

70785

TECHNICAL ASSISTANCE

911 SYSTEM REPORT

PREPARED FOR THE COLUMBIA
REGION ASSOCIATION OF
GOVERNMENTS, STATE OF OREGON

TASK NO. 7907601

PERFORMED BY:

THE ASSOCIATED PUBLIC SAFETY
COMMUNICATIONS OFFICERS, INC.

NEW SMYRNA BEACH, FLORIDA

UNDER A GRANT FROM THE LAW ENFORCEMENT ASSISTANCE ADMINISTRATION

ADVISOR: THOMAS P. POMEROY

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I. INTRODUCTION

- A. In accordance with procedures established by APCO under the technical assistance project (P-17) and in response to a request from Mr. Jack R. Bails, Director, Metropolitan Service District, Criminal Justice Planning Department, Portland, Oregon, to provide technical advice and assistance for the implementation of a regional 911 Emergency Telephone System, the advisor met with the following officials during the period 26 - 28 November, 1979, at Portland, Oregon:

Mr. Jack R. Bails, Director, MSD, Criminal Justice
Planning

Mrs. Merry Hanson, 911 Project Director, City of
Portland

Mr. Jack Wiseman, Clackamas Fire Department

Mr. Mel Paulson, Milwaukie Council

Mrs. Joy Burgess, Milwaukie Council

Chief A. E. Jones, Milwaukie Fire Department

Mr. Bill MacDonald, Milwaukie Police Department

Mr. Gayle G. Easterday, Milwaukie Police Department

Mr. Pete Harrey, City of Lake Oswego

Mr. Zane O. Wilson, Lake Oswego Police Department

Mr. Bill Berger, Lake Oswego Fire Department

Mrs. Blanche Parks, Clackamas County Fire District #1

Mr. John Michels, Oak Lodge Fire Department

Mr. F. A. Hiland, Clackamas #1

Mr. Rick Peterson, Boring Fire Department

Mr. Dan Smith, Fire 10

Mr. George Allen, Happyvalley #65

Mr. Doug Krebs, Tualatin Fire District

Mr. Mick Riebhoff, Willomette Falls Ambulance

Mr. Jeff Lagerstrom, Willomette Falls Ambulance

Mr. Pete Herder, Gladstone Fire Department

Mr. Dave Clemens, Gladstone Police Department

Mr. Harry Carpenter, Clackamas County Fire District #1

Mr. Jack Horner, Director, Emergency Communications, Portland

- (1) The Columbia Region is planning for the implementation of an areawide 911 Emergency Telephone System to serve all Police and Fire/Rescue Departments and Agencies located throughout the multi-County region.
- (2) As identified by the attached 911 service area map, numerous telephone central offices serve the residents of this area. Several utility companies provide the telephone service with various types of equipment in multiple police and Fire/Rescue jurisdictions.

(3) A selectively routed system is required to provide timely response to citizens' requests by the proper authorities and agencies providing emergency services.

B. The Associated Public Safety Communications Officers (APCO) Project 17 is funded by the Federal Law Enforcement Assistance Agency (LEAA) to provide technical advisor support to organizations requesting technical assistance.

C. This report is based on observation of facilities, conferences with officials and discussions with management level authorities.

2. PROBLEM STATEMENT

Many types of telephone equipment provide 911 telephone service in several metropolitan areas throughout the United States. Some equipments are manufactured by firms which are not owned or controlled by the various regulated utilities. In many cases the privately owned equipment provides better service in a cost effective manner.

It is necessary to have an unbiased appraisal of equipment that would best meet the needs of local jurisdictions who are planning and/or operating 911 emergency telephone systems.

Local authorities must either accept vendors recommendations or obtain consulting services from other sources.

The Columbia Region Association of Governments is presently planning an areawide 911 system. The requirement for timely and accurate information is extremely difficult to satisfy when various regulated utilities are providing telephone service within the region and multiple Departments and Agencies are required to provide responsive emergency service within their areas of responsibility.

