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# Preliminary Examination of Law Enforcement Communications and Record Systems in Rhode Island

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MARCH 1974

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**Preliminary Examination of  
Law Enforcement Communications  
and  
Record Systems in Rhode Island**

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**MARCH 1974**

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I. INTRODUCTION

The Law Enforcement Assistance Administration (LEAA) recently requested Equipment Systems Improvement Program (ESIP) technical support in evaluating Rhode Island's communications and record systems programs - specifically, to determine what action should be taken by LEAA to complete the system. The information presented in this paper is based on material gathered and discussions held with personnel of the Boston Regional Office and the Rhode Island Planning Agency. This paper is a report on the findings.

## II. BACKGROUND

The State of Rhode Island, with a population of 950,000 and a land area of 1,049 square miles, is the smallest but second most densely populated state in the nation.

In regards to the Criminal Justice program in the state, the Criminal Justice Administration is illustrated in Figure 1 and the LEAA funding (Parts B, C, and E) history<sup>1</sup> is presented in Figure 2. A breakout of the financial expenditure for criminal justice<sup>2</sup> (Fiscal Year 1972) is illustrated in Figure 3.

The law enforcement resources consist of the Rhode Island State Police and 39 local (city and town) police agencies. The State Police have 170 sworn officers and 100 radio-equipped vehicles. There are seven State Police barracks and Figure 4 illustrates the locations of these facilities. It should be noted that the Scituate barracks is located adjacent to the State Police Headquarters.

The 39 local police agencies are divided into nine planning regions. Four of these regions are cities (Providence, East Providence, Cranston and Warwick) and the remaining five regions consist of a

<sup>1</sup>5th Annual Report of the Law Enforcement Assistance Administration - Fiscal Year 1973.

<sup>2</sup>Expenditure and Employment Data for the Criminal Justice System 1971-72, National Criminal Justice Information and Statistics Service SD-EE No. 4.

