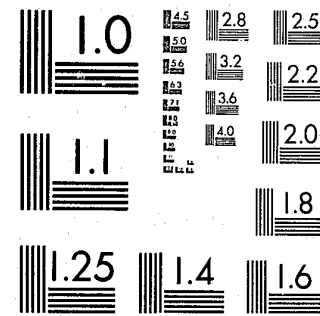


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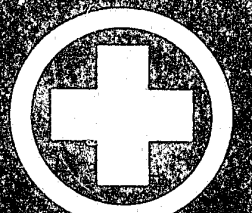
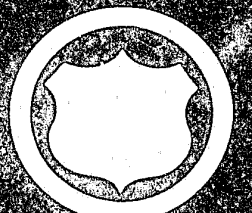
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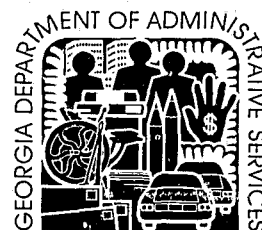
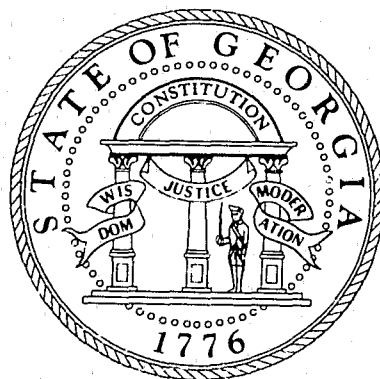
STATE OF GEORGIA

EMERGENCY TELEPHONE NUMBER PLAN

911

68329





68329

STATE OF GEORGIA
911 EMERGENCY TELEPHONE
NUMBER PLAN

NCJRS

JUN 16 1980

ACQUISITION

This plan was approved by the Emergency
Telephone Number Committee in accordance
with the provisions of The Georgia Emergency
Telephone Number "911" Service Act of 1977

DECEMBER 1, 1979

PREPARED FOR THE STATE OF GEORGIA
BY THE TELECOMMUNICATIONS DIVISION
OF THE GEORGIA DEPARTMENT OF ADMINISTRATIVE SERVICES
PROJECT NUMBER 80-32-04-M-311-01

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THE GEORGIA OFFICE OF HIGHWAY SAFETY
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I. INTRODUCTION

In Georgia there are a great many police, fire, and ambulance agencies. Each has one or more telephone numbers for use by the citizen in contacting these agencies in an emergency. The replacement of approximately 2,000 local telephone numbers with the single universal emergency number Nine-One-One (911) will result in critical savings of time for Georgia citizens in obtaining emergency assistance from their public safety agencies. This will result in financial savings through reductions in property losses, reduction in the effects of injuries, increased apprehension of criminals, and in the savings of life itself.

Recognizing the immense public benefit of 911, the Georgia Legislature passed State Act 636, the "Emergency Telephone Number '911' Service Act of 1977." This Act designates the Department of Administrative Services, Telecommunications Division, as the state agency responsible for the development of a Statewide "911" Plan. This plan describes a systematic process by which local governments and public safety agencies can develop a 911 system tailored to fulfill local requirements. Detailed planning information and an approved 911 configuration plan for each County in Georgia will be appended.

Configuration Plans are to be prepared on a county wide coverage basis and forwarded to the Telecommunications Division for approval

and inclusion in the State Plan. Since State Act 636 is a permissive Act only, local governments will not be required to install the system. By having an approved plan, local governments will save valuable planning time when the decision is made to implement the system. The use of this plan and the 911 Planning Guide will greatly simplify the development of a 911 plan.

II. BENEFITS OF 911

Although public safety agencies in Georgia have continuously sought to maintain the highest level of assistance and service to their communities, they can be provided with a number of significant benefits through a properly implemented 911 program. Chief among these benefits is the time that can be saved from the point of initial awareness of an emergency to actual on-site assistance. Measured in minutes or even seconds, reducing this span of time can be critical in responding effectively to most emergency calls.

A better coordination of multiple emergency services, analysis of assistance needed and call priority is possible with 911. Through the central emergency answering center, unnecessary duplication of services can be avoided and a more effective scheduling of personnel and resources made possible.

Once fully implemented, communities generally develop a confidence in 911 which contributes to a better informed public and an increased awareness of public safety assistance efforts.

A. FACTORS CAUSING DELAY IN EMERGENCY CALLS

In Georgia, there are hundreds of emergency telephone numbers in use. For any particular location, there are invariably different numbers to call for help from the individual public safety agencies. Compounding this problem is the fact that police, fire, ambulance and the sheriff frequently serve dif-

ferent geographical areas so that next door neighbors may, for example, be served by the same police agency but different fire departments.

