate moving ahead, or whether to defer it until local financing is possible. Independently of that choice, the final report resulting from this project will describe the resulting model and all of its equipment and systems requirements in sufficient detail that it can be adapted to the use of other police departments.

The total term proposed for this project is one year. The several stages will overlap to a substantial extent, but it is generally estimated that the first three months will be required to reach final conclusions about new concepts and objectives, the middle six months will be required for the development of systems, and the final three months for testing, revision, and preparation of the final report.

### III. RESULTS

#### Evaluation

A highly important aspect of this study must be the development of evaluation techniques. These should be of two principal kinds:

The first is the evaluation of change itself, concerned with how the new systems meets the expectations of greater speed, flexibility, and versatility in correlating information. Exactly what the evaluating method will prove to be is hard to predict, for it depends in part on the kind of new systems yet to be devised.

Some criteria are obvious, such as comparative man-hours and other costs entailed in preparing a monthly report to the FBI, and the time beyond the close of the reporting period required to complete the report, both before and after the system is developed. This leads to the incidental observation that, given compatible systems and equipment, a "report" in the traditional

sense may no longer be required at all, since the Phoenix computer could communicate directly with the FBI's equipment.

Other more telling criteria for measuring and deciding the benefits of change would have to be devised as the work proceeds. The facts of public life being what they are, some part of this evaluation will have to relate to relative costs, but to a far greater extent, the emphasis will be on relative benefits, particularly in making the man in the field a more fully effective protector of the public.

The second set of measures of effectiveness do not relate to change of records system but to changes in police strategy and tactics that better information would make possible. When better, more complete and more timely records are available, the Police Department will utilize this intelligence to change the deployment of its manpower and equipment, based on its better informed judgment. By including these changes in the system, and by relating them to the occurrences toward which the redeployment is directed, the Department can get instant feedback to show whether a change of practice produces the anticipated results. If not, further changes can be made until the right combination is found to assure the right result.

The evaluation techniques to be developed, therefore, will be concerned as much with how the Department is better able to do its total job as it is with how it is better able to do its record keeping job.

Significance

The significance of this project is described in the goals it seeks to attain. It proposes to apply imaginative thinking and to adapt the latest in equipment and data systems concepts to meeting the organizational, analytical, and reporting requirements of a metropolitan police department in a rapidly growing part of the country. It intends in this development to recognize that

a single city should neither restrict its records to its own information nor to its own use. It should develop a plan utilizing modern communication linkages which will both obtain information from and provide results to the other agencies in the area with which it must cooperate in the war on crime.

The result of this undertaking is intended to be a working model of a modern police information system which can be installed and used by the City of Phoenix in cooperation with as many of its neighbors as find it possible to participate, with the details of the system described in such detail that it will require little adaptation or effort to suit it to any other department having comparable interests and problems.

Continuation

If the project fulfills its expectations, the City of Phoenix expects to transform the model into full operation. Whether this can be done in the fiscal year immediately following the completion of the project or whether it will require some phasing because of expense entailed, is a question to which there is no answer until the scope and cost of the system is known. If necessary, the City will seek further Federal or foundation support to bridge the gap, but it confidently expects that the resulting system will be well within the resources of the City within a relatively short time after the project has been completed.

Dissemination

As indicated in foregoing references, it is intended that the project will result in a report fully describing the equipment and systems in such detail that it could be readily used by other police departments. The resulting report will be prepared in sufficient quantity in order that it can be distributed upon request to qualified organizations or institutions. In addition, we would assume that the general results will be of sufficient

interest that the consultants, collaborating with City officials, will develop popular versions of the findings and recommendations to be published in professional journals and the publications of associations of local governments and their officials.

#### IV. RESOURCES

##### Qualifications and Facilities of Grantee

The principles and practices of council-manager government have been firmly established in Phoenix since 1950. This fact is nationally recognized as being the direct result of active and progressive citizen participation in city government.

As an example of administrative continuity since 1950 -- the same city manager selected by a reform City Council in 1950 remained in office over 11 years, despite the fact that he served under five different mayors and 27 different Council members. This provided a continuity in management that proved invaluable, considering the tremendous growth of the city.

A continuing emphasis on citizen participation in government has brought two All-America Awards to Phoenix during the period between 1950 and 1966. Citizen participation in municipal affairs is encouraged wherever possible. Citizens' committees are used to advise the City Council and the administrative staff on specific problems as well as to develop public understanding of proposed projects.

A number of citizens' advisory committees have performed yeoman service to the City and to the community in general. Excellent examples of these are the 1957 and 1961 Phoenix Growth Committees, the Citizens' Bond Advisory Committee, and numerous citizens' groups participating in the various anti-poverty activities sponsored by Operation LEAP, a department of the City of Phoenix organization.

From 1957 to 1962, citizens showed their faith in city government by approving \$173,000,000 in bonds for necessary improvements in facilities and services. One of the first projects completed as part of the 1957 bond program was construction of a jail compound with a capacity for 750 prisoners. The \$300,000 facility relieved over-crowded facilities at the downtown jail.

As part of the bond program, a new Municipal Building and Council Chambers, part of a City-County complex was completed in the spring of 1963. Construction of a new multi-million dollar Police and Courts Building is tentatively planned for 1968-69, with architectural work to begin in fiscal year 1967-68. This building will be located on one of the six blocks of the City of Phoenix-Maricopa County Governmental Center.

City Councils since 1950 have refrained from establishing quasi-independent boards, commissions or authorities with the responsibility for administration of specific municipal functions. The philosophy of City Councils has been that the greatest responsiveness to citizens' needs come when policies are established by the elected representatives of the people and carried out by an administrative organization under the direction of a trained and experienced city manager.

Since 1950 City Councils have demonstrated their understanding of the respective roles of the City Council and the City Manager and have established harmonious working relationships with the Manager. The result has been that the Council has been effective in carrying out its legislative and policy-making duties and the Manager has been effective in his administrative duties.

Blessed with energetic and interested citizens, willing to give of their time to solve tremendous problems of growth and development, Phoenix faces an era of unlimited development.

The direct grantee in this case is the City of Phoenix and, more particularly, its Police Department. Having undergone the rapid growth described earlier, the Department is thoroughly familiar with the problems of a metropolitan department and the needs for developing a more modern record system.

Within the last ten years the Phoenix Police Department has been given numerous awards for outstanding achievements. Some of these awards are: I.A.C.P. Traffic Enforcement Supervision; National Safety Councils-Fleet Safety Award; National Police Officers Safety Award and several other awards.

Probably the most important achievement of the Department has been the emphasis toward the improvement of organizational effectiveness. Within the past six years three major reorganizations have taken place in an effort to improve overall efficiency. In this respect it has been the desire to improve the administrative as well as the operational functions of the department with increased emphasis being placed on crime prevention activities.

The following is an example of the educational background, past employment and experience of the various City staff members that will be available to assist the general management consultant group.

Police Captain (G. Selby) - Project Director

Twenty years with Phoenix Police Department. Graduate of the F.B.I. National Police Academy. ICMA (Municipal Police Administration Studies). Various additional studies in law enforcement and related fields. Various assignments with the department. Currently the command officer in charge of the Field Services Bureau that includes the Records and Identification Section.

Police Lieutenant (T. Blaine)

Ten years of service with Phoenix Police Department. Graduate of Northwestern University Traffic Institute (Police Administration). College studies at Phoenix College and Arizona State University. Various assignments with Department, currently Budget and Personnel Officer.

Police Lieutenant (F. Kurth)

Thirteen years with Phoenix Police Department. I.C.M.A. (Municipal Police Administration Course), work on various assignments in the Department, (i.e. Budget Officer, research projects, and reorganization surveys).

Police Lieutenant (J. Allen)

Nineteen years with Phoenix Police Department, nine of which were in the capacity of Records and Identification Supervisor. Experienced in computer and data processing applications along with business and office methods. Member of International Association of Identification plus the Advisory Group to I.A.C.P. Committee on Uniform Crime Reports.

Police Sergeant (L. Hicks)

Twelve years with Phoenix Police Department. B.S. in Political Science from Arizona State University. Currently enrolled in Masters program, School of Police Administration, Michigan State University. Various assignments with the Department.

Police Sergeant (H. Ennis)

Six years with Phoenix Police Department. Various assignments with the Department. Currently enrolled at Northwestern University Traffic Institute.

Administrative Assistant II (A. Pasquan)

B.S. degree in Police Administration from Michigan State University. M.A. degree in Public Administration from Wichita State University. Police Chief, El Dorado, Kansas (five years). Graduate of the F.B.I. National Police Academy. Administrative Assistant with the City of Phoenix Division of Research and Budget (6 years).

Continuation Sheet -

Police Administrative Intern (D. Aultman)

B.S. in Education from Ohio Northern University. M.S. in Police Administration from Michigan State University. Administrative Intern with Phoenix Police Department (1 year).

Computer Programmer II (J. Hanna)

Employed with the City of Phoenix for three years. College studies at Phoenix College. IBM training. Computer Programmer II with City of Phoenix (one year).

Systems and Procedures Analyst I (D. Willis)

Employed with the City of Phoenix Division of Research and Budget for one year. Education and previous experience devoted to paperwork simplification, systems and procedures analysis and forms control.

Since a large part of the responsibility for the direction, coordination, and execution of this project is proposed to be entrusted to an independent consulting organization, that organization's qualifications are of equal or greater importance. This grant application has been prepared in consultation with Griffenhagen-Kroeger, Inc., specialists in public management.

The following synopsis of experience of Griffenhagen-Kroeger, Inc., is included to show the general criteria for the selection of an independent management consulting organization. The general management consulting organization chosen for this project will be required to have a similar background of experience.

Griffenhagen-Kroeger has existed in its present form since 1959, when it was formed from two organizations, Griffenhagen & Associates, founded in 1911, and Louis J. Kroeger & Associates, founded in 1945. This total organization represents a wide and varied experience in public administration, including quite specific experiences related to this project.

Continuation Sheet -

In broad terms, Griffenhagen-Kroeger, Inc. has many years of experience in organization and systems for national, state, and local governments. Its general organization and systems studies have included police agencies, ranging from the national constabulary and intelligence agency of the Philippines to such local agencies as the police departments of Los Angeles and Long Beach, California, and the Sheriff's office of Santa Clara County, California.

It has had other experiences limited specifically to police department organization and methods, including concentration on records, of which recent examples have been in Lubbock, Texas, East Orange and Linden, New Jersey, and San Luis Obispo and Union City, California. A similar study is about to be undertaken in Orange, New Jersey.