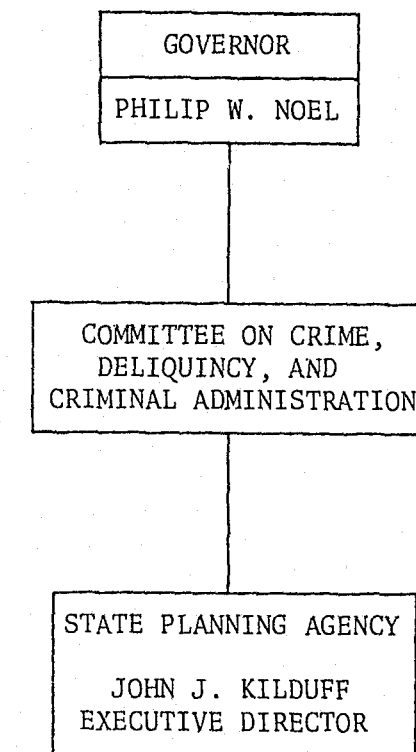


FIGURE 1 - RHODE ISLAND CRIMINAL JUSTICE ADMINISTRATION

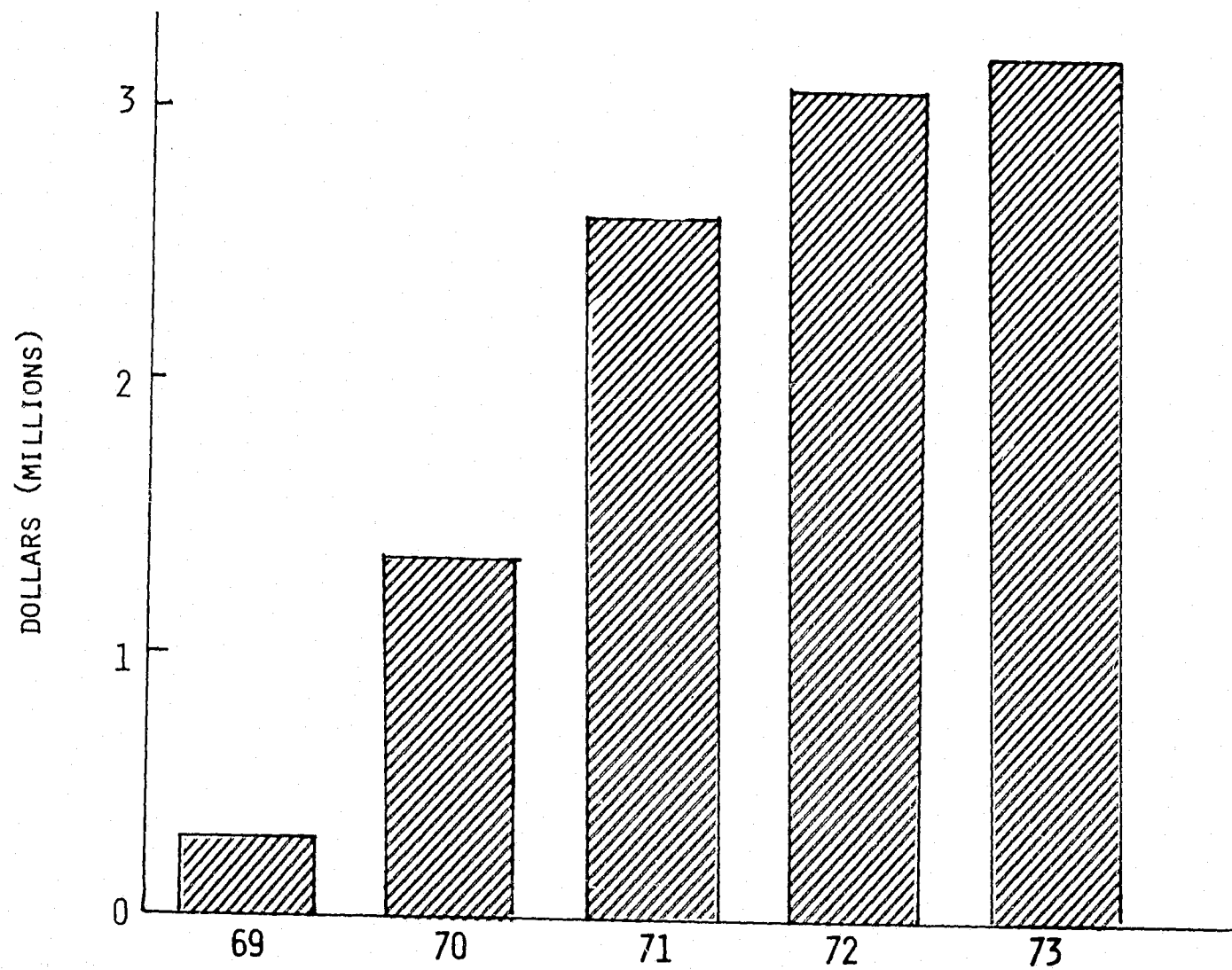


Figure 2 - LEAA Funding History

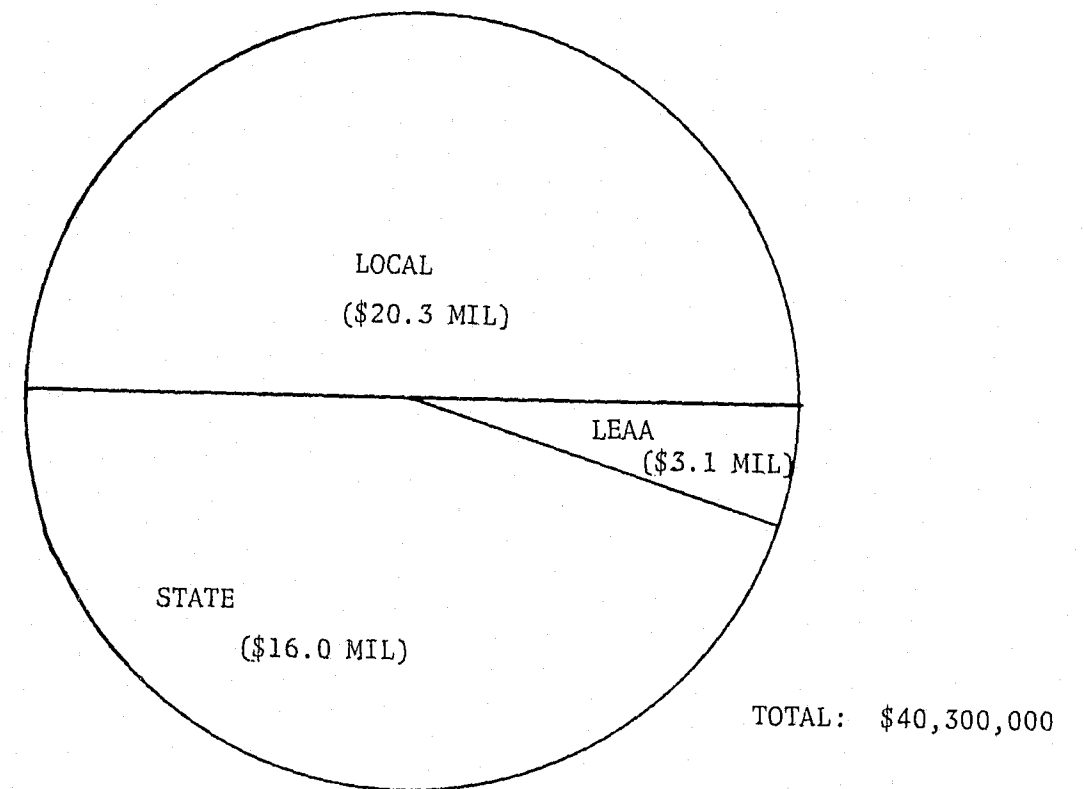


FIGURE 3  
Criminal Justice Expenditure in Rhode Island  
Fiscal Year 1972

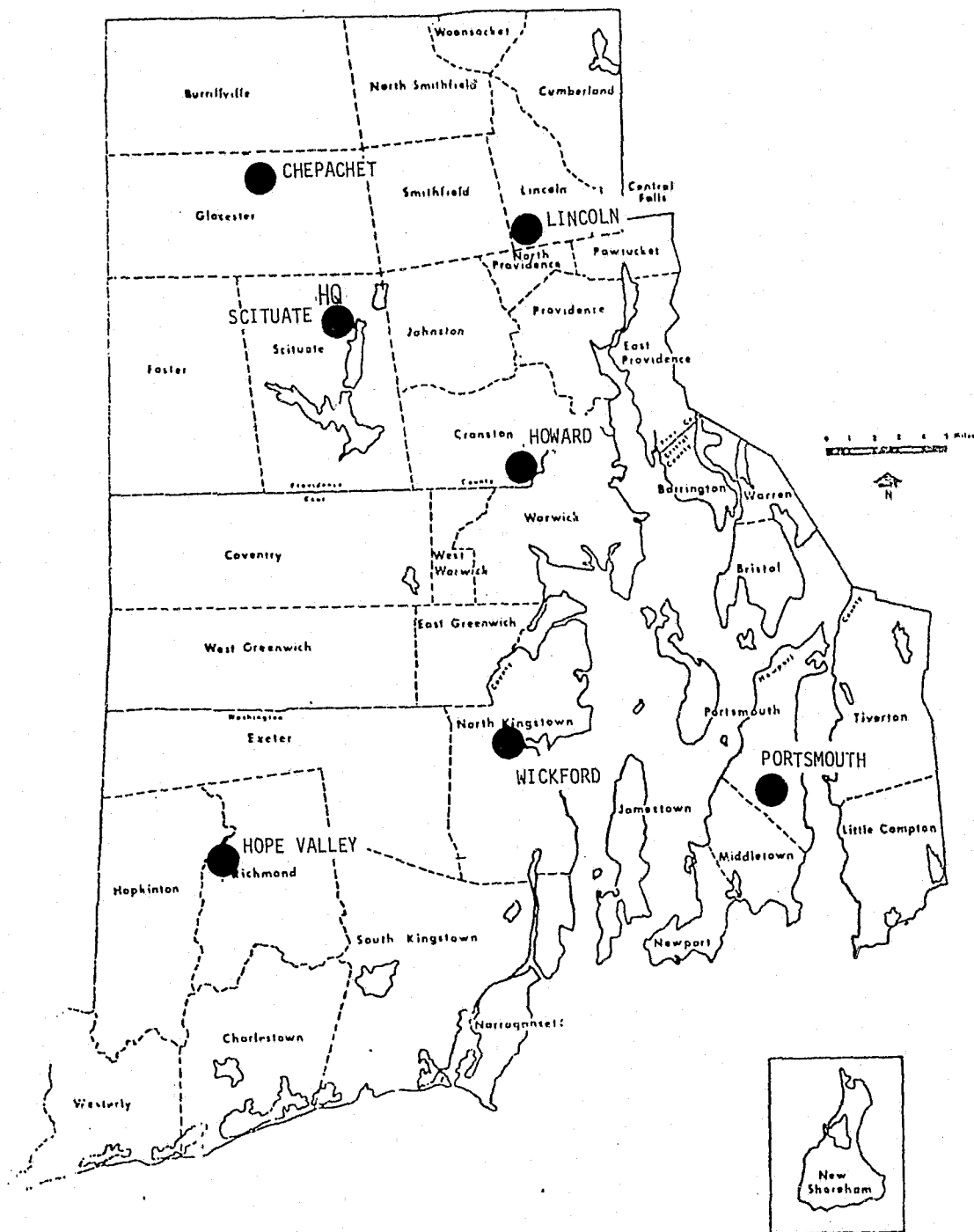


Figure 4 - State Police Barracks Location

combination of cities and towns. Figure 5 illustrates the regional breakout and the police mobile resources (totaling approximately 500 vehicles).

The Communications/Records System Program and Goals

Rhode Island's action program in police communications and record systems is divided into three areas:

- Improve State Police auxiliary services
- Improve communications/records for Municipal Police
- Implement statewide police records/communications center

The first two areas address the improvement of State and local police communications/records systems encompassing the updating of a statewide interagency high-band emergency channel entitled, "Rhode Island State Police Emergency Radio Network" (RISPERN). The plan calls for all law enforcement agencies to have this coordination channel (in addition to their working channels) in their vehicles. The base station would be controlled by the State Police. Accent in the records area is directed towards the establishment of regional data centers. Each police vehicle would have a data access radio channel enabling direct communications with one of the nine regions which serve as the data access-point to state and national criminal justice files. The nine regional data centers would have high speed data terminals linked to the statewide records/communications center (the third action program area) housed at State Police Headquarters.