Several surveys have shown that only about 20% of all adults have memorized even one of these several emergency telephone numbers in their own local area. Even this knowledge of one number useful in one area limits reporting emergencies because:

- People frequently work and live and shop in different areas.
- People traveling are unfamiliar with local procedures for handling emergency calls.
- The average person moves several times in his lifetime.
- Boundaries of areas served by public safety agencies change occasionally, as do corresponding emergency telephone numbers.

Additional complications are:

- If a person is not at home or work, the identity of the city may not be known.
- Even at home, a person may not know which of several ambulance services to call or has no way of knowing what ambulances are in or out of service. This may necessitate calling a second or third service to find an available ambulance.
- Some agencies are not staffed 24 hours per day. Dialing "0" can introduce a delay if the operator is handling other calls. When reached, the operator must then determine the nature and location of the emergency and take additional time trying to locate the right response agency. This can be a complicated task when the operator may be many miles from the emergency location. The operator could realistically make two or more calls to reach the right agency.
- Time can be lost while looking for a directory and then finding the correct number.

Other difficulties encountered by persons trying to call for emergency help which result in time loss include:

- Calling the wrong agency, e.g., calling police when an ambulance is needed because only the police number is known.
- Emergencies requiring service from multiple agencies.
- No coin for a pay telephone.
- Misdialing due either to calling the number above or below the correct one, transposing numbers or dialing too fast.
- Many emergency calls in Georgia involve a long distance charge; to avoid the charge, persons have been known to try to handle a problem by themselves.
- A light source is often required to aid in looking up and dialing telephone numbers.

With these factors in mind, it is not at all surprising that careful studies have determined that this "lost" time ranges from 1 minute to 4.5 minutes. It is after this time that response agencies are first alerted to respond.

The major benefit of 911 to citizens and public safety agencies is the reduction in the overall response of a public safety agency.

The total time required in response to a perceived emergency is the sum of:

- (1) Time from citizen perception of an emergency situation to the time he or she reaches the correct public safety agency;
- (2) time from reception of a call by the agency to the time an emergency service vehicle is dispatched to the scene of the emergency; and
- (3) time from the dispatch of the vehicle to the time it arrives at the scene of the emergency.

A 911 system will provide valuable time savings in the first of these three components of the total response time.

Many surveys have been conducted on the problems citizens have in reaching their public safety agencies. These surveys indicate that less than 50 percent of the citizens know the telephone numbers of their own public safety agencies, and at least 20 percent do not know the correct agencies. Clearly, when citizens are traveling, only a very few know the appropriate jurisdiction, much less the emergency telephone numbers of the public safety agencies. Citizens who do not know the correct emergency telephone number rely on telephone directories or direct call (zero) to local telephone company operators.

Telephone operators have historically provided emergency assistance to the citizen who does not know the correct number. However, telephone operators are not highly trained in providing emergency service and must themselves search the telephone directories for the telephone number of the correct agency. An additional disadvantage is the gradual reduction of the number of operator centers due to the automation of telephone switching centers. An operator reached by dialing "0" could be over 200 miles from the scene of the emergency and would, therefore, be ill-equipped to assist the citizen in selecting the correct agency.

Average call delays encountered by citizens not having the correct number ranged from 1 minute to over 3.5 minutes, depending upon the type of agency and the number of agencies contacted before the correct

agency was reached. Twenty percent of the citizens surveyed experienced an average delay of 3.5 minutes because of failure to reach the correct agency on the first contact. Additionally, 10 percent of these citizens needed assistance from more than one type of agency. These delays in citizen access to public safety agencies are caused by the citizen not knowing the correct agency, and the lack of easily located emergency numbers. By utilizing 911 as a universal emergency number, both of these problem areas will be eliminated. The three-digit number is easily remembered, and trained answering personnel can quickly identify the correct agency and provide for the transfer of the emergency information to that agency.

The benefits of reduced response time by emergency service agencies are quite clear. A study by the President's Commission on Law Enforcement showed a direct relationship between apprehension of criminals and low response time. According to a study done by the Stanford Research Institute for the State of Florida, a reduction of an average of only one minute in fire response time could probably pay for the yearly cost of 911 in Georgia. A reduction in response time for ambulance and rescue units will reduce the death rate in heart attack, injury accident, and other life or death emergency medical responses. An important, but somewhat less clearly seen, benefit of 911 is the more efficient and more cost effective use of scarce emergency service resources for the public benefit.