In its work with police departments, Griffenhagen-Kroeger, Inc. has used its general administrative analysts, combined with experienced police administrators. It regularly utilizes the services of John Holstrom, retired Chief of Police of Berkeley, California, and former President of the International Association of Chiefs of Police, and, on other occasions, uses an active Police Chief on loan from his department.

In this instance, there is required an added element of experience in and understanding of modern data systems and equipment. In that respect, Griffenhagen-Kroeger, Inc. as a member of The Diebold Group, can draw on the diversified experience of John Diebold and Associates, leading international consultants in data processing. Of particular importance to this project is that the current Diebold Research Program provides information about the nature and stages of development of new generations of computers and associated equipment.

In addition to drawing on the staff and resources of its affiliate, Griffenhagen-Kroeger, Inc. has its own staff specialists in data processing as applied to public administration. Recent assignments include consulting with

the Lockheed Space and Missiles Company in that organization's widely publicized application of aerospace industry techniques to governmental information problems; a review of the total data systems of New York City; and assistance to the States of New York and California. The most recent data specialist added to the Griffenhagen-Kroeger, Inc. staff has come immediately from an assignment in behalf of his former employer for the Department of Justice of the State of California

Staff and Staff Organization

The City, as the direct grantee, will designate as project director, Captain of Police, Gordon Selby, Field Services Bureau. The City will also designate an advisory committee whose role has been previously discussed.

Other City staff to be provided during the term of the project are 25% of the time of a Police Captain, a Police Lieutenant, a Police Administrative Intern, an Administrative Assistant II, and two Secretaries II, and 50% of the time of a Computer Programmer II.

The consulting organization will provide general direction through its Executive Vice President, Mr. Louis J. Kroeger, who has directed the organization's activities for 20 years in the full scope of its professional services to government. Mr. Kroeger, in addition to his 20 years in consulting business has had extensive state and Federal administrative experience, principally as Personnel Director for the State of California, as Executive Officer for the Rationing Department of the Office of Price Administration, and Director of Administrative Services for that organization.

The consulting organization is unable to designate by name members of its staff who will be associated with this project until the time of its starting is definitely established. It will, however, provide a project director immediately responsible for the work in their behalf, who will be qualified

in government organization and systems analysis, together with other specialists in systems analysis, in data processing, and in police administration. The extent of this service is shown in the proposed budget.

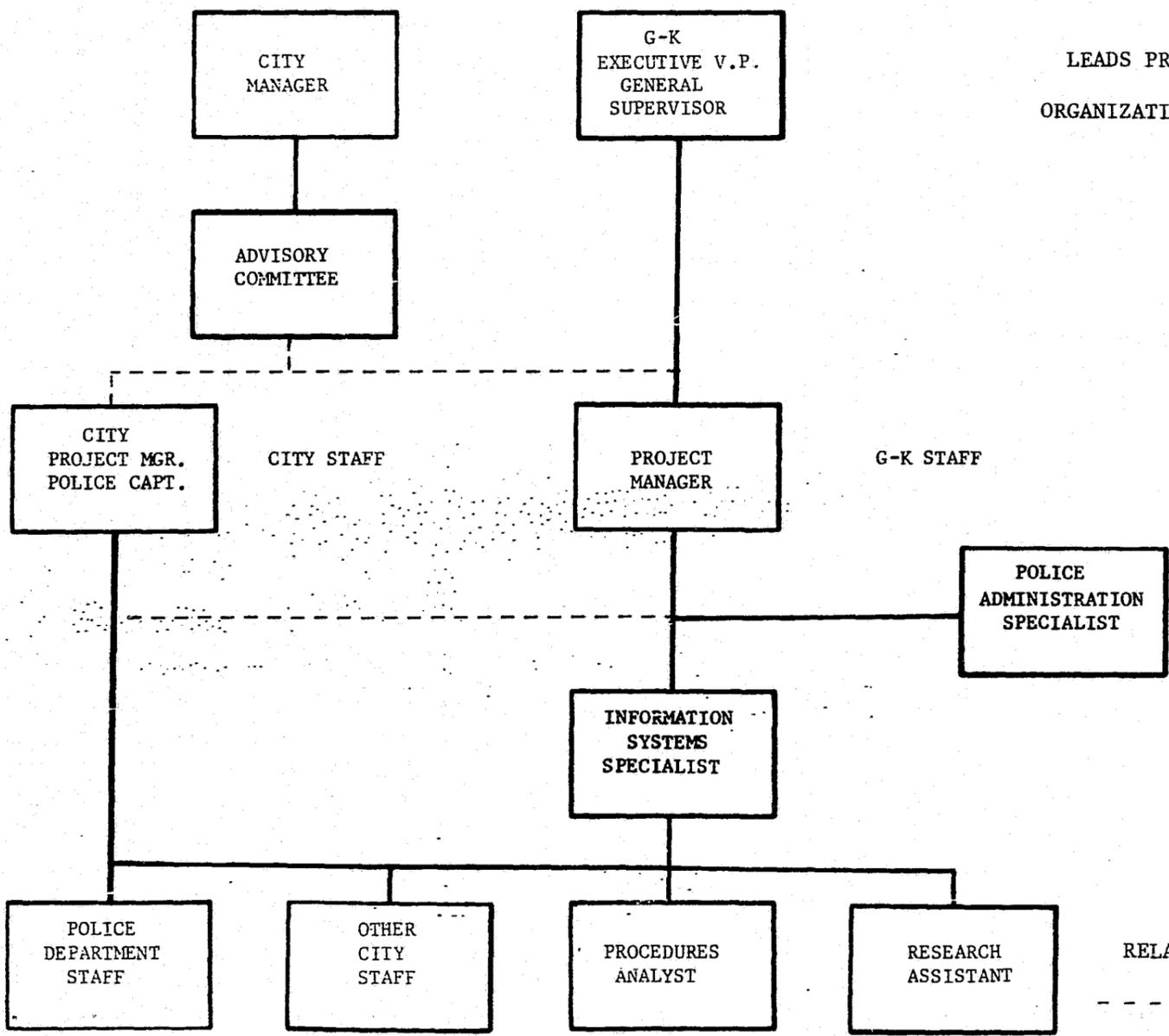
Cooperating or Participating Agencies

As previously indicated, participants will include the City of Phoenix, the consulting organization, an advisory committee to be appointed by the City Manager, the Arizona Highway Patrol, the Sheriff of Maricopa County, and the Police Departments of Scottsdale, Mesa, Tempe, and Glendale, with perhaps others whose interests can be attracted to the project.

The interest of the other agencies just identified is evidenced by accompanying copies of letters from them.

LEADS PROJECT  
ORGANIZATION CHART

SECTION B  
PROJECT ORGANIZATION  
STAFFING AND TRAINING



RELATIONSHIPS:  
 - - - - - COORDINATION  
 \_\_\_\_\_ DIRECTION

### Introduction

The project was organized to provide the law enforcement understanding and experience of the Phoenix Police Department combined with the management and information systems experience of Griffenhagen-Kroeger, Inc., a public administration consulting organization. In addition to its staff competence, the consulting firm also provided additional specialists in police administration, procedures development, communications, and records management. The consultant was made responsible, under the terms of the contract with the City, for the overall direction and successful completion of the study.

The progress of the study was periodically reviewed by an advisory committee selected and appointed by the City Manager and consisting of the following representatives of the City of Phoenix management:

The Chief of Police.

The Finance Director.

The Research and Budget Officer.

The Assistant to the City Manager (who acted as chairman).

The primary objective of the advisory committee was to provide a continuous review of the project progress and to insure the development of a workable system resulting from the study.

### Project Staffing

The Phoenix Police Department served as the principal contributor of staff to the study. The City contributed office space and supplies for the duration of the study. The following City of Phoenix personnel were assigned to the project:

#### Police Department

- 1 Police Captain (Project Director and Coordinator for the City).
- 1 Police Identification Supervisor (Police Lieutenant).
- 3 Police Sergeants.
- 1 Police Administrative Intern.
- 1 Secretary.

#### Other City Departments

- 1 Systems and Procedures Analyst.
- 1 Computer Programmer.
- 9 TOTAL

#### Other Contributions

Throughout the project, a considerable amount of time was devoted by various members of the Phoenix Police Department and other City departments. Additionally, the Phoenix Junior College police science students devoted several hundred man-hours of effort during the data collection and analysis phase of the project.

The project organization was composed of a management and direction level consisting of the assigned Police Captain and the consultant's project manager. The day-to-day work progress and ultimate design of the system was the responsibility of the consultant's Information Systems Specialist. The work production was primarily done by the Police Identification Supervisor (at the early stages of the project) and the three sergeants assigned as staff. The consultant's other staff was brought in for only limited periods of time on special assignments.

It is interesting to note that, with few exceptions, the Police Department staff brought no previous experience in systems design or procedures

analysis to the project. However, as an indication of the competence and analytical resources existing in the department, these officers produced a final result that would normally be considered difficult or impossible for an inexperienced staff. All officers concerned exhibited imagination and inventiveness in approaching the day-to-day problems of the project even though most of the staff had had no previous preparation in dealing with these kinds of problems.

#### Staff Training

In order to obtain the greatest benefit possible of the understanding and experience provided by the police department personnel, the consultant provided initial training in systems analysis, procedures writing, work flow charting and computer orientation. Also, the LEADS staff and other selected members of the police department attended a condensed in-house course on COBOL (Common Business Oriented Language) to afford a better understanding of problem definition and computer programming. In addition, the consultant conducted a computer systems orientation seminar for the police department administrative personnel. And, as a part of the continuous training throughout the project, the police staff was exposed to various systems and equipment presentations and demonstrations.

The training was not one-sided. The Chief of Police had selected the department's staff contributions with care in that a variety of departmental operations experience was represented. The consultant's staff can be said to have received a series of intensive courses in police science and tactics during the course of the project. With rare exceptions, all required information regarding departmental operations was immediately available to the consultant in the persons of the competent officers assigned to the project.

SECTION C

STUDY METHODS AND SCHEDULES

Introduction

The study began on a full-time basis on September 19, 1966. Prior to this, the City of Phoenix staff devoted considerable time to preparing office space and obtaining office equipment. The personnel to be assigned to the project were selected and the necessary adjustments were made within the department to permit these assignments, and on September 12, and 13, 1966, the LEADS staff met to discuss general project goals and establish a tentative work schedule for an initial two months of orientation. The first advisory committee meeting was held on September 19, 1966, to establish working relationships and to define specific areas of responsibility. A tentative project schedule for the first phases of the study was presented by the consultant and reporting requirements were adopted.