NINE REGIONS & POLICE MOBILE RESOURCES

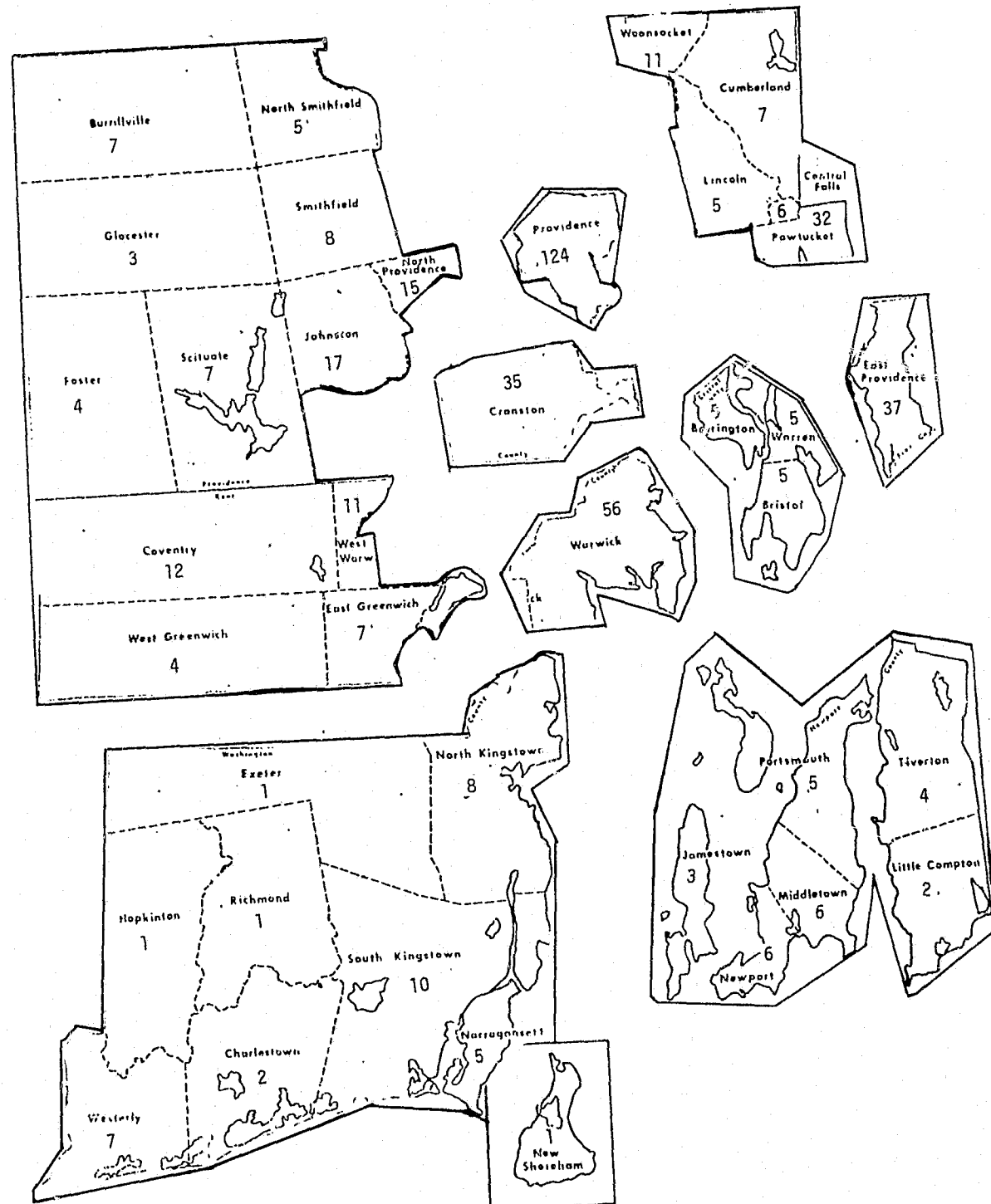


Figure 5 - Regional Breakout and Police Mobile Resources

The goals of the records/communications program appear to fall into three major areas:

- Improve response time to citizen's request for service
- Improve record systems and data access
- Enhance inter-agency coordination

These communications/records goals are commensurate with those outlined in the National Advisory Commission Report on Criminal Justice Standards and Goals.

Two Systems (CJIS and Regional)

The implementation of the State's communications and records program is directed in two areas, the Criminal Justice Information System (CJIS) and the nine regional communications/records systems.

The implementation plan for CJIS consists of three major phases as follows:

- |           |   |
|-----------|---|
| Phase I   | State Police Communication System<br>Microwave<br>VHF Mobile Radio<br>Communication Control Center                |
| Phase II  | Interagency Law Enforcement Information System<br>Local Interface with CJIC (SP HQ)<br>Emergency Telephone System |
| Phase III | Data Inquiry and Comprehensive Data Systems   |

Phase I consists of implementing the State Police (SP) microwave and land mobile radio systems and establishment of the statewide communication control center. The microwave system, illustrated in Figure 6, consists of ten sites (6 SP barracks, the State capital, two remote