B. SAVE TIME - DIAL 911

If 911 is available statewide, persons confronted with any

emergency situation need only dial "911" to get all types of assistance immediately, with these advantages:

- 911 is easy to use.
- 911 is fast.
- 911 is always answered.
- 911 can be dialed from a pay telephone without use of a coin, if the telephone company has modified it for coin free dialing.
- 911 can be dialed in the dark.
- 911 can be taught to be used by children who are too young to read.
- 911 calls are free to caller.

C. THE POWER OF 911

911 will save time, probably one minute or more in total response time by public safety agencies. A personal rule of thumb of a Fire Chief helps emphasize this point: "The first five minutes of a fire are equivalent to the next five hours." National figures indicate that the temperature of a fire will approach 1000 F in five minutes, producing superheated air which can kill humans instantly and cause explosive flaming of wood. Many other flammable materials can explosively flame at lower temperatures.

Stanford Research Institute concludes in "911 in Florida, A System Concept" that a one minute reduction in response time in fires in Florida will cause a reduction of loss in residential fires of 11% and a reduction of loss in non-residential and non-building fires of 2%. A reduction of that magnitude in fires alone will more than offset the cost of implementing 911 state-

wide in Georgia. In addition, lives lost due to heat or products of combustion gases will certainly decrease if one minute can be saved in total response time.

In emergency medical situations, if breathing is stopped, brain damage may begin after three or four minutes. Death may occur in six to ten minutes. Saving one minute in total response time in this situation is very important. Fast action is also required in cases of heart stoppage, arterial bleeding and other serious medical problems.

The saving of time can be an equally important factor whether a response unit is able to reach the scene of an emergency within three to four minutes or even ten to fifteen minutes. In those areas where emergency vehicles have to be dispatched from distant points, call answering personnel may connect the caller directly to an emergency center for first hand advice and instructions until assistance arrives. No matter at what level emergency services are provided, the saving of time is vital to the successful rendering of aid to the individual.

To appreciate the advantage of 911, consider a caller in a rural area faced with a serious medical emergency involving a family member. This caller is under stress and may even be hysterical. Speed and ease of calling for help are important. The caller used the nearest phone, dials 911 and the person answering may:

1. Radio dispatch the law enforcement unit (police, sheriff or state patrol) already in the field and nearest to the scene of the emergency for immediate first aid or paramedical treatment.

2. Dispatch a fire-medical rescue unit if needed.
3. Dispatch the nearest available ambulance.
4. Extend the caller to a hospital emergency room or doctor for advice.
5. Tell emergency unit personnel what the situation is at the scene, what advice is being given and what to expect upon arrival.

In this situation, by dialing 911, the caller saves time, can be given emergency advice and can expect assistance from the nearest appropriate response unit. Thus, through 911, all responding units are coordinated by trained personnel using modern radio equipment for the most rapid and effective method of providing emergency assistance.

D. EXTRA FEATURES AVAILABLE WITH 911

1. CALLED PARTY HOLD AND EMERGENCY RING-BACK

The person answering the 911 call is able to hold a line open and ring-back the calling telephone, even if the caller hangs up his telephone, when the 911 system employs a direct trunked network. This ring-back feature can reduce the incidence of false fire alarms and false bomb reports. With Called Party Hold, the calling telephone location can be traced by the telephone company even after the calling phone is hung up.

2. FORCED DISCONNECT

With this feature, it is possible to disconnect a caller if the caller attempts to tie up incoming lines by dialing and not hanging up.

E. INDIRECT BENEFITS OF 911

Many indirect benefits have occurred after 911 service has been implemented. For instance, when public safety answering personnel serve multiple agencies, the need for a high level of proficiency becomes apparent and is soon acquired through specialized communications center training, which results in better emergency service to the public. The experience of coordinating the efforts of multiple public safety agencies through 911 can also be invaluable in large scale emergency situations where broad areas may be endangered by the spread of hazardous materials due to explosions or transport accidents. Personnel at 911 emergency answering centers working with all types of emergency service agencies are ultimately able to identify problem areas where improvements in these services can be made.

III. BACKGROUND OF THE DEVELOPMENT OF 911

A. BACKGROUND

"911" (Nine-One-One) is the three-digit telephone number that has been designated as the "Universal Emergency Number" for public use throughout the United States to report emergencies and request emergency assistance. It is intended as a nationwide telephone number giving the public direct access to an Emergency Answering Center (EAC) which will be responsible for taking the appropriate action. The operation of the EAC is not a responsibility of the telephone companies providing the telecommunication portion of the 911 system.

The concept of a nationwide telephone number was first used in Great Britain more than 40 years ago when the code "999" was established on a national scale. Other countries in Europe and around the world have since provided their citizens with similar uniform emergency telephone numbers.