3. PROBLEM ANALYSIS AND DISCUSSION

A mix of Central Office telephone equipment located in telephone company owned facilities provide telephone service throughout the Columbia Region. Both General Telephone and Electronics (GT & E) and Northwestern Bell of A.T. & T. provide service in addition to other smaller regulated companies.

The equipment in use ranges from Electronic Switching Systems (ESS) to Step by Step (SXS) and Cross Bar (X-Bar) type central offices.

3. PROBLEM ANALYSIS AND DISCUSSION (Cont'd)

Several central offices provide telephone service to citizens that are served by police and Fire/Rescue jurisdictions outside of the geographic location of the switching centers. This requires selective routing which may be accomplished through the use of the Automatic Number Identification (ANI) or manually by a 911 operations center.

Selective routing has been successfully accomplished by developing the necessary hardware and software at a central tandem switching location which uses the number identifier to automatically route the calls to the appropriate emergency answering center. This method provides responsive service without the need for intermediate manual screening. All central offices must outpulse the number identification to the tandem switch and the data base at the tandem must be arranged to identify the number and route the call to the proper answering point.

The telephone companies have not provided sufficient information upon which a recommendation can be based. Extensive coordination and detailed engineering is required for the completion of an Implementation Plan for the 911 Emergency Telephone System.

The manual screening and routing of all 911 calls may not provide the required service response time and may not be cost effective. These determinations can be accomplished after the detailed engineering and conceptual design phases have been completed.

4. CONCLUSIONS

An extensive amount of detailed operational requirements and capability information must be translated into specific design and engineering actions for implementation planning purposes.

The Conceptual, Design, Engineering, Installation, Test and Activation phases of effort must be closely coordinated and supported by all organizations and agencies involved.

The specifications developed by the City of Portland for Engineering and Management alternatives for the implementation of the 911 Emergency Telephone System should permit the development of an efficient and cost effective system.

The competitive acquisition of hardware and/or software will be beneficial to the Columbia Region.

The operating telephone companies must provide timely, complete and accurate information to the using organizations and must effectively support system implementation.

4. CONSLUSIONS (Cont'd)

A task force must be designated by the Region's governing organizations to provide guidance and approval of the implementation plan.

5. RECOMMENDATIONS

That the City of Portland proposed engineering effort encompass the Columbia Region requirements for the development of a fully integrated 911 system.

That the operating telephone companies be directed to provide all information required in a timely manner.

That an automatic selectively routed system using number identification be provided wherever possible with Automatic Number Identification features.

That the Public Information Program advise all citizens that the 911 System is for emergency use only, i.e., the immediate need for a policeman, fireman or emergency medical assistance. Seven digit numbers should be identified for administrative usage.

That all 911 System hardware and/or software be competitively acquired.

That a 911 System task force be designated and supported for all phases of implementation.