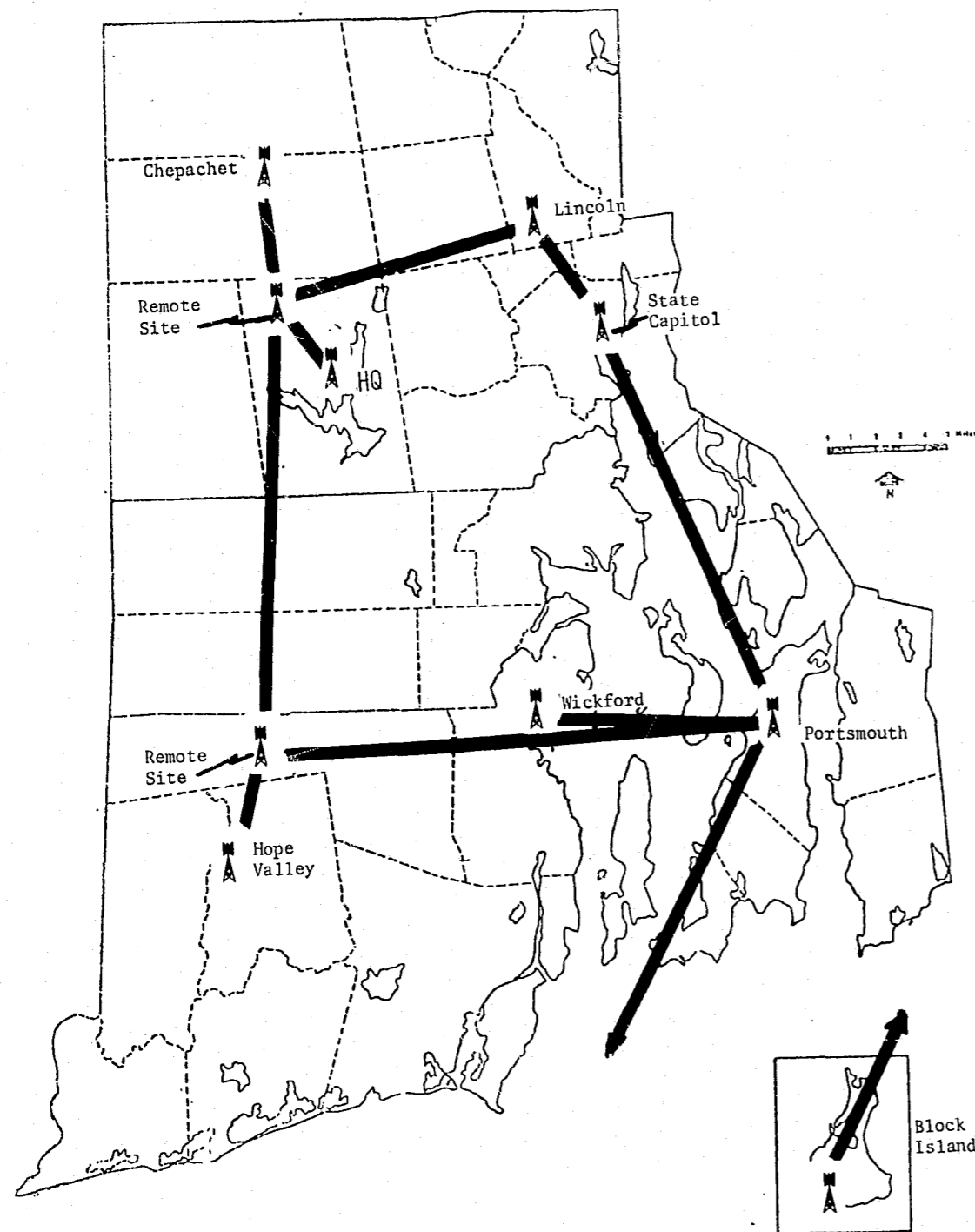


Figure 6 - State Police Microwave System (Phase I)

repeater sites, and the Block Island site). This system is a 2 GHz voice system (with the exception of the 960 MHz link to Block Island) with a 300 channel basic capacity incorporating a loop configuration for enhanced system reliability. The system is configured for 72 channels and provides inter-barrack communications and statewide complaint access to the radio dispatcher at headquarters (communication control center).

The State Police land mobile system, illustrated in Figure 7, consists of an eight channel high-band capability and includes a mobile repeat mode for communications (through a portable radio) with the officer when he is out of his car. In essence, the mobile repeat mode enables long range portable communications. There are two base station sites and depending on the particular vehicle location (north or south zone) one of the two base stations is activated by the radio dispatcher (through the microwave system) stationed at SP headquarters. As mentioned earlier, the SP microwave system enables direct access with the communications control center at State Police headquarters.

Phase II of the CJIS consists of interfacing the nine regional centers to the State Police microwave system and the provision of emergency telephone system linking the nine regions and the State Police. Figure 8 illustrates the regional microwave system (heavy lines) and the State Police microwave system (dotted lines.) The