In the United States, official impetus for the development of a nationwide emergency telephone number was provided by the 1967 recommendation of the President's Commission on Law Enforcement and Administration of Justice that a "single number should be established" for reporting police emergencies. Other Federal Government agencies and various government officials supplied further stimulus. In 1968, the American Telephone and Telegraph announced that it would make the digits 911 available for national use.

The code 911 was chosen because it best fits the need of all parties involved. First, and most important, it meets public requirements because it is brief, easily remembered and can be dialed quickly. Second it best meets the long range numbering plans and switching configurations of the telephone industry. It is a unique number, never having been authorized as an office code, area code, or service code. Using other telephone numbers for each emergency was determined to be contrary to the purpose of a single universal number.

In March of 1973, the Office of Telecommunications Policy, Executive Office of the President, issued a national policy statement which recognized the benefits of 911 and encouraged the nationwide adoption of 911. The intense interest in the concept of 911 can be attributed primarily to the recognition of several characteristics of modern society: increased incidence of crimes, accidents, and medical emergencies; inadequacy of emergency reporting methods; and the continued growth and mobility of the population.

B. CURRENT STATUS OF 911 NATIONALLY

As of December, 1978, over 700 areas in the United States had "911" service. These systems now serve approximately 64 million citizens, or about 30% of the United States Population.

C. CURRENT STATUS OF 911 IN GEORGIA

In 1970, the City of Macon in Bibb County implemented the first "911" system in Georgia. Since that date thirteen additional systems have been installed.

The 911 systems in Georgia and year installed are as follows:

1. Bibb County	May 1970
2. Dougherty County	July 1970
3. Thomas County	May 1971
4. Baldwin County	May 1974
5. Early County	May 1976
6. Lowndes County	June 1976
7. Turner County	July 1976
8. Stephens County	October 1976
9. Barrow County	April 1977
10. DeKalb County	October 1977
11. Jekyll Island	May 1978
12. Wayne County	June 1978
13. Washington County	March 1979
14. City of Americus	July 1979
15. Fulton County	November 1979

With the fifteen systems currently in operation, approximately 21% of the citizens in Georgia have access to 911.

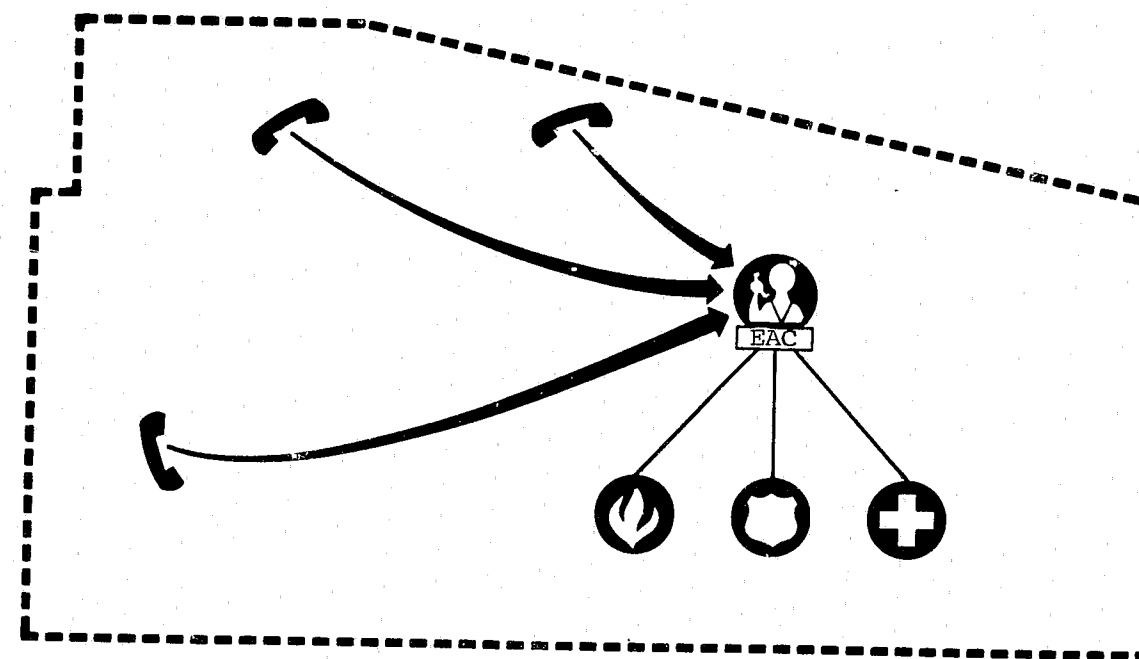
IV. 911 SYSTEMS DEFINITIONS

The following section defines and illustrates the common 911 system configurations and the four approved methods of communication between the Emergency Answering Center and responding emergency service agencies. Local 911 system designs may be combinations of these illustrated systems if they satisfy the State 911 Standards in Appendix C.