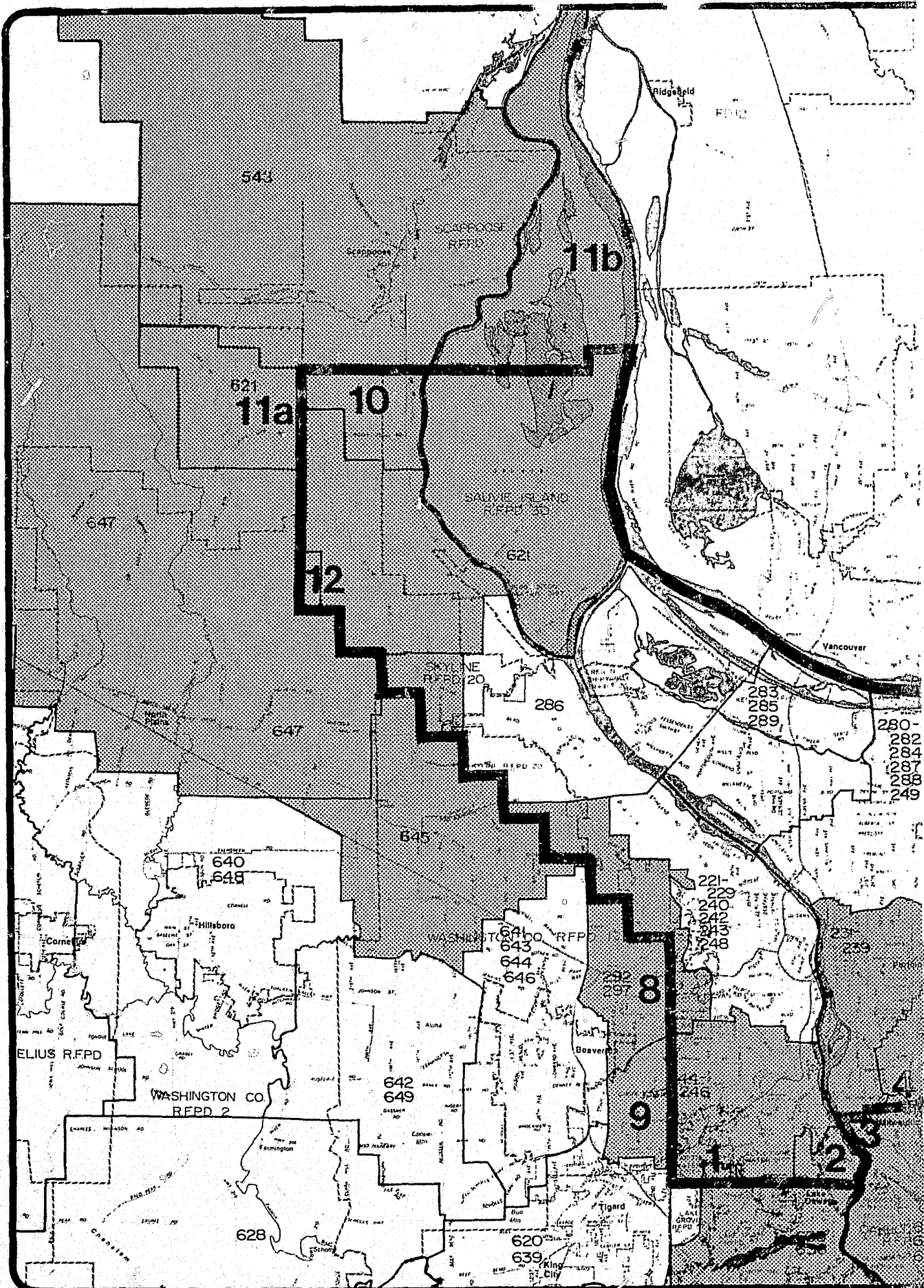
That government owned microwave systems be utilized for 911 system trunking.

ATTACHMENTS:

1. City of Portland Request for Proposal
2. 911 System Service Area Map

The following documents were provided to Mr. Bails on November 27, 1979:

1. Installation/Cutover Implementation Plan
2. Fire System Specifications
3. General Implementation Plan for 911 Emergency Telephone Number System
4. 911 Automatic Call Distributor (ACD) Specifications
5. Relocation Plan
6. 911 System Operational Testing Procedures
7. Consultant Professional Engineering Service Agreement
8. Bidding and Evaluation Factors