At this stage of the project, only the most general of goals had been established by a combination of the thinking that went into the City's application for grant and the consultant's proposal. Fortunately, no attempt had been made to date to pre-structure the progress of the study and its methods or to specify minutely its objectives. Quite wisely, the City permitted the consultant the opportunity to experiment and innovate to the greatest degree possible to the end that a really different and imaginative result would be obtained. This approach has its hazards, the most deleterious of which is that an inordinate amount of time can be spent on experimenting with concepts with no progress being made toward a concrete result. Some of this did occur and some false starts were made, however, without an initial period of trial and error and search for new concepts, the final result might have suffered.

### Study Methods

The project was conducted in four major stages:

1. Orientation.
2. Creation of an Information Base.
3. System Design.
4. Documentation.

These stages are listed for the purposes of reporting. Actually, the work at any one stage considerably overlapped that of other stages. Due to the many design details, ranging from the simple to the complex, some were being developed during the orientation period and many were not finally adopted until documentation was underway.

#### Orientation

The project staff turned early attention to the appraisal of the available existing information on other law enforcement systems of relevance to the objectives of the study. Two purposes were involved:

1. The staff should not expend time designing systems that were already in existence elsewhere or, conversely, attention should be devoted to designing systems that did not exist if law enforcement progress was to be made.
2. The identification of problems or difficulties encountered by others in system design would contribute to the elimination of similar pitfalls during the project progress.

A second aspect of the project orientation was to achieve an awareness of general records and communications problems that existed in Arizona law enforcement agencies that might have an interest in the system to be designed for Phoenix.

A third aspect of the orientation was to make the members of the Phoenix Police Department aware of the scope and objectives of LEADS and to solicit their assistance in the development of the system. This was accomplished by:

1. Conducting meetings with all departmental supervisors and administrators at which project goals were outlined and cooperation was solicited.
2. Distributing to each member of the department a personal memo regarding the project and containing a request for assistance when needed.

The appraisal of other law enforcement systems and the achievement of an awareness of regional and metropolitan problems was accomplished by a series of two-man team visits (one consultant and one police department representative) to the following Arizona agencies:

1. The police departments of:

Flagstaff

Glendale

Kingman

Mesa

Scottsdale

Tempe

Tucson

Yuma

2. The Maricopa County Sheriff's Department
3. The Arizona Highway Patrol

and to the following agencies outside of Arizona:

1. In California:

Alameda County PINS System

California Bureau of Identification and Investigation

California Highway Patrol Headquarters

Los Angeles Police Department

Los Angeles Sheriff's Department

2. In New York:

New York City Police Department

New York State Identification and Intelligence System

3. In Washington, D. C.:

Federal Bureau of Investigation (NCIC)

International Association of Chiefs of Police

Office of Law Enforcement Assistance

4. Elsewhere:

Chicago Police Department

Institute for Telecommunications Science and Aeronomy,  
Boulder, Colorado

St. Louis Police Department

In making the team visits in other states, some specific pieces of information were to be obtained in addition to any other system details that could be learned. Specific information sought included:

1. Descriptions of hardware, schematics and the computer languages used.
2. Available project reports or studies about systems.
3. All possible information about conversion and implementation problems.

4. The extent of ties with other data banks.
5. Cooperative arrangements with other user agencies.
6. Potential improvements and novel links.
7. General descriptions of systems.
8. System additions being projected.
9. Personnel, space, and other special requirements for existing and proposed systems.

These trips were deemed to be of value to the project. Areas of progress and problems, as experienced by the agencies visited, were called to our attention and discussed. The information gained was to be utilized throughout the progress of the study.

Creation of an Information Base

Before a system design could be started, it was imperative to create an information base that would be as comprehensive as possible to achieve within the time allocated to this aspect of the project. While a considerable amount of general design information was obtained through the accumulation of published materials and through the team visits reported above, it was necessary to build a base of specific elements of information that would eventually become the building blocks for the eventual system design. It was also necessary to be aware of the state of the technological arts in order that the system design be as advanced as possible.

To achieve the latter, contacts were made with equipment manufacturers who were known to have advanced equipment or equipment in the development stage. The result of these contacts are contained in a "state of the art" report prepared during the course of the project. This report is included in the appendix of this volume.

To build an information base, several steps were taken:

1. Questionnaires were distributed to all police department personnel with a request for submissions that would identify communications and operating problems, and informational needs. In other words, the individual officers and their supervisors were being asked what, to them, were needed pieces of information in order to be effective.

The response consisted of some 1,000 submissions containing informational needs and detailing:

- the nature of the information needed
- when it was needed
- who needed it
- who should supply it
- why it was needed
- how it was to be used

Several hundred hours were contributed by departmental personnel to this effort.

2. A definitive information elements catalog was created by:
  - a. Analyzing every department form and abstracting and classifying each piece of information on the form. Some 187 report forms were identified, containing 3,774 pieces of information (some later found to be overlapping), containing, in turn, 52,451 characters.
  - b. Supplementing the elements taken from the forms with elements contained in the departmental submissions discussed above.

This catalog, which became a primary source of information during the design phase of the project, is described in detail in the next section of this volume.

3. All procedures in the police department, which involved an exchange of information, were intensively studied and documented. All together, some 90 procedures were originally isolated for study although subsequent analysis reduced this to a limited number of basic input procedures. These input procedures are described in Chapter 1, Section A of Volume II.

#### System Design

The system design (detailed in Volume II of this report) was achieved through a series of steps:

1. With the information elements catalog and with the identification of major operational procedures, the major system and sub-system blocks could be selected for further analysis and development. The eight major system blocks tentatively selected for either manual improvements or computer application were:

- Stolen Property Information
- Directory and References Indices
- Personnel, Accounting and Property Resources
- Deployment and Incident and Crime Information Processing
- Communications Operations and Procedures
- Warrant Information Input and Retrieval
- Extra City Interface
- Police-Court Information Exchange

2. The work was then directed to identifying and describing procedures for each of these system blocks. First, current procedures were written; secondly, improved procedures were devised and documented (including process flow diagrams) and thirdly, tentative conclusions were reached regarding the relative importance of each procedure and its adaptability to an automated data process. (Non-essential or less important procedures were dropped from further consideration.)
3. Record and record transaction or activity volumes were computed to serve as a basis for determining the scope of conversion and implementation problems and the equipment capacities that would be required.
4. Data processing equipment capabilities were explored and related to the various blocks of information that had to be input, stored, retrieved and communicated.
5. Tentative system configurations were designed for each inquiry and response operational area.
6. Preliminary implementation studies were conducted to test the cost/benefit possibilities of each major system segment.
7. Input forms were devised and input and response formats were designed for the final system.
8. The effect of the tentatively defined system on the organization of the police department was analyzed and reorganization patterns were developed.
9. Basic conversion requirements were isolated.
10. The final design was started, based upon the previous analyses and

the resolution of experimental alternatives, and system configurations and equipment specifications were prepared.

11. Final conversion costs were calculated and cost comparisons between the present and proposed system were prepared.
12. Implementation schedules were developed.

During the design stage of the project, it was determined that the development of a novel system employing the City's computer would be possible with a relatively small expenditure of design and programming time.

This proposed system offered a number of advantages and features:

1. Currently available data (through dispatch punch cards) could provide a data base.
2. Computer time to process the system would not be significantly greater than the present police department production time.
3. It would provide a significant improvement in the information available for command officers.
4. It could be easily fitted into the ultimate design of the ALERT system.

This system, called "AID" (Analysis of Incidents and Deployment), provides field commanders of the department with the ability to assign police personnel to all areas of the City based upon computer predictions of manpower needs. To achieve this capability, a data base was compiled by creating a punched card ("Dispatch Card") each time a police unit was dispatched on a call or on a citizen's request for service. Based on 12 months (or longer if desired) previous history of these dispatches, command officers may request a computer printed map indicating for any day, shift, beat, etc., the percentage of police manpower which would be required in

any area of the City at any time of day. Twenty-one of these maps can be produced for any forthcoming week, one for each shift of each day.

Also, by this same system, reports and graphs may be produced, either on request or cyclically, to provide statistical data as to crime volumes, time of occurrence, and locations which will assist the department command in efficiently deploying manpower.

Certain other required statistical reports can also be produced by the system, such as the FBI Uniform Crime Reports, City administration reports and others.

This system was fully programmed and put into operation during the course of the project. The details of this sub-system are described in Chapter 2 of Volume II of this report.

#### Documentation

The project results were documented in three parts:

1. A project summary report containing these section headings:
  - a. The Grant
  - b. Objectives of the Project
  - c. Project Organization and Staffing
  - d. Staff Development
  - e. Project Methods and Results
  - f. Demonstration System (AID)
  - g. System Implementation
2. Volume I (this volume)
3. Volume II containing these chapters and sections:  
Chapter 1 - System Description

Section A - Source Data Procedures

Section B - Processing Procedures

Chapter 2 - Demonstration System (AID)

Chapter 3 - System Configurations, Specifications and  
Implementation

Section A - System Configuration and Equipment Specifications

Section B - System Conversion

Section C - Implementation Schedules

Section D - Police Department Organization and Staffing

These documents were reviewed by the Office of Law Enforcement Assistance and printed by the City of Phoenix.

SECTION D  
INFORMATION ELEMENTS CATALOG

One of the significant products of LEADS was an information elements catalog containing, in a variety of classifications most, if not probably all, of the pieces of information required for communications in a police department. While the catalog contains some defects, the most pronounced being a considerable number of element duplications, still the catalog became an important design resource during the project.

As a first step in providing the catalog, all departmental forms (187 forms) were gathered and identified with associated files (291 files). Secondly, each element of information on the forms was abstracted, listed, and coded. Thirdly, all the idea and information needs submissions from police department personnel (1,000 contributions) were analyzed and structured as elements, sets, and files for comparison with existing information content.

In order to classify the elements, a method was developed for recording the elements on a form and at the same time supplying other information regarding the elements that would be valuable in the identification of data sets and files. To promote the uniform recording of element information, an instruction sheet (LEADS Set-Element Chart Guide), a form (LEADS Set-Element Chart), and a code system (LEADS Code Sheet) were prepared. These documents are presented on the following pages.

Because of the sheer volume of the work in recording the information elements from almost 200 forms, the assistance of the police science students attending Phoenix Junior College was requested and provided. A majority of these students were members of the Phoenix Police Department.