A. BASIC 911

The "basic 911 system" allows a person dialing 911 to be connected to a EAC via normal telephone facilities. All 911 calls from lines served by a central office or central offices will be routed to one EAC. The following illustration depicts a basic 911 system. Consideration should be given to public education of telephone subscribers located within the 911 planning area but served by other central offices. They should be informed that until adjacent jurisdictions have 911, they should use a designated seven-digit emergency number. Stickers or other means of showing the special number should be provided for the appropriate telephones.

BASIC 911 SYSTEM



Legend:

EAC - Emergency Answering Center

---- Central Office Boundary

B. EXPANDED 911

An Expanded 911 system provides several distinct advantages over conventional emergency communications systems and over Basic 911:

1. Selective routing performed by a computer in the telephone central office, means that each emergency call goes directly

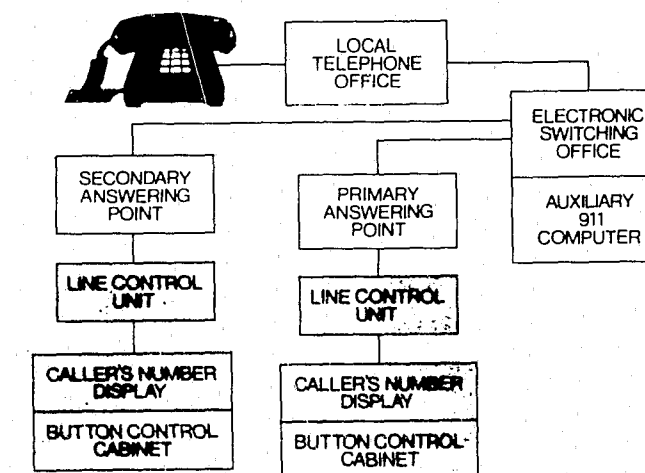
to the correct primary answering point, (911-EAC) no matter how many such points there are.

2. Selective call transfer or Automatic Call Transfer allows the answering attendant to forward the call to the proper emergency agency at the push of a button.
3. Automatic Number Identification (ANI), provides a visual display of the caller's telephone number at the answering center that provides two obvious advantages. If the caller is incoherent or hangs up before giving sufficient information, the attendant can immediately call the number back and get that information. This should also help deter prank calls.
4. The 911 attendant can help coordinate aid with push button speed when more than one emergency service is needed. For example, a fiery automobile crash may require police, ambulance service and fire fighting help. One call to 911 can get it done quickly and surely.
5. The computerized 911 system can improve data collection regarding emergency calling and planning future emergency services. This also presents an opportunity for study and improvement of current emergency practices.

HOW A TYPICAL EXPANDED 911 SYSTEM WORKS:

A citizen dials 911. This sets into motion a sophisticated electronic system that includes telephone switching offices, an auxiliary 911 computer in a designated electronic tele-

phone office, and secondary answering points operated and manned by the emergency agencies themselves.



Route of Expanded 911 Emergency Call

The central office serving the caller relays a signal to another telephone office - one designated to handle all 911 calls in the 911 Service Area and served by an electronic switching machine. This signal identifies the call as an emergency and also transmits the caller's telephone number.

In the electronic office, an auxiliary 911 computer goes into action. Its data base keeps track of every telephone number in the service area, where each number is located and which emergency agencies and answering points serve that location.

The computer determines which primary answering points serves the caller's area and sends the call there immediately.

A line control unit at the answering point automatically distributes incoming calls to the first free attendant. The calling telephone number is displayed on the attendant's console by light emitting diodes.

The attendant answers by saying "Emergency nine-one-one" and learns what type of emergency exists. Depending on what type of emergency there is, and which public service agency is manning the 911 EAC, the call could be handled in several ways. The examples below assume that the 911 EAC is located at a police dispatching unit.

If the call required police aid, the 911 attendant might dispatch help directly or pass the necessary information to a nearby dispatcher.

If the call was a fire emergency, the attendant would press the "fire department" button on the 911 control cabinet (Another button can be provided for ambulance service.) The "fire department" signal races back to the electronic office. Again the computer consults its memory, determines which fire department or fire dispatcher serves the caller's area, and speeds the call to the proper secondary answering point in an average of four seconds or less.