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Ridgefield

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SALVIE ISLAND RFPD

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WASHINGTON CO. RFPD 2

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Tigard

King City

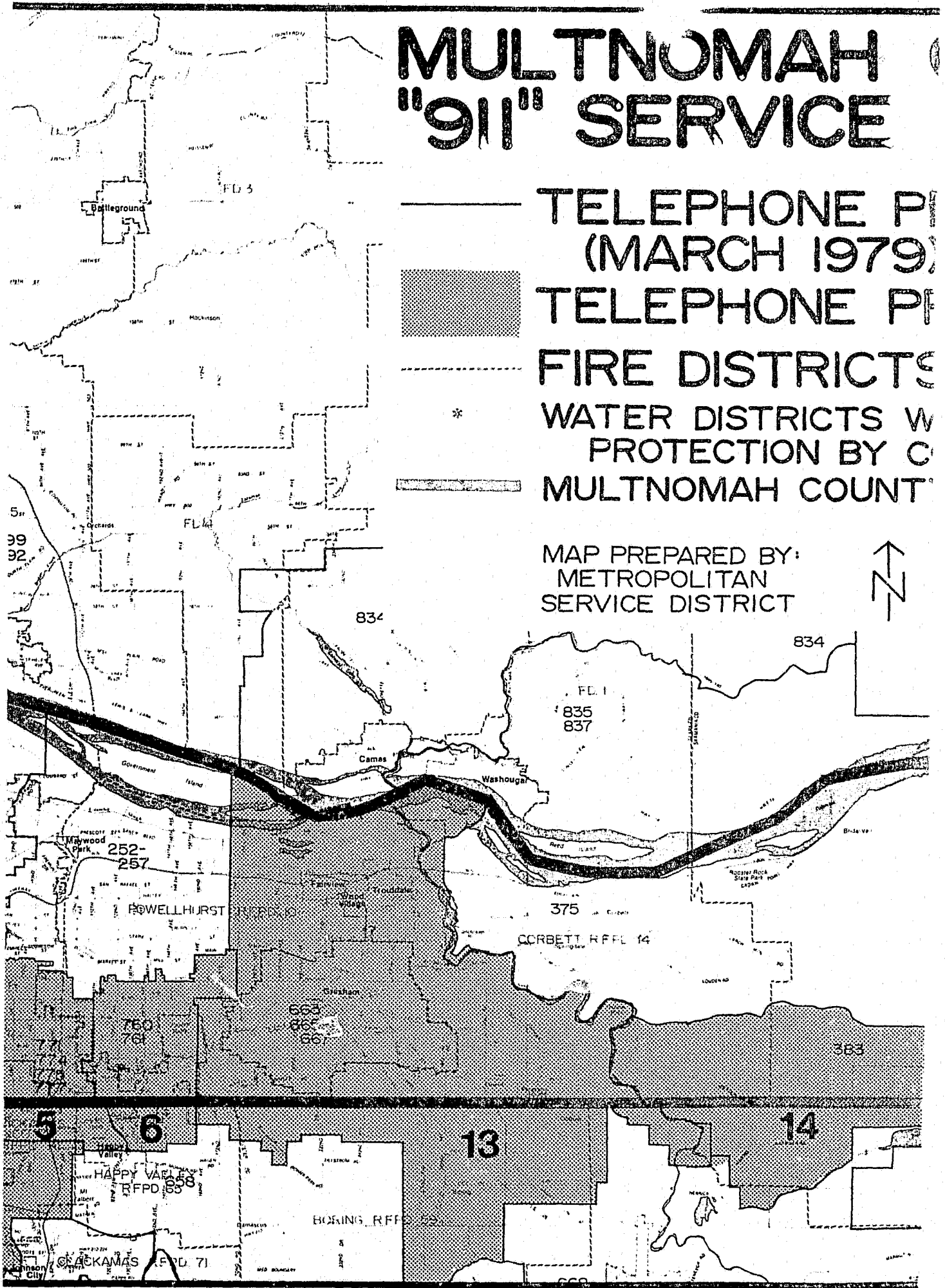
LAN GROVE RFPD

CLATSOP COUNTY