The LEADS staff accomplished the editing, logging, and assignment of element code numbers on the set-element sheets and prepared the data processing procedures including detailed report formats. The raw data was then submitted to the City's Computer Services Section for processing.

These catalogs of information provided a comprehensive collection of law enforcement information element content, file location and volume. These catalogs provided one of the bases for the ALERT system design and will continue to be valuable reference volumes during the implementation effort.

Following the data recording forms and instructions are samples of the LEADS information elements' catalog. The samples show the last page(s) of each catalog as the complete catalogs are too voluminous for publication in this report.

#### PURPOSE:

In order to design a model law enforcement information and communications system, it is necessary to use a total systems analysis approach. The technique developed by the Phoenix LEADS Staff involves the determination of existing and required elements of information, present flow of information, and current reports storage and handling activities. The attached Set-Element chart provides a formal collection document from which this information can be converted to punched cards. The information collected will be processed to determine interrelationships of data flow, storage volume, and file duplication. Further analysis will provide observations concerning the blocks of information from which a detailed design of an optimum law enforcement information and communications system can be developed.

#### DEFINITIONS:

The Data Element is the smallest portion of basic information, i.e. stock number, license number, name, etc.

The Data Set is a combination of data elements as utilized in forms, records, or reports.

The Data File is an aggregation of data sets accumulated for a definite usage.

The Data Block is a combination of structured or unstructured files related by some gross subject classification, i.e. people, objects, time, dollars, etc.

#### INSTRUCTIONS

##### Data Set (Boxes Left to Right)

1. Set # Enter 3 digits of set identification coding as directed by LEADS staff.
2. File # Enter the 3 digit file code from the code sheet to indicate the file in which this document is placed.
3. Source Enter the 2 digit activity code from the code sheet to indicate the creating activity for this document.
4. Dest. Enter the 2 digit activity code from the code sheet to indicate the destination of this document once it leaves the above source.
5. Freq. Enter the 1 digit transaction frequency code from the code sheet.
6. IOG Enter the 1 digit IOG code from the code sheet to indicate whether this document is an input into the police department from a field officer or outside activity, an output from a police department activity, or generated (created) within the police department.
7. Act. Enter the 2 digit activity code from the code sheet to indicate the activity of major use of this document.
8. App. Reserved for data processing use.
9. Dem. (1st digit) - Enter the 1 digit code from code sheet to indicate whether set exists or is needed.  
(2nd digit) - Enter the 1 digit code from code sheet to indicate whether set involves persons or objects.
10. Name Print the official name of the document in 25 characters using clear abbreviations as needed.



LEADS CODE SHEET

FUNCTIONAL ACTIVITY CODES

- 10 Administrative Bureau
- 11 Background Investigation (Personnel)
- 12 Budget and Payroll
- 13 Training
- 14 Plans
- 15 Range and Firearms
  
- 20 Special Investigations Bureau
- 21 Intelligence Detail
- 22 Narcotics Detail
- 23 Vice Detail
  
- 30 Community-Relations Bureau
- 31 Internal Security
- 32 Community
- 33 Internal Inspections
  
- 40 Patrol Bureau
  
- 50 Traffic Bureau
- 51 Hit and Run Detail
- 52 Warrant Detail
- 53 Enforcement Detail
  
- 60 Field Services Bureau
- 61 Records and Identification
- 62 Property
- 63 Police Lab
- 64 Detention
- 65 Complaints
- 66 Communications
- 67 Jail
- 68 Compound
  
- 70 General Investigations Bureau
- 71 Burglary Detail
- 72 Forgery Detail
- 73 Fugitive-Liaison Detail
- 74 Robbery Detail
- 75 Theft/Burglary from Auto Detail
- 76 Persons Detail
- 77 Auto Theft Detail
- 78 Homicide Detail
- 79 Night Shift Detail
  
- 80 County/City Prosecutor
- 81 County Sheriff's Office
- 82 Non-Government
- 83 Courts
- 84 Motor Vehicle Division
- 85 Other Law Enforcement Agencies
- 86 Fire Department
- 87 FBI
- 88 City Government
- 89 State Government
  
- 99 General Phoenix Police Department Activity

TRANSACTION FREQUENCY

- 1 Yearly
- 2 Quarterly
- 3 Monthly
- 4 Weekly
- 5 Daily
- 6 Hourly
- 7 Non-Scheduled
- 8 Immediately

INPUT/OUTPUT/GENERATED (IOG)

- 1 Input
- 2 Output
- 3 Generated

DEM. (1st Digit)

- 1 Exists
- 2 Need Now
- 3 Later

DEM. (2nd Digit)

- 1 Persons
- 2 Objects
- 3 Both

ELEMENT # (Left hand digit)

- 1 Name
- 2 Physical/Personal Description
- 3 Location or Address
- 4 Property Information
- 5 Department Information
- 6 Date and Time
- 7 Processing Elements
- 8 Identification Numbers
- 9 Criminal Tactics
- 0 Other

A/N ALPHABETIC NUMERIC

- 1 Alphabetic
- 2 Numeric
- 3 Combination

LEADS Report Number I L

Files Location Catalog

This catalog lists the 291 Phoenix Police Department files by location, indicating for each file the functional location within the department (see the "Functional Activity Codes" part of the LEADS Code Sheet), the accumulated quantity of documents, the average monthly document increase, and the average monthly number of file transactions. An overall total of these quantitative fields is produced at the end of the catalog.

LEADS REPORT NO 1

EXISTING FILE STATUS

SET	FILE	SCE	DES	FQ	IO	ACT	APP	DEM	ELEMT	CH	A/N	CC	NAME	ACCUM	QTY	AV	MO	INC	AV	MO	TRAN
									94			75	0 BICYCLE AUCTION FILE		700		50				200
									95			75	0 BICYCLE LICENSE # FILE		91,000		700				1,500
									96			75	0 BICYCLE SERIAL # FILE		91,000		700				900
									97			75	0 BICYCLE NAME FILE		91,000		700				900
									98			75	0 BICYCLE RELEASED FILE		7,000		250				500
									210			75	0 RCPT FOR BIKE LICENSES		1,000		15				20
									211			75	0 LOG STOLEN-BIKE DTL		250		21				500
									212			75	0 LOG RECOVERED BIKE DTL		145		12				300
														287,245			3,408				7,220
50									202			90	0 APPLS POLICE RESERVE		1,000		25				2
									203			90	0 LOGS POLICE RESERVE				20				
									274			90	0 PERSONNEL POLICE RESERVE		1,000		25				30
														2,000			70				32
									227			99	0 OVERTIME REQUESTS		18,000		1,500				1,750
														18 00000		001	500		00	001	750

ELEMENT CH SET FILE 291 8,684,955 220,333 1,678,519  
 FILE 291

LEADS Report Number I N  
 Files Numeric Catalog

This catalog lists the 291 Phoenix Police Department files numerically within functional area locations and indicates the accumulated quantity of documents, the average monthly increase, and the average monthly number of file transactions. Sub-totals are provided for all quantitative fields for each functional area location and a grand total is provided for all locations at the end of the catalog.

SET	FILE	SCE	DES	FQ	IO	ACT	APP	DEM	ELEMT	CH	A/N	CC	NAME	ACCUM QTY	AV	MO	INC	AV	MO	TRAN
286				72									0 WARRANTS	320		100				250
287				72									0 PHOTOS SUSPECTS	1,800		100				400
288				72									0 D R CLOSED	8,000		125				800
289				72									0 D R PROSECUTORS COPY	4,200		200				175
290				72									0 CORRESPONDENCE	2,700		100				150
291				20									0 CONFIDENTIAL NTBK RECORDS	1,000		30				300

FILE 291 8,684,955 220,333 1,678,519

LEADS Report Number 2  
File Set Element Analysis

This catalog depicts the 3,773 elements of information grouped and sub-totaled by file and set within. A grand total is provided for all files and all sets. The analysis matrix appears throughout the run indicating the following:

1. The associated set number.
2. The associated file number.
3. The functional activity source.
4. The functional activity destination.
5. The frequency of reporting.
6. The input/output status.
7. The functional activity of major use.
8. The demand code (i.e. exists, need now, etc.).
9. The person, object, or both code.
10. The element number.
11. The number of characters.
12. The alpha-numeric indicator.

LEADS REPORT NO 2

FILE-SET-ELEMENT ANALYSIS

SET	FILE	SCF	DES	FO	IO	ACT	APP	DEM	ELEMT	CH	A/N	CC	NAME	ACCUM	QTY	AV	MO	INC	AV	MO	TRAN		
														DESCRIPTION									
215	999	61	87	7	2	87		13	10020	25	1	2	NAME										
215	999	61	87	7	2	87		13	20006	1	2	2	SEX										AGENCY RPTG
215	999	61	87	7	2	87		13	20022	2	2	2	AGE										SUBJECT
215	999	61	87	7	2	87		13	20040	30	3	2	F P CODE										F P CLASS SUBJ
215	999	61	87	7	2	87		13	20041	25	1	2	NAME										SUBJECT
215	999	61	87	7	2	87		13	60043	6	2	2	DATE										SUBMISSION
215	999	61	87	7	2	87		13	60044	6	2	2	DATE										ARRESTED SUBJECT
215	999	61	87	7	2	87		13	60058	6	2	2	DATE										DISPOSITION
215	999	61	87	7	2	87		13	70358	25	1	2	OFFENSE										DESCRIPT
215	999	61	87	7	2	87		13	70360	10	2	2	DISPOSITION										JUDGEMENT
215	999	61	87	7	2	87		13	80006	10	3	2	NUMBER										FBI

ELEMENT 11

CH: 146

ELEMENT 190

CH 2,872 SET 11

ELEMENT 3,773

CH 52,439 SET 186 FILE 291

8,684,955 220,333 1,678,519

60

LEADS Report Number 3  
Element Analysis

This catalog lists the individual elements in sequence by the significant digit element number. For example, all elements having to do with date and time will be listed as 60000 series numbers with the four least significant digits indicating the distinct element identity. The standard analysis matrix appears throughout the run. This run is especially useful in eliminating duplication in the design of consolidated reports and records.