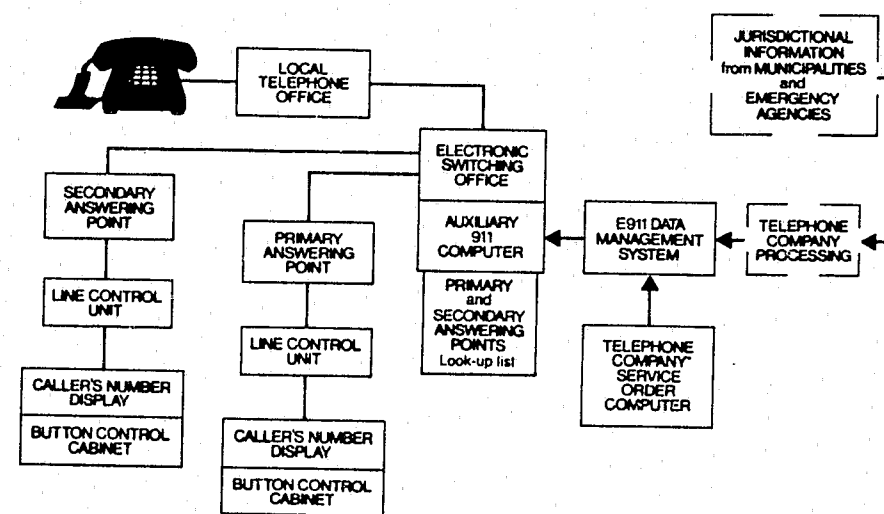
A three-way call is established: The original caller, the 911 EAC attendant and the secondary answering point attendant are all on the line. The caller's number also appears on the console at the secondary answering point. Information is exchanged and fire fighters are immediately dispatched to the scene of trouble.

A call might come in for an agency not on the 911 network, for example, Poison Control. The attendant can still take the necessary information and relay it to the Poison Control Center by regular telephone lines.

In many cases, a combination of these methods of handling calls might be used. The 911 EAC attendant might dispatch police aid directly and bring in emergency medical service on a three-way call.

The secondary answering attendant also has the call-transfer capabilities. Once the primary attendant leaves the call, the secondary attendant can set up a three-way call involving another answering point.

These are only examples of how 911 calls might be handled in a 911 Service Area. The flexibility of the expanded 911 system allows the system to be tailored to the needs of the Service area.



The Expanded 911 Information System

MORE ON THE SELECTIVE ROUTING FEATURE

The auxiliary 911 computer, the heart of the Expanded 911 System, uses information from several sources to selectively route emergency calls to the proper answering points.

The various city, county and municipal governments would provide to the telephone company information relating street names and numbers with police, fire, and emergency medical service jurisdictions. This information would be coded and fed into a data management system by the telephone company.

The telephone company would enter information about existing telephone numbers and their locations. This data would be obtained from the company's computerized records system (service order computer). This records system would be linked to the 911 data management system to provide daily

updating.

When the street addresses, emergency jurisdictions telephone numbers are correlated in the data management system, an answering point look-up list is produced. This is the data base for the 911 auxiliary computer. It contains coded listings of all primary and secondary answering points in the 911 network.

So, when the 911 call is made, the signal from the caller's central office arrives at the electronic switching office designated to handle 911 calls. The 911 auxiliary computer, referring to the look-up list, identifies the correct answering point. The switching office then sends the call to that location.

When a call must be transferred to a secondary answering point, this same look-up list enables the 911 computer to establish the three-way call to the correct secondary agency.

C. SOPHISTICATED 911 FEATURES

Sophisticated telephone system features may enhance the common and control capabilities of a EAC. The following are examples of sophisticated system features that are generally available:

1. Central Office Identification - When a EAC serves more than one central office, dedicated lines or trunks are used to identify each central office.
2. Distinct Tone - Differentiates between a caller who abandons a 911 call before the EAC answers, and a caller who is connected but cannot speak.
3. Forced Disconnect - Allows EAC operators to force the release of the 911 incoming line.
4. Called Party Hold - Enables the EAC operator to control the connection for confirmation and tracing of a call (requires dedicated trunks.)
5. Switchhook Status - Alerts EAC operator when calling party hangs up.
6. Ringback - Enables the EAC to ringback a calling telephone party in conjunction with Called Party Hold.

Additional sophisticated system feature that are not generally available at this time are as follows:

1. Selective Routing - a telephone arrangement which will automatically route calls from a predetermined geographical area to an EAC serving that area, regardless of municipal

and central office boundary alignments.

2. Automatic Number Identification (ANI) - Automatically displays calling telephone number at the EAC.
3. Automatic Location Identification (ALI) - Automatically displays the address of the calling telephone at the EAC.