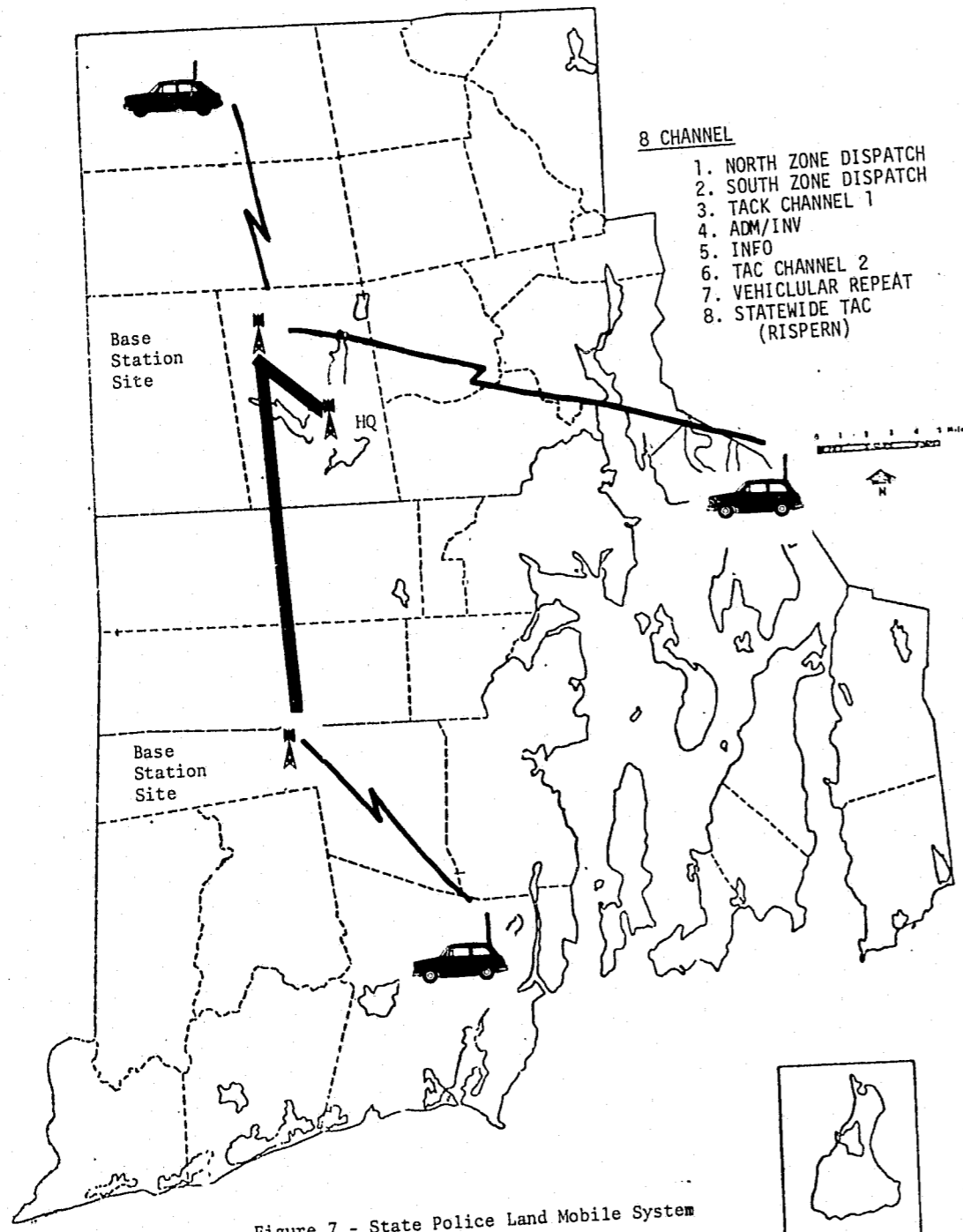


Figure 7 - State Police Land Mobile System (Phase I)

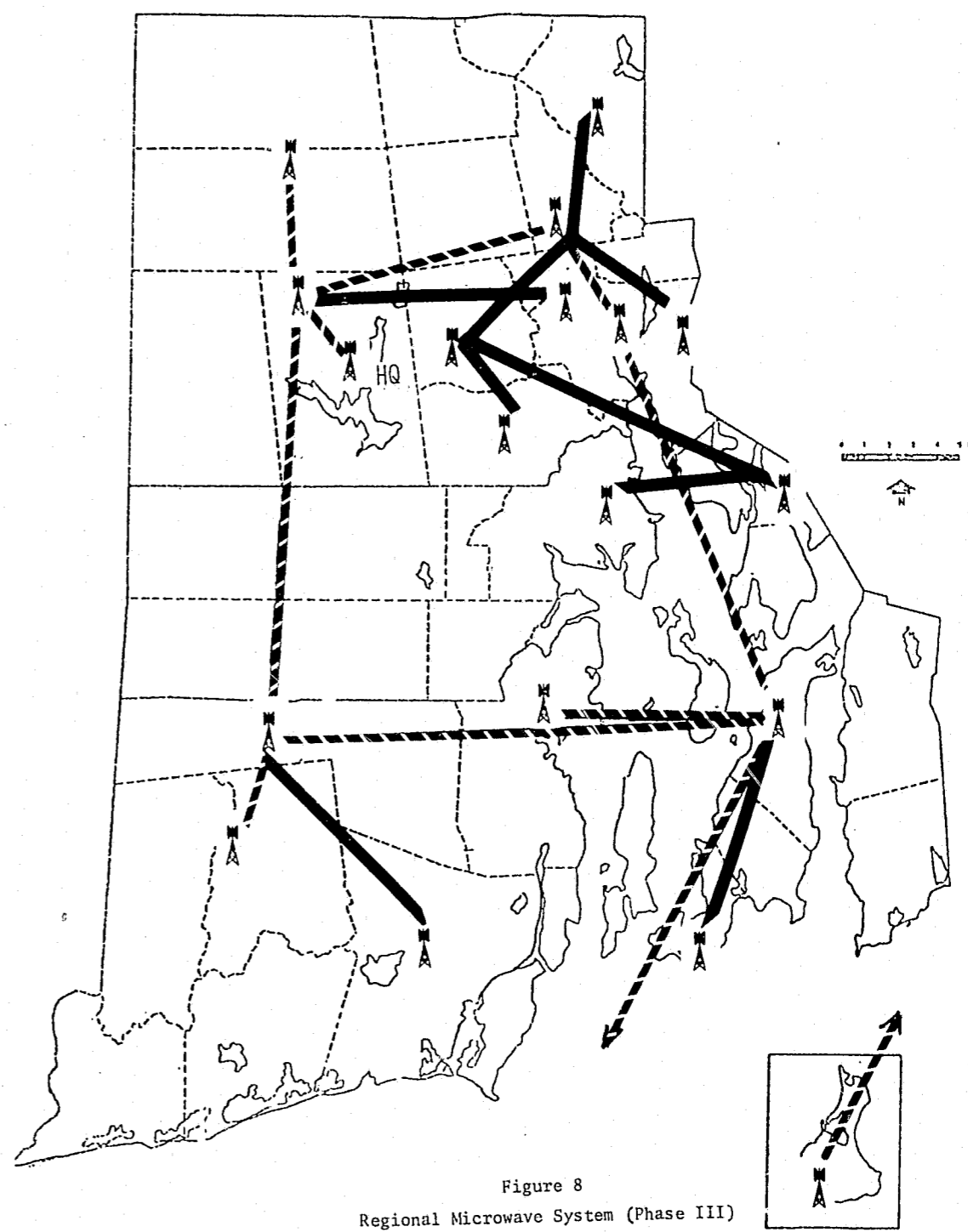


Figure 8  
Regional Microwave System (Phase III)

emergency telephone system consists of a direct dial access between regions and the State Police utilizing the regional and state microwave systems as the communication interface.

Figure 9 illustrates how the 39 local agencies access the state-wide communication system. A police vehicle from one of the local agencies radios his information request to his respective regional office. The information is inputted by a high speed terminal to the communications control center via microwave. A search is automatically made of local and national files and the response is wired back to the region. The regional dispatcher then radios the information to the local police vehicle thereby completing the data access in a rapid fashion.