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## ELEMENT ANALYSIS

SET FILE SCE DES FQ IO ACT APP DEM ELEM CH A/N CC NAME

APPLICANT TYPE	SUBJECT TYPE	DESCR	DESCRIPT	M O	CHK CASHNG ID	CIRCUMSTANCES	OFFENSE
16 226 63 11 7 1 11	11 90006 25 1 2	NARCOTICS					
62 291 20 20 7 3 20	11 90006 1 2 2	NARCOTICS					
62 291 20 20 7 3 20	11 90006 50 1 2	NARCOTIC					
128 5 82 82 7 2 61	13 90010 60 1 2	M O					
183 205 72 72 7 1 72	13 90010 50 1 2	M O					
230 998 99 99 7 1 99	11 90010 99 3 2	NARRATIVE					
176 5 40 61 7 1 70	13 90011 25 3 2	M O					
217 53 61 87 3 2 87	13 90012 25 3 2	DEATH					
222 27 61 61 7 2 88	11 90013 10 3 2	TYPE					

ELEMENT 12

CH 350

ELEMENT 3,774

CH 52,451

ELEMENT 3,774

CH 52,451

## Elements Alphabetic Catalog

This catalog lists the elements (smallest unit of information) alphabetically, indicating the following information for each element:

1. The associated set number.
2. The associated file number.
3. The functional activity source.
4. The functional activity destination.
5. The frequency of reporting.
6. The input/output status.
7. The functional activity of major use.
8. The demand code (i.e. exists, need now, etc.).
9. The person, object, or both category code.
10. The element number.
11. The number of characters.
12. The alpha-numeric indicator.

An overall total of elements and characters is provided at the end of this catalog.

## LEADS REPORT NO 4

## ELEMENT CATALOG

SET	FILE	SCE	DES	FQ	IO	ACT	APP	DEM	ELEMT	CH	A/N	CC	NAME	ACCUM	QTY	AV	MO	INC	AV	MO	TRAN	
16	226	63	11	7	1	11		11	60037	6	2	2	WHEN									
196	183	40	50	7	1	80		11	20228	15	3	2	WHEN DOSED									
23	73	63	63	7	1	11		11	00123	25	1	2	WHERE INCARCER									
196	183	40	50	7	1	80		11	00130	10	1	2	WHY OBSERVED									
82	195	82	50	7	2	50		13	20087	8	2	2	WIDTH									
172	107	40	40	7	1	70		11	00012	1	2	2	WITNESS									
23	73	63	63	7	1	11		11	20029	15	1	2	WORK									
20	226	82	11	7	1	11		11	50186	3	2	2	WORK CHARAT									
19	225	99	11	7	1	11		11	20125	3	2	2	WT									
172	107	40	40	7	1	70		11	20016	4	2	2	WT									
178	998	71	85	7	2	71		13	20081	8	3	2	WT									
177	84	82	71	7	1	71		13	20072	9	1	2	WT									
181	85	82	71	7	1	71		15	20072	3	3	2	WT									
176	5	40	61	7	1	70		13	20025	3	2	2	WT									
176	5	40	61	7	1	70		13	20038	4	2	2	WT									
230	998	99	99	7	1	99		11	20104	9	2	2	WT									
142	3	99	73	7	1	65		11	40075	2	2	2	YEAR									
11	53	61	87	1	0	10		12	60036	2	2	2	YEAR									
211	5	77	84	7	2	84		12	60104	4	2	2	YEAR									
145	139	65	66	7	3	66		12	20043	2	2	2	YEAR									
146	118	70	66	7	3	66		12	20043	4	2	2	YEAR									
80	177	40	50	7	1	50		13	20043	2	2	2	YEAR									
192	5	40	61	7	1	76		11	20043	2	2	2	YEAR									
207	61	40	83	7	1	83		11	20043	3	1	2	YEAR									
211	5	77	84	7	2	84		12	20043	4	2	2	YEAR									
205	999	53	83	7	1	83		12	60056	4	2	2	YEAR									
80	177	40	50	7	1	50		13	40059	2	2	2	YEAR VEH									
47	149	15	15	3	1	15		11	50715	4	2	2	YEARLY AVERAGE									
19	225	99	11	7	1	11		11	00053	2	2	2	YEARS EXPERIENCE									
226	225	99	89	7	1	89		11	30107	6	2	2	ZIP CODE									

ELEMENT 3,774

CH 52,451

ELEMENT 3,774

CH 52,451

SET

ELEMENT 3,774

CH 52,451

SET

FILE

64

LEADS Report Number 5  
Sets Alphabetic Catalog

This catalog lists the sets (documents) alphabetically, indicating the following information for each set:

1. The set number.
  2. The associated file number.
  3. The functional activity source.
  4. The functional activity destination.
  5. The frequency of reporting.
  6. The input/output status.
  7. The functional activity of major use.
  8. The demand code (i.e. exists, need now, etc.).
  9. The person, object, or both category code.
- An overall total of sets is provided at the end of this catalog.

65

LEADS REPORT NO 5 SET FILE SCE DES FQ IO ACT APP DEM ELEM CH A/N CC	SET CATALOG NAME	ACCUM QTY AV MO INC AV MO TRAN DESCRIPTION
104 21 81 61 7 1 61	1 WARRANT REGISTRATION CARD	
200 999 73 81 7 2 81	1 WARRANT INFO & INVEST REP	
204 17 61 82 7 0 82	1 WILL RELEASE NO INFO	
165 5 99 61 7 1 70	1 WITNESS/SUSPECT STATEMENT	
157 229 68 68 3 3 68	1 WORK DETAIL CHARGES	
226 225 99 89 7 1 89	1 WORKMANS REPORT OF INJURY	
166 63 85 70 7 1 70	1 WRNT VERIFICATION RQST	
ELEMENT		

ELEMENT	CH	SET 187
ELEMENT	CH	SET 187 FILE

SECTION E

PROJECT BY-PRODUCTS AND DERIVED BENEFITS

The existence of the LEADS project has had a considerable effect on the Phoenix Police Department, producing valuable by-products that might not otherwise have occurred. The most significant of these benefits is the increased awareness on the part of members of the department (at all activity and rank levels) of the potential inherent in a highly automated police records and communications system. And, this awareness involves most of the department personnel. Early in the study, the LEADS staff encouraged suggestions and participation in the study by the department and the response was significant. LEADS staff visits were made to all operational sections of the department which generated suggestions concerning problem areas and operational improvements. Making these contributions has tended to make a number of department personnel aware of the need to continually evaluate law enforcement procedures and operations. And, of course, the information gained was of considerable value to the LEADS staff in the system design.

Other valuable by-products were produced because of the project:

1. A class of departmental members was selected to attend a two-week computer programming course. While no expert programmers were produced, the department now has some personnel with a fundamental knowledge of the way computers are made to work and an awareness of the problems of converting a design to an operating reality.
2. Several members of the department have enrolled in college level courses and some are devoting time to home study courses dealing with data processing and related fields.

3. A group of the department's top administrators attended a computer usage seminar conducted at a local computer manufacturer's plant. This seminar was made possible by the LEADS staff's liaison with representatives of this company. The subjects covered were strongly accented toward computer application in the police field. The overall result of this training has been to introduce key department members to new ideas and the tremendous potential represented in the imaginative use of computers.
4. After a staff visit to the California Highway Patrol Headquarters, some additional impetus was given to promoting the department's connection to the "AUTO STATIS" network. A teletype terminal has subsequently been installed in the department's communications room, providing an on-line connection with the California system. This system will be interfaced with the National Crime Information Center in Washington, D. C., thus making it possible for Phoenix officers to obtain information concerning wanted persons, stolen vehicles and property from all over the United States in only seconds. The same installation can be utilized to input information to these systems, enhancing the chances of apprehending wanted persons and recovering stolen property.
5. The LEADS project has developed the AID (Analysis of Incidents and Deployment) system and has thus left the department with a concrete example of a law enforcement operations improvement. This system became operational in July of 1967 and provides the department with deployment forecasts and vital incident and crime analyses.

- After the implementation of this system was completed, the LEADS staff conducted a training session explaining the purpose and operation of the AID system. This training session was held for administrators of our department as well as for interested persons from other law enforcement agencies. Since this session was conducted, the Maricopa County Sheriff's Office has contacted the LEADS staff and is considering implementation of the AID system in their agency.
6. During the course of the LEADS study, a unified report form was developed. This report form consolidated six forms used previously by the department. The use of this form will be of convenience to the reporting officers as well as increase the efficiency of the department's reporting process. The report form will provide a standard information format facilitating future information input to the ALERT system. Future development of automated scanning input devices would be facilitated by the nation-wide adoption of such a reporting form.
  7. The need for a reliable personal radio for officers, providing communication capability while away from their cars, was recognized early in the study. Discussion of this need with the project's advisory committee resulted in the City's communications staff being encouraged to devote time to the development of such a device.
  8. Other suggestions for improved procedures in a variety of areas have been generated by the study with some ideas having been

implemented. Examples:

- a. Consideration is being given to the transfer of the responsibility for the custodial care of prisoners to the County.
- b. A more efficient method of assigning officers to court days was needed. One such method indicated the possibility of savings to the department of over 11,000 man-hours per year.
- c. A more efficient method for the input of statistical information to the department's existing data system was explored with the result that a duplication of effort and a costly key punch operation was eliminated.
- d. The traditional typing of officers' Incident Reports was examined by the project staff. A resulting suggestion was to use copy machines to duplicate these handwritten reports. The department has adopted this suggestion, causing a significant speed-up in flow of reports as well as financial savings caused by reduction of required clerical staff and recording and phone devices.

A portion of these suggestions were by-products of the project's exchange of ideas made possible by travel to other departments. The adoption of the proposed changes by the department was facilitated by an increased receptiveness towards new ideas that had been generated by the department's participation in this study. The department's receptiveness towards new systems and ideas; its awareness of future educational requirements; the willingness to reevaluate existing programs, along with the understanding of the value to be received by a constant exchange of ideas between cities and agencies, has been promoted-by participation in this project.

Finally, the participation in the study as part of the project staff has developed new skills in the officers involved. The department now has new resources in management analysis, in procedural analysis, and in systems design.

SECTION F  
PROJECT CRITIQUE

Meeting Objectives

One measure of the success of a project is the degree to which original objectives have been attained. From this point of view, it can be said that this study has not been entirely successful. The explanation is that there were two sets of objectives for this project:

1. The goals established in the grant application, and
2. The goals established by the staff at the beginning of the work.

The former have generally been met; the latter have not.

The two major goals established in the grant application can be summarized as follows:

1. The modernization of police records and data systems.
2. The improvement of the value of the records system to the officer in the field.