D. SYSTEM CONFIGURATIONS

Basic 911 (Decentralized System) Configuration Figure 1 illustrates basic decentralized 911 System with three central offices and three cities.

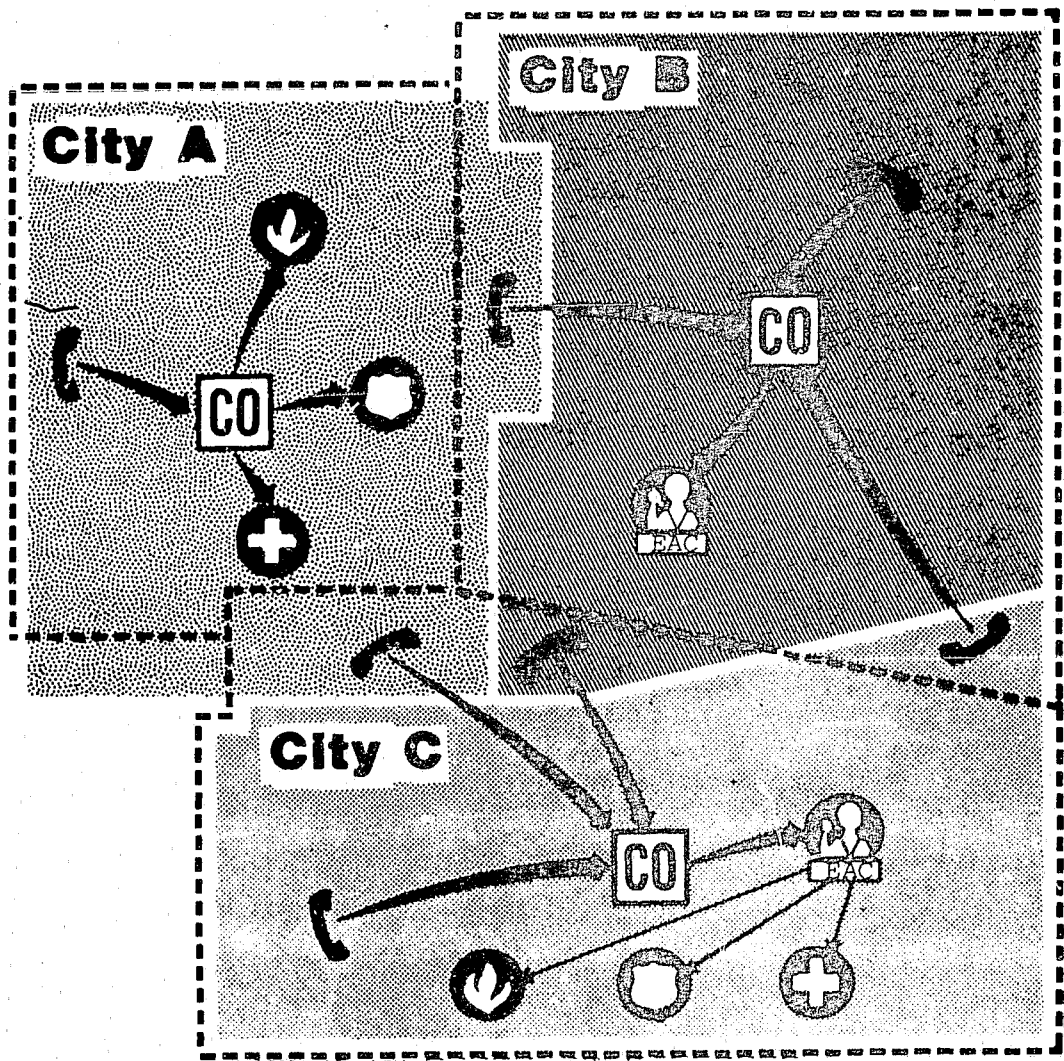


FIGURE 1

Legend:

EAC — Emergency Answering Center

CO — Telephone Central Office

--- — Central Office (CO) Boundary

In City A (Figure 1) where 911 has not been implemented, calls for fire, police and ambulance services are dialed direct using separate seven-digit numbers. The public should be informed and provided with seven-digit emergency number telephone stickers.

City B (Figure 1) is a system that utilizes the Direct Dispatch method from a single EAC. There are telephones that are within City B boundaries, and outside of the City B boundaries, but all of them are within the same telephone central office (dotted line). When 911 is dialed from any one of these telephones, the call is routed to City's B EAC since a central office cannot differentiate between city boundaries. Direct transfer lines to adjacent agencies are provided.