Phase III of the CJIS consists of implementing an automated message switch at the communication control center to replace the present "torn-tape" method of NCIC and NLETS access. This step will provide a more efficient and rapid access to national criminal justice information files. In addition this phase involves the design, development, and implementation of a Rhode Island Comprehensive Data System. The type of information planned for storage in the CDS is as follows:

- UCR's
- Criminal histories
- Criminal identification
- Wants and warrants
- Offender based transaction statistics
- State stolen vehicles
- Stolen property
- Management administrative information

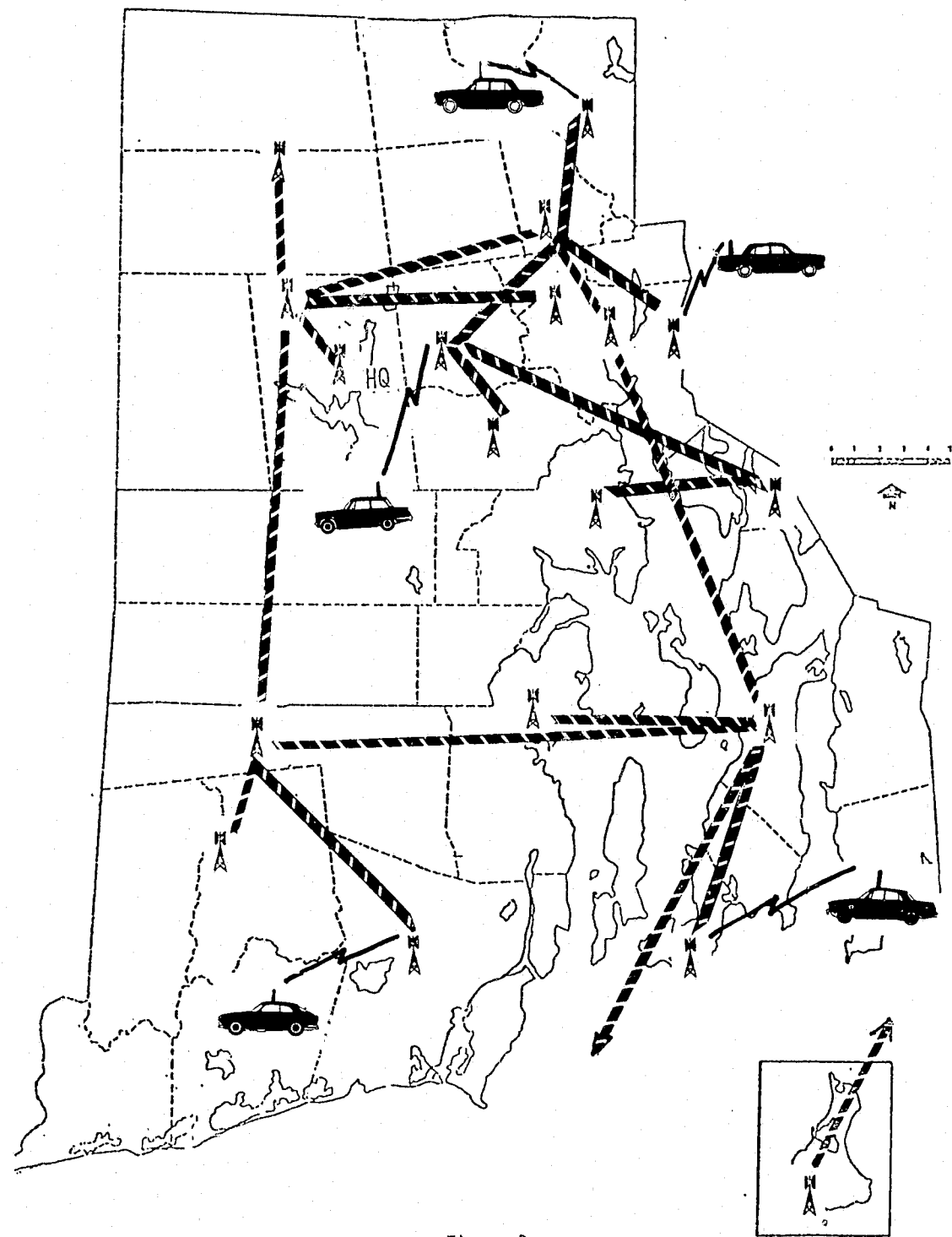


Figure 9  
Local CJIC Interface

The regional communications/records system includes the updating of local communications and record systems as well as the establishment of the nine regional data centers. Plans include developing the local land mobile radio systems such that each vehicle radio will have 1) regular dispatch channel, 2) regional data channel, and 3) RISPERN channel.

### III. STATUS AND EXPENDITURES

The status of the CJIS is presented in Table I. As indicated, Phase I is operational with the exception of the communications control center which could be considered partially operational.

Eight of the nine regional microwave sites (Phase II) have been installed but the system is not in operation. The Phase II emergency telephone system has not been installed. No activity has been directed towards completion of Phase III.

It is important to note that the planned installation of the emergency telephone system and the automated message switch would place the Phase II regional microwave system in operation.

In regards to the regional communications/records systems, it appears that five of the nine regions have either completed implementation or are moving towards this point. The remaining four regions, E. Providence, Warwick, Cranston, and Newport County, are either in the planning or early implementation states.

The approximate communications/records system expenditures for the State Police, the regional microwave system and the nine regions are presented in Table II. As indicated, the State has already spent 2.4 million dollars; 1.2 million is planned for 1974, and at least 1.2 million more (the State Police and regional microwave system) are committed.