These goals have been achieved at least in design form and we have no reason to believe that this design cannot be implemented. A number of improvements have been designed:

1. Almost all police records will be computer stored (or be available through other types of high-speed accessing techniques) and the information can be rapidly correlated and retrieved.
2. Stored information can be made available to officers in the field in significantly reduced time.
3. The scope of the information available to a field officer almost immediately will be considerably greater than before.
4. The method by which crime information is analyzed and reported has been considerably improved.

5. The receipt of complaints and the dispatch of assistance will be accomplished with reduced time and increased effectiveness.
6. The availability of investigative information will be revolutionized under the proposed system due to the mass of data on persons and property that can be instantly accessed.

In addition to meeting most of the project design objectives, the study produced an actual working system - AID. The AID system not only provides a better information base for manpower deployment, but it also provides a working system for analyzing crime and incident information.

On the other hand, some goals set by the staff at the outset of the project have not been entirely attained:

1. While some report consolidation and simplification have been achieved, still the field officers' report preparation time has not been significantly reduced.
2. While the communications time between the field officer and the information system has been reduced, we were not able to achieve the ultimate of putting the officer directly on-line. This is less a system design problem than it is a technological problem.
3. The project did not, as we had intended, produce a truly metropolitan system. There is, however, the potential for any surrounding city to tie-in to the ALERT system with key-set terminals to receive limited persons or property information. If this is done, we believe that there is a future potential for developing a common comprehensive data bank for all agencies in the area providing the political complications can be overcome.

#### Staffing Considerations

The original intention was to have the consultant's staff provide overall project guidance and technical resources with the City contributing staff to do data gathering and analysis and to provide law enforcement operations expertise. The principal staff contribution by the City was the continuous assignment of three officers, with this contribution being supplemented from time to time by part-time personnel.

While law enforcement expertise was required throughout the project, the skills most required by the study were those in the areas of systems and procedural analysis. As it might be assumed, the officers assigned to the project were not necessarily skilled in these areas and it became apparent that the City could not make available a full-time contribution from one of its management analysis and research sections. Due to the unavailability of experienced analysts locally, project progress might have been greater if it had been the consultant's responsibility to supply all staff. And, one might conclude that any future projects involving systems analysis and design would be best staffed by consultant experts in such work. We, however, do not draw this conclusion. While some time was spent in training in systems analysis, it was time well spent in that a staff resource capability was being created during the course of the project that would be of future benefit to the police department. This would not have occurred if the consultant had performed all of the work.

Some problems were experienced by the consultant in staffing and several changes in staffing patterns occurred during the project. While there were a variety of reasons for the changes, the principal point involved is that the consultant needed as much flexibility as might be possible in assigning

his resources to the project. This was not the case, however, because the original budget required of and submitted by the consultant in his proposal reflected a rigid staffing structure. This structure, and also the City's originally proposed staffing structure, turned out to be inappropriate at various stages of the project and at least two grant amendments were required to adjust these patterns. In future law enforcement assistance projects involving a considerable amount of experimentation and conjecture at the beginning regarding methods to be used, recognition of the need for frequent changes in staffing should be given by the grantor in the grant requirements.

Subjects for Additional Study

During the course of the project, a number of problems arose which suggest future studies. Some of these are related to the objectives of this project; some represent the concern of the officers involved in the project to see improvements in law enforcement techniques:

1. A reliable and inexpensive means by which an officer may directly communicate with the computer from his moving car needs to be developed.
2. Inexpensive devices need to be developed that will allow the officer to be voice-contacted by the computer (or a dispatcher) when he is out of his car and away from his radio.
3. Systems by which the computer can directly dispatch and deploy field forces should be developed.
4. If the above systems can be developed, a study should be made on the effects of this on manpower, the "beat" system, and other deployment concepts now accepted as good practice.
5. The development of computer storage of fingerprints and photographs would considerably reduce the time required to check records and produce a "make."

CREDITS FOR ASSISTANCE

The credit for the benefits the LEADS study will produce must be shared by many individuals and agencies.

During the progress of the study, the LEADS staff was brought in contact with dozens of agencies and hundreds of persons. Without exception, these contacts proved to be fruitful and produced a heightened understanding of the need for improvement in the records and communications functions of the law enforcement agency.

Special mention must be made of the assistance given the project by the LEADS Advisory Committee. These individuals shared the enthusiasm of the staff and contributed significantly by their continuing interest and cooperation. The staff was also encouraged by the interest shown in the project by the members of the City Council before whom the staff was scheduled for several progress reports.

The Office of Law Enforcement Assistance, through its advisory and supporting role, also played a major part in bringing this study to a successful conclusion.

This project owes its successful conclusion to:

The Mayor and members of the City Council:

Mayor Milton H. Graham

Frank G. Benites

Jarrett S. Jarvis

Mrs. Sophia Kruglick

John F. Long

Frank P. Middleton

Dr. Morrison F. Warren

The City Management:

Robert Coop - City Manager

Charles A. Esser - Assistant City Manager

The LEADS Advisory Committee:

Marvin A. Andrews - Assistant to the City Manager

Paul E. Blubaum - Chief of Police

Selden G. Kent - Research and Budget Officer

John M. Urie - Director, Finance Department

City Departments and Divisions:

Division of Accounts

Accounting Section

Computer Services Section

City Courts

Magistrate's Office

Court Administrator's Office

Communications Division

Engineering Division

Quarter-Section Mapping Section

Personnel Department

Planning Department

Drafting and Reproduction

Purchases and Stores Division

Duplicating Shop

Research and Budget Division

Other Law Enforcement Agencies:

Arizona Highway Department

Phoenix

Arizona Highway Patrol

Phoenix

California Highway Patrol

Sacramento

California State Bureau of Criminal

Identification and Investigation

Sacramento

Chicago Police Department

Illinois

Detroit Police Department

Michigan

Flagstaff Police Department

Arizona

Glendale Police Department

Arizona

Kingman Police Department

Arizona

Los Angeles Police Department

California

Los Angeles County Sheriff's Department

California

Maricopa County Sheriff's Office

Arizona

Mesa Police Department

Arizona

National Crime Information Center

Washington, D. C.

New York Police Department

New York

New York State Identification System

Albany, New York

Oakland Police Department

California

Scottsdale Police Department

Arizona

St. Louis Police Department

Missouri

Tempe Police Department

Arizona

Tucson Police Department

Arizona

Yuma Police Department

Arizona

## CITY OF PHOENIX PROJECT CRITIQUE

An Historical Overview of the "LEADS" Project

In June, 1966, when the City of Phoenix submitted their application for Federal assistance to engage in the "LEADS" study, it was with limited past experience in an undertaking of this nature and complexity.

The "LEADS" project has proven invaluable as a broadening experience for each and every person who participated in the study. The preparatory planning, the development and organization of the project, the collection and analyzation of data, and the final documentation each presented unique and challenging tests. Each problem that confronted the staff was approached boldly, critically analyzed and solved.

Griffenhagen-Kroeger, Inc., public management consultants, were selected for assignment to the project by virtue of their qualifications and their submitted bid proposal, one of several such proposals from nationally and internationally recognized consulting firms. The selection procedures used for retaining an administrative consultant are detailed later in this report.

The City of Phoenix staff assigned to the project were well pleased with the technical assistance and coordination provided by the consultant staff and believed that the technical personnel provided by Griffenhagen-Kroeger, Inc., were well qualified. The "LEADS" project and the final report, which documents the study are, in every way, the product of the combined efforts of the consultant and the City staff.

At times during the course of the study there were differing opinions between the consultant and the City staff concerning goals, processes, and work methods. We believe this to be a healthy and productive framework for a

## Other Contributors:

Institute for Telecommunications Science and Aeronomy, U. S. Department of Commerce, Boulder City, Colorado

Police Sciences Division, Phoenix Junior College, Arizona

The General Electric Company, Information Systems Division, Phoenix

## The Staff of the project included:

## The consultant - Griffenhagen-Kroeger, Inc. - San Francisco:

Louis J. Kroeger	General Supervisor
Charles Rains	Project Manager
Albert Lockwood	Information Systems Specialist
Virginia Burt	Procedures Analyst
Addison Fording	Special Police Consultant

## The Police Department:

Richard Newton	Captain - Project Coordinator
Jack Allen	Lieutenant
David Haynes	Sergeant
Lowell Hicks	Sergeant
Donald Peterson	Sergeant
Daniel Aultman	Administrative Intern
John Kelley	Administrative Intern
M. Josefina Gamboa	Secretary
Leona Reynolds	Secretary

project of this nature, as imaginative thinking and originality were encouraged at the project's inception. However, as differences arose, they were objectively considered and harmoniously resolved.

The working relationship between consultant, the City staff, the Advisory Committee, and the Federal agency, was productive throughout the "LEADS" project.

In all studies such as this, which involve agencies of differing purposes and responsibilities, cooperative interaction is of utmost importance in developing a useful product.

The foregoing general comments are those which the City staff believe should be a part of a critique of this study and are indicative of the impressions experienced throughout the project by the members.

#### Preparatory Organization

At the onset of the project, the City of Phoenix was faced with two immediate determinations, that of providing facilities and that of selecting staff for the project.

Adequate office space was provided in the Municipal Courts Building and necessary office equipment was purchased. The office equipment provided was of good quality and was adequate in quantity for the staff members assigned.

The office facility consisted of some 400 square feet in area and was adequately illuminated. The atmosphere was conducive to concentration and study.

At one point in the project it was necessary to move the "LEADS" activity to another office within the same building but the move was made quickly and with little disruption or delay in work. The latter office facility was comparable to the first.

The office facilities utilized during the course of the project were located three blocks from the main Police Building. At first, it was thought that the distance between this location and the offices of the Police Department would prove to be a disadvantage. Our experience, however, indicates that some separation of the department and the research project's office is advisable. Regardless of intentions, there is a natural inclination for the department members to continue to rely on officers assigned to such a project to assist in problems related to their previous assignments. While this cannot practicably completely be prohibited, the separation of facilities reduces this interruption.

Staffing required greater consideration. Police Chief Paul E. Blubaum and Mr. Albert Pasquan (at that time an assistant to the City Manager of Phoenix) originally proposed the application for the study grant. The grant proposal was then approved by the City Manager, Mayor, and City Council of the City of Phoenix.

An Advisory Committee was appointed by the City Manager to oversee and advise the project staff in its direction and progress.