MULTNOMAH "911" SERVICE

TELEPHONE P
(MARCH 1979)
TELEPHONE P
FIRE DISTRICTS
WATER DISTRICTS W
PROTECTION BY C
MULTNOMAH COUNT

MAP PREPARED BY:
METROPOLITAN
SERVICE DISTRICT



COUNTY AREA

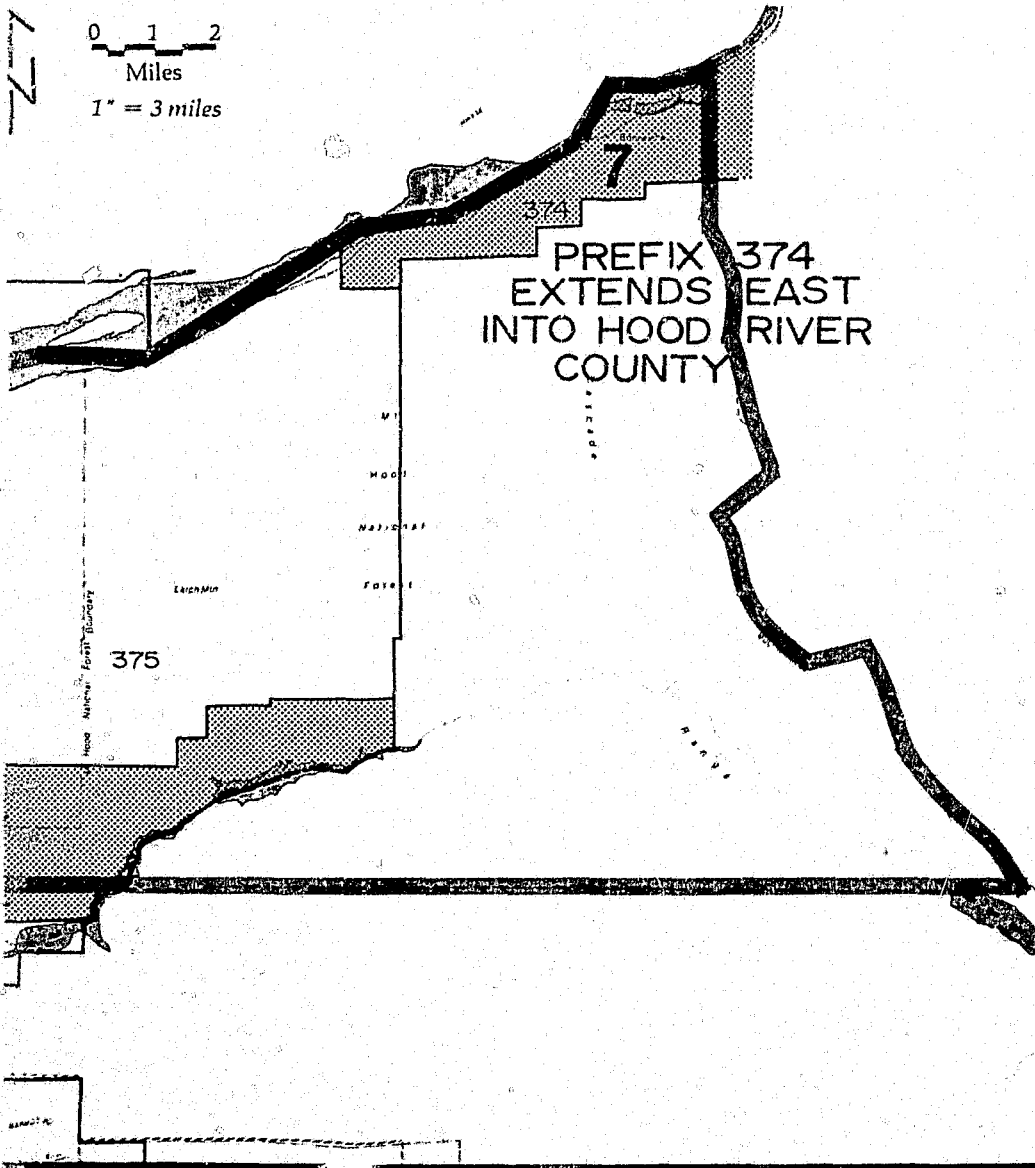
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PROBLEM AREAS

TS (JULY 1977)

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