TABLE I  
CJIS STATUS

PHASE	COSTS	PROGRAM	COMMENTS
I	\$2.1 MILLION (\$878,000 PAID)	SP MICROWAVE SYSTEM SP MOBILE RADIO SYSTEM COMMO CONTROL CENTER	OPERATIONAL OPERATIONAL 6 CONSOLES INSTALLED PARTIALLY UTILIZED
II	\$700 THOUSAND (\$110,000 PAID)	REGIONAL MICROWAVE SYSTEM	SYSTEM INSTALLED* NOT OPERATIONAL
	?	EMERGENCY TELEPHONE SYSTEM	NOT INSTALLED (DIAL-UP EQUIP. REQ'D)
III	?	MESSAGE SWITCH SYSTEM COMPREHENSIVE DATA SYSTEM	NOT DESIGNED NOT DESIGNED

\* 8 OF 9 SITES

TABLE II  
COMMUNICATIONS/RECORDS SYSTEM EXPENDITURES\*

	1969-1973	1974 PLAN	REMAINING
STATE POLICE	\$ 878,000	\$ 405,000	\$ 810,000
REGIONAL MICROWAVE	110,000	146,000	438,000
BLACKSTONE VALLEY REGION	185,000	139,000	UNKNOWN
PROVIDENCE P.D.	116,000	52,000	
EAST PROVIDENCE P.D.	60,000	34,000	
WESTERN RHODE ISLAND REGION	732,000	216,000	
CRANSTON P.D.	65,000	66,000	
BRISTOL COUNTY REGION	22,000	22,000	
WARWICK P.D.	75,000	45,000	
NEWPORT COUNTY REGION	48,000	26,000	
WASHINGTON COUNTY	108,000	21,000	
	\$2,390,000	\$1,172,000	\$1,248,000

PROJECTED COSTS = \$5,500,000

\*APPROXIMATE

#### IV. CONCLUSIONS

Based on a preliminary examination of the Rhode Island law enforcement communications/records systems, the following conclusions can be reached:

- The system goals are in concert with the National Advisory Commission
  - Reduce response time - 23.1, 23.2
  - Improve records and data access - 24.1, 24.4
  - Enhance interagency coordination - 23.3
- Insufficient system planning documentation is available to enable evaluation of appropriateness of the particular design approach
- It appears that Rhode Island purchased a relatively large communications system without comprehensive planning
- The vendor manufactures high quality communications equipment and the system appears capable of delivering high performance communications
- A major portion of the hardware is installed
- Key elements of the CJIS plan have not been initiated - control center, emergency telephone system, automated message switch, CJIS data base

One of the most significant factors affecting our examination of the CJIS program was the apparent lack of comprehensive system planning. There was no evidence of 1) a hardware/operational survey, 2) a detailed delineation of existing records/communications problems, 3) the establishment of requirements, 4) an examination of alternative design approaches and attendant tradeoffs, and 5) a final system design. Considering the short time period allocated for our examination and the lack of planning documentation, (as stated to us by State officials), we were

not able to evaluate the appropriateness of the system nor were we able to comment on the particular design approach.

## V. RECOMMENDATIONS

Based on discussions with the LEAA General Counsel, the recommendations address the question: should additional LEAA funds be expended for completion of the Rhode Island communications/records system?

From a system viewpoint, the answer is YES because:

- The goals are rational.
- The hardware is good.
- The vendor is competent.
- Most of the system is installed.
- Any change at this point would result in a major system upheaval.

In essence, insufficient planning appeared to accompany the considerable hardware expenditure, (the proverbial cart and horse analogy). The system might far surpass the law enforcement requirements of the State (it is impossible to judge without the requirements and planning backup that should have accompanied system selection), but it is a highly capable system and it is almost completely installed. There appears to be no alternative but to complete the system's implementation and to develop operational procedures which will provide maximum use so that the highest benefit/cost ratio can be obtained.

It is important to note that the affirmative response to the question of further funding is made from the standpoint of a technical (or system) analysis. This is to say that other considerations such as financial, administrative, or operational did not enter into the analysis.

The recommendation to proceed is not without caveats. We believe that further activity should proceed in a particular fashion in order to avoid further problems. Specifically, we recommend that LEAA proceed with the Rhode Island communications/records system program in the following fashion:

- Require submission of a system plan including,
  - Review of CJ communications/records requirements
  - Evaluation of existing plan to meet these needs
  - Update of implementation plan
  - Establishment of evaluation component
- Review plans prior to authorization (LEAA)

In other words, Rhode Island should update their communications/records systems plan such that it is commensurate with the existing requirements and establish the basis and necessary agreements for implementing this plan. This updated plan should then be submitted to LEAA for final review prior to funding authorization.

In addition, in order to derive maximum benefit from the existing system we recommend that Rhode Island consider:

- Satisfying other state agency communications requirements by utilization of the microwave network
- Establishing a State level Office of Telecommunications, holding responsibility for analysis, design, development, and operation of statewide communications systems to foster and coordinate this utilization.

In closing, we recommend that LEAA provide technical support to regions and/or State Planning Agencies to develop and/or review communications/records systems programs in advance of funding.

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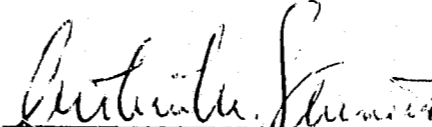
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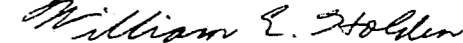
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