The Advisory Committee consisted of the following administrators of the City of Phoenix:

Marvin A. Andrews, Assistant to the City Manager

Paul E. Blubaum, Police Chief

Selden G. Kent, Research and Budget Officer

John M. Urie, Finance Director

The Advisory Committee invited major consultant organizations to submit a proposal outlining their capabilities and available resources which would

qualify them to conduct the study. Several CPA firms also requested that they be sent the materials required for a proposal. Proposals were invited from the following organizations:

Systems Development Corporation  
Santa Monica, California

Public Administration Service  
Chicago, Illinois

Griffenhagen-Kroeger, Inc.  
San Francisco, California

Booz, Allen, and Hamilton  
San Francisco, California

Haskin and Sells  
Phoenix, Arizona

John A. Donaho and Associates  
Baltimore, Maryland

Ernst and Ernst  
Phoenix, Arizona

Peat, Marwick, Mitchell and Co.  
Phoenix, Arizona

Price, Waterhouse and Co.  
Phoenix, Arizona

In order to evaluate the individual proposals, certain standards or criteria were established and built around the outline of information requested in the letter to the consultants. During the initial review, four of the proposals submitted were eliminated since they did not meet the overall standards initially set forth to the same degree as did the other three proposals. Price, Waterhouse and Company, and Haskins and Sells were invited but did not submit proposals.

The three remaining consulting organizations (Systems Development Corporation, Ernst and Ernst, and Griffenhagen-Kroeger, Inc.) were interviewed by the Advisory Committee for the purpose of clarifying their proposals and presenting their consultant staff who would be working full-time with the study.

The factors considered as being of major importance were:

1. Overall background and qualifications of the firm in relation to its ability to conduct the proposed study.
2. The firm's concept of the study and its proposed methods.
3. Qualifications of the staff and particularly the project director who would work full-time on the project.

Using these factors as the major selection criteria, the "LEADS" project Advisory Committee recommended that the firm of Griffenhagen-Kroeger, Inc., be appointed to conduct the study. This firm is part of The Diebold Group, one of the leading international firms in data processing and advances in that field. The services of The Diebold Research Program were also used in this study.

A factor that was thoroughly considered during the final selection of the consultant, and that we believe was of utmost value in the success of the project, was the ability of the consultant's project manager to communicate well with the staff of the Police Department and the personnel of other City departments. For this reason, we advise that other cities preparing to engage in such an endeavor have the interested consultant firms arrange interviews of their proposed project managers to determine if they and the department's administrators are able to communicate well.

During the course of the study, our staff felt that some continuity was lost during periods that the consultant's project manager was absent from the project, and for that reason recommend that consideration be given to provisions that require his continual assignment for the duration of the project.

Police Chief Paul E. Blubaum selected the project staff members from the Police Department with the approval of the Advisory Committee.

Staff members other than police officers were selected by the Advisory Committee.

The originally assigned Police Department staff members were as follows: Captain Gordon Selby, a member of the Phoenix Police Department for 20 years. Captain Selby had worked in every phase of police work and had ascended through the ranks from patrolman to his present position of Captain and was exceptionally well versed on communications and records functions. (Captain Selby retired prior to the beginning of the project.)

Lieutenant Jack Allen, had been a member of the Phoenix Police Department for 19 years. Nearly fifteen years of his service had been in the capacity of supervisor of the Records and Identification Bureau for the Phoenix Police Department and he is considered an expert in his field. Lieutenant Allen's extensive knowledge of the Records and Identification Bureau procedures proved invaluable during the project.

Sergeant Lowell Hicks, at the time of assignment, had recently received his master's degree from Michigan State University. During the 13 years he had been a police officer for the City of Phoenix, he had been assigned to every division of the Police Department.

Sergeant Hicks, as a graduate of the Northwestern Traffic Institute, was extremely familiar with traffic records keeping.

Sergeant David Haynes had been a member of the Police Department for eight years and was well versed on field and traffic reporting procedures and their related problems.

Sergeant Don J. Peterson had been a police officer for 14 years, 12 of them as a member of the Phoenix Police Department. Sergeant Peterson supplied the project with an accurate view of the field officers' informational needs and resources.

Mr. Daniel Aultman and Mr. John Kelley both were Administrative Interns with the City of Phoenix. Mr. Aultman was subsequently appointed Police Science Coordinator for Phoenix College, and in that capacity was extremely helpful to the study.

Mr. Kelley and Mr. Aultman both supplied the benefit of their experience in administrative procedures.

Obviously, the City staff was selected most carefully and each staff member had unique and valuable talents which encompassed a wide range of experience and knowledge in law enforcement.

Subsequent to the approval of the grant and prior to actually beginning work on the project, Captain Selby fulfilled his service obligation to the Phoenix Police Department and entered into retirement.

Captain Richard H. Newton was then assigned as Project Director. Captain Newton had been a member of the Police Department for 16 years and during this time has worked in all major police functions in both line and staff capacity. Captain Newton, at the time of his assignment as Project Director, was the Captain in charge of the Field Services Bureau. This Bureau included the Headquarters Section, Communications Section, and the Records and Identification Bureau. The Project Director of such a study must have a varied background of police experience to be able to provide the consultants with the information and direction to assist them in their phase of the study.

Other personnel (secretaries, computer programmers, and systems specialists) were provided by the City of Phoenix as required throughout the project. (Note: About midpoint in the project, Lieutenant Jack Allen also retired, as had Captain Selby.)

Personnel changes during a study are generally undesirable, as they are time-consuming in the necessary orientation of a newly-assigned staff member.

When selecting personnel for a project of this duration, administrators should consider the individual's service obligation to the agency and assure themselves of the person's ability in this regard to complete the project to be undertaken. Obviously, it is not always possible to predict illness or the employee's voluntary termination of employment, but known factors should be considered.

#### The Project Objectives

The purpose of the project, as originally stated in the grant, was to "develop a model records and communications system for law enforcement."

The model system is to be documented and made available to other law enforcement agencies throughout the United States. It is anticipated that the pilot project and resultant model records and data systems will become a major contribution to law enforcement and have a wide application throughout the United States.

The adequacy of police records and data systems, and of written and verbal communications through the use of records, are problems of major concern to law enforcement throughout the United States. Specifically, the problems are:

1. The adequacy of the data used by the field officer.
2. The amount of time required of him in supplying information to the records system.
3. The time element in receiving necessary data from the system.

Although there are some new and valid methods being used by some police departments, there has been no general trend to establish completely new systems or even undertake a comprehensive evaluation of existing systems in use by the law enforcement agencies. This is the basis for the City of Phoenix project.

This project is concerned with the modernization of police records and data systems, using the latest -- including new means of oral and physical communication -- to reduce the complexity and time required of the field officer for records purposes; to provide the field officer with more comprehensive and more timely information; and to provide a more complete and accurate record to improve coordination of police activity among the jurisdictions of the metropolitan area.

On first impression, these would appear to be very direct goals and ones which could surely be studied in depth during the original grant period of 12 months. Closer examination of this field of study revealed a situation

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which was extremely complex, with many fringe area problems, not the least of which was the existing eight million-plus documents presently on file in the Phoenix Police Department.

The problem of converting these files while maintaining their present use and absorbing the ever increasing input of information into both the old and new systems appeared overwhelming.

A great deal of consideration by both the consultant staff and City staff was required to define the project goals and restrict them within time and staffing limitations.

Needless to say, many areas of study which deserved greater consideration were, in fact, touched on lightly due to the restricted duration of the project.

At time, certain specific study areas would branch into many other fields and involve other agencies. The following examples are indicative of these problem areas on which study depth was limited.

On studies of input of information, the court systems were vital in regard to citations, warrants, and court functions.

It was found that warrants and court functions involved constitutional separation of court and state which involved other agencies and jurisdictions. Some of these had legislative and others political overtones, with varying degrees of cooperation which could be relied upon in formatting a reliable information system. To create a workable system in these fringe areas would have required political agreement between agencies or even legislative action, all of which would have been far too time-consuming for a study of this duration.

The same problems appeared in consideration of criminal law information and arrests and detention of criminals. Where municipal, county, and state processes merged, problems concerning the interaction or exchange of information between the agencies were involved.

One measure of the success of a project is the degree to which original objectives have been attained. From this point of view, it can be said that this study has not been entirely successful. The explanation is that there were two sets of objectives for this project:

1. The goals established in the grant application.
2. The goals established by the staff at the beginning of the work.

The former have generally been met -- the latter have not.

The two major goals established in the grant application can be summarized as follows:

1. The modernization of police records and data systems.
2. The improvement of the value of the records system to the officer in the field.

These goals have been achieved at least in design form and we have no reason to believe that this design cannot be implemented. A number of improvements have been designed:

1. Almost all police records will be computer-stored (or be available through other types of high-speed accessing techniques) and the information can be rapidly correlated and retrieved.
2. Stored information can be made available to officers in the field in significantly reduced time.
3. The scope of the information available to a field officer will immediately be greater than before implementation of the project's recommendations.
4. The method by which crime information is analyzed and reported has been considerably improved.
5. The receipt of complaints and the dispatch of assistance will be accomplished with reduced time and increased effectiveness.

6. The availability of investigative information will be revolutionized under the proposed system due to the mass of data on persons and property that can be instantly accessed.

In addition to meeting most of the project design objectives, the study produced an actual working system - AID. The AID system not only provides a better information base for manpower deployment, but it also provides a working system for analyzing crime and incident information.

On the other hand, some goals set by the staff at the outset of the project have not been entirely attained:

1. While some report consolidation and simplification has been achieved, the field officers' report preparation time has not been as significantly reduced as was originally envisioned.
2. While the communications time between the field officer and the information system has been reduced, we were not able to achieve the ultimate goal of putting the officer directly on-line. This is less a system design problem than it is a technological problem.
3. The project did not, as we had intended, produce a truly metropolitan system. There is, however, the potential for any surrounding city to tie-in to the ALERT system with key-set terminals to receive limited persons or property information. If this is done, we believe that there is a future potential for developing a common comprehensive data bank for all agencies in the area, providing the political complications can be overcome.

The existence of the "LEADS" project has had a considerable effect on the Phoenix Police Department, producing valuable by-products that might not otherwise have occurred. The most significant of these benefits is the increased awareness on the part of members of the department (at all activity and rank levels) of the potential inherent in a highly automated police records and

communications system. And, this awareness involves most of the department personnel. Early in the study, the "LEADS" staff encouraged suggestions and participation in the study by the department and the response was significant.

"LEADS" staff visits were made to all operational sections of the department which generated suggestions concerning problem areas and operational improvements. Making these contributions has tended to make a number of department personnel aware of the need to continually evaluate law enforcement procedures and operations. And, of course, the information gained was of considerable value to the "LEADS" staff in the system design.

Other valuable by-products produced because of the project are as follows:

1. A class of departmental members was selected to attend a two-week computer programming course. While no expert programmers were produced, the department now has some personnel with a fundamental knowledge of the way computers are made to work and an awareness of the problems of converting a design to an operating reality.
2. Several members of the department have enrolled in college-level courses and some are devoting time to home-study courses dealing with data processing and related fields.
3. A group of the department's top administrators attended a computer usage seminar conducted at a local computer manufacturer's plant. This seminar was made possible by the "LEADS" staff's liaison with representatives of this company. The subjects covered were strongly accented toward computer application in the police field. The overall result of this training has been to introduce key department members to new ideas and the tremendous potential represented in the imaginative use of computers and other data processing components.

4. After a staff visit to the California Highway Patrol Headquarters, additional impetus was given to promoting the department's connection to the "AUTO STATIS" network. A teletype terminal has subsequently been installed in the department's communications room, providing an on-line connection with the California system. This system is now interfaced with the National Crime Information Center in Washington, D. C., thus making it possible for Phoenix officers to obtain information concerning wanted persons, stolen vehicles, and property from all over the United States in only seconds. The same installation is utilized to input information to the "AUTO STATIS" network, enhancing the chances of apprehending wanted persons and recovering stolen property.
5. The "LEADS" project has developed the AID (Analysis of Incidents and Deployment) system and has thus left the department with a concrete example of a law enforcement operations improvement. This system became operational in July of 1967 and provides the department with deployment forecasts and vital incident and crime analyses. After the implementation of this system was completed, the "LEADS" staff conducted a training session explaining the purpose and operation of the AID system. This training session was held for administrators of our department as well as for interested persons from other law enforcement agencies. Since this session was conducted, the Maricopa County Sheriff's Office has contacted the "LEADS" staff and is considering implementation of portions of the AID system in their agency.
6. During the course of the "LEADS" study, a unified report form was developed. This report form consolidated six forms used previously by the department. The use of this form will be of convenience to

the reporting officers as well as increase the efficiency of the department's reporting process. The report form will provide a standard information format facilitating future information input to the "ALERT" system. Future development of automated scanning input devices would be facilitated by the nationwide adoption of such a reporting form.

7. The need for a reliable personal radio for officers, providing communication capability while away from their cars, was recognized early in the study. Discussion of this need with the project's Advisory Committee resulted in the City's communications staff being encouraged to devote time to the development of such a device.
8. Other suggestions for improved procedures in a variety of areas have been generated by the study with some ideas having been implemented.

Examples are:

- a. Consideration is being given to the transfer of the responsibility for the custodial care of prisoners to the County.
- b. A more efficient method of assigning officers to court days was needed. One such method indicated the possibility of savings to the department of over 11,000 man-hours per year.
- c. A more efficient method for the input of statistical information to the department's existing data system was explored with the result that a duplication of effort and a costly key-punch operation was eliminated.
- d. The traditional typing of officers' Incident Reports was examined by the project staff. A resulting suggestion was to use copy

machines to duplicate these handwritten reports. The department has adopted this suggestion, causing a significant speed-up in flow of reports as well as financial savings caused by reduction of required clerical staff and recording and phone devices.

A portion of these suggestions were by-products of the project's exchange of ideas made possible by travel to other departments. The adoption of the proposed changes by the department was facilitated by an increased receptiveness towards new ideas that had been generated by the department's participation in this study. The department's receptiveness towards new systems and ideas; its awareness of future educational requirements; the willingness to reevaluate existing programs, along with the understanding of the value to be received by a constant exchange of ideas between cities and agencies, has been promoted by participation in this project.

The Grant "Demonstration" Requirement

The demonstration system, AID (Analysis of Incidents and Deployment), we believe, was a practical undertaking and the results were impressive, especially in view of its continuing availability and use. It would have been desirable, however, to have had a larger data base and possibly additional entry items with which to work.

As a demonstration system, AID was unquestionably successful even though manpower limitations at this time prevent fully exploiting its potential. The Phoenix City Council has approved the authorization of approximately 100 additional police officers in the forthcoming 1968-69 budget year. The AID system indicated, graphically, the need for additional officers and may have been somewhat instrumental in the additional manpower authorization.

### Work Methods

Decisions concerning direction, methods, procedures, and work assignments throughout the project were arrived at by means of conferences attended by the consultant staff and the City staff and were periodically reviewed by the Advisory Committee. Participants were given the opportunity at the conferences to express their individual views to maintain an objective and productive course of study.

As a result of the conference decisions, the Project Director and Manager would direct specific work assignments to individual staff members which were most applicable to that member's area of knowledge, experience, and ability.

In a study of this nature, which at the onset was intended to delve into new and untried concepts, this method of reaching decisions, providing direction and assignment of work, we feel, has been quite satisfactory.

All data collected in the course of the study through contact with other agencies, from publications or as contributed by officers, staff members or private industry, was thoroughly documented and considered in conference fashion as previously described.

### Evaluation and Analysis

Although the grant application stated certain general goals, as staff efforts became more diversified throughout the study other possible goals were presented. Many of these, on consideration, were found to be not within the limits of the study and were rejected as not practical.

There can be no question, however, that the originally stated objectives were, in fact, achieved and that the later considered goals that were reached have contributed by giving added value to the project.

The by-products of the study can certainly be considered in the form of limited goals.

The final system submitted was developed in a form which can be used in total or in part, and although directed specifically toward the City of Phoenix,

other agencies and municipalities can extract that portion of the system that is applicable to their needs.

The City of Phoenix realized benefits in training and experience throughout the study and will profit to an even greater degree upon implementation of the proposed system.

A true and total analysis of the value of the "LEADS" project cannot be stated nor will it be realized until such time as the recommended system is in use. Even on first implementation, the true economics will not be experienced.

However, if one foresees the far-reaching advantages of the "ALERT" and AID systems, the value of the total project cannot be overestimated.

### The Future

Of the suggestions for future study and development submitted by the "LEADS" report, we believe the following will have the greatest impact on the future of law enforcement:

We feel that the vehicle status board proposal, already submitted by our City for future consideration by the Federal government, should be given priority for development by Federal law enforcement grant agencies. This is a much needed law enforcement tool which will assist cities in providing efficient police service with minimum manpower.

Further progress should be attempted in enabling the officer in the field to have direct voice or instrument contact with computer-stored information.

For better officer availability and for the officer's personal safety, the development of a smaller, lighter, and more efficient personal radio should receive priority in future grants.

Summary of Critique

The City staff of the "LEADS" project believe the following items should be given consideration by the Office of Law Enforcement Assistance and by agencies undertaking a project study of this nature:

1. In the consideration of a contracted consultant and in the project organization plan, the work responsibilities of each agency or organization involved should be clearly defined and the requirements not only of staffing and facilities but of product should be specifically stated.
2. Selection of consultant and agency staffs should be based not only on background and ability, but also on their continuing availability to the project.
3. The consultant's project manager should meet the agency staff prior to final consultant selection. It is advised that the project manager be assigned to work on the project full-time until its completion.
4. Office space should be provided away from the Police Building.
5. Project staff requirements may vary at different stages requiring changes of portions of the agency staff. All assignments, when at all possible, should be full-time and relieve those assigned of their normal departmental responsibilities.
6. Extensive consideration and deliberation must be given to defining the objectives of the study within limits of time, staffing, and financing. The scope should be restricted to allow sufficient depth of study.
7. It was found during the study that other agencies were engaged in similar activities. Often a duplication of effort was resulting. It would benefit all agencies so engaged to be made aware of the

progress of other related studies. A cooperative exchange of ideas would be helpful to all concerned. It is suggested that the Federal grantor should more actively promote and coordinate this interaction between grantees.

8. As previously mentioned, not all project objectives have been achieved. Although other contributory reasons might be cited, the major cause is that the scope of study as described in the grant application was greater than could be thoroughly dealt with within the existing time and staffing limitations. Although now apparent, this was not known during the early portion of the study and excessive time was required in determining the areas to which the project would devote its major efforts. This problem has been dealt with as well as possible during the course of the project. Its mention may cause others to restrict the scope of their projects to more manageable proportions.
9. As described previously, our department's staff, by its involvement in this study, has been exposed to considerable training in systems and procedural analysis. This has been and will continue to be of benefit to the department. This benefit, however, should be weighed carefully by departments undertaking such studies as efforts spent in training do consume project time and may cause project time to be affected to a degree that it will upset the project's scheduling.
10. The LEAA Grant Guide amply explains reporting requirements that must be followed during the course of the project. The reporting experience during the "LEADS" project has shown that the reporting requirements are not unreasonable or excessive. Final reporting requirements are, however, not as easily understood. Final reporting obligations,

both narrative and financial, should be thoroughly understood at the beginning of each project. This will avoid excessive time being spent in researching project records for information that could have been gathered and recorded during the course of the project.

11. During the course of the project, the indefinite future of the Law Enforcement Assistance Act and other legislation of that type has affected the direction of this study. The inability to evaluate future assistance by the government in implementation of recommendations that might be made by the project has made more difficult the task of identifying the "Ideal" records and communications system. We believe that without some sound method of evaluation of future assistance, the "Ideal" system may become confused with a researching department's opinion of its municipality's ability to devote funds for implementation of their recommendations.

It has also been of concern to us during the study that city governments will be affected by the uncertain possibilities of such assistance. Prior to expending large sums of money to develop systems such as those recommended by this project, the inclination may be to delay while exploring the possibilities of acquiring Federal funds. Delays frequently may mean that the funds will not become available until the next budget year at which time the possibility of Federal funding may again present itself.

It appears that a sound and regulated system allowing all cities to know that assistance may be depended on and under what circumstances would be of great benefit to projects of this type during the course of study as well as at the time of implementation.

In summation of the project critique, the following conclusions can be made:

1. Participation in the "LEADS" project has produced a department-wide increased awareness and open mindedness towards new ideas, systems, and procedures.
2. Our department is better prepared for constructive changes, and more active communication between our agency and other agencies now exists.
3. The "LEADS" report furnishes us with an organized plan for the modernization of our records and communications systems now as well as for the future.

The participation of our department has not been free of problems, but we have gained a great deal and believe this report, the product of our studies, will be of benefit to all law enforcement agencies with the typical and involved problems of planning the practical and efficient modernization of their departments.

**END**