City C (Figure 1) depicts a system utilizing the Transfer Method. The caller dialing 911 reaches the EAC where the call is transferred to the proper agency. Again, out of jurisdiction calls would be transferred, relayed, or referred (for non-emergencies only) to the proper emergency service.

Basic 911 (Centralized System) Configuration Figure 2 illustrates a basic centralized 911 system with the same three telephone central offices and cities employing one central EAC. All 911 calls for the three cities are answered at a central EAC. Each city would then be served by a combination of the four response methods of Direct, Transfer, Relay, or Referral.

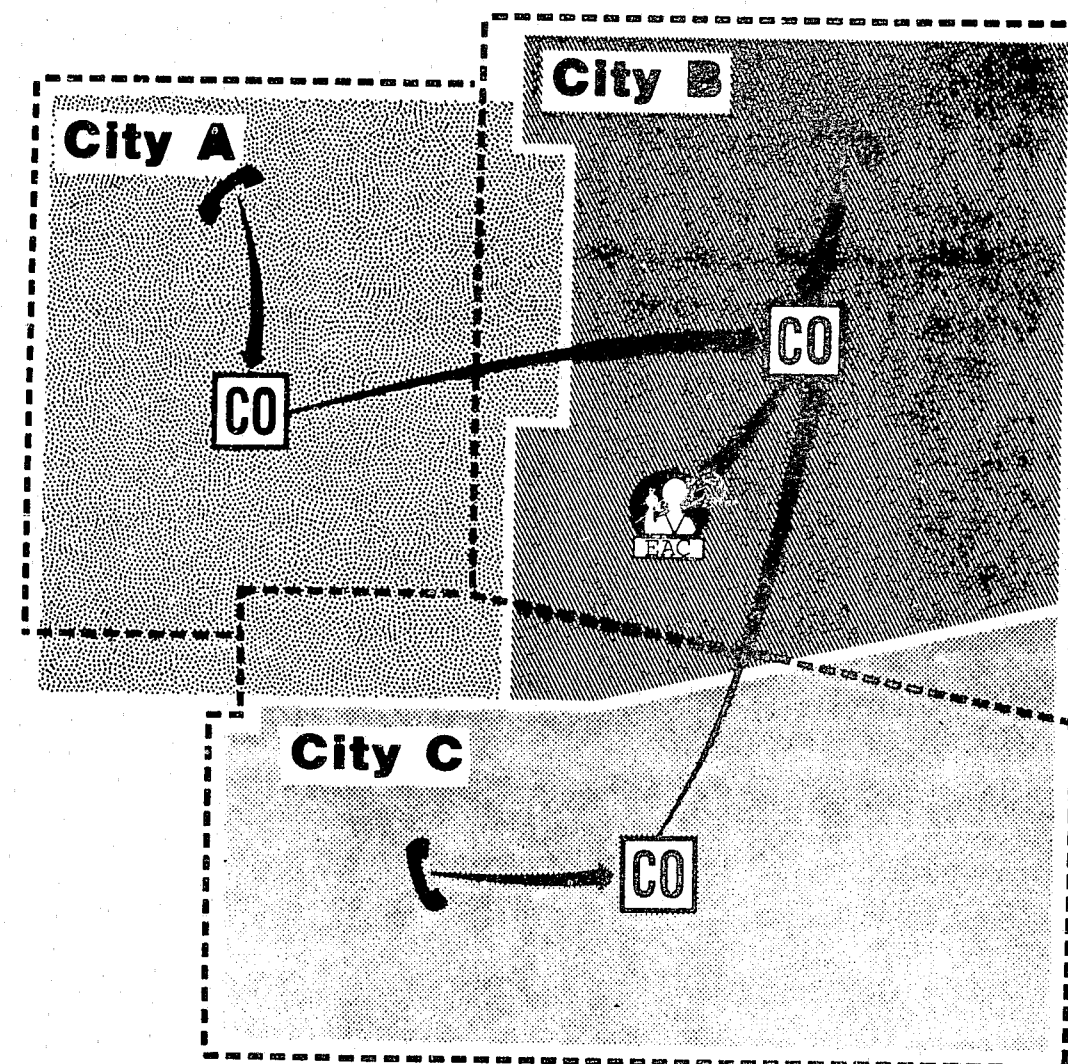


FIGURE 2

Legend:

EAC — Emergency Answering Center

CO — Telephone Central Office

--- — Central Office (CO) Boundary

Selective Routing Configuration, (Figure 3), illustrates three cities having a sophisticated 911 system utilizing selective routing features where, regardless of city and telephone central office boundary alignments, the call is automatically routed to the proper EAC serving the caller's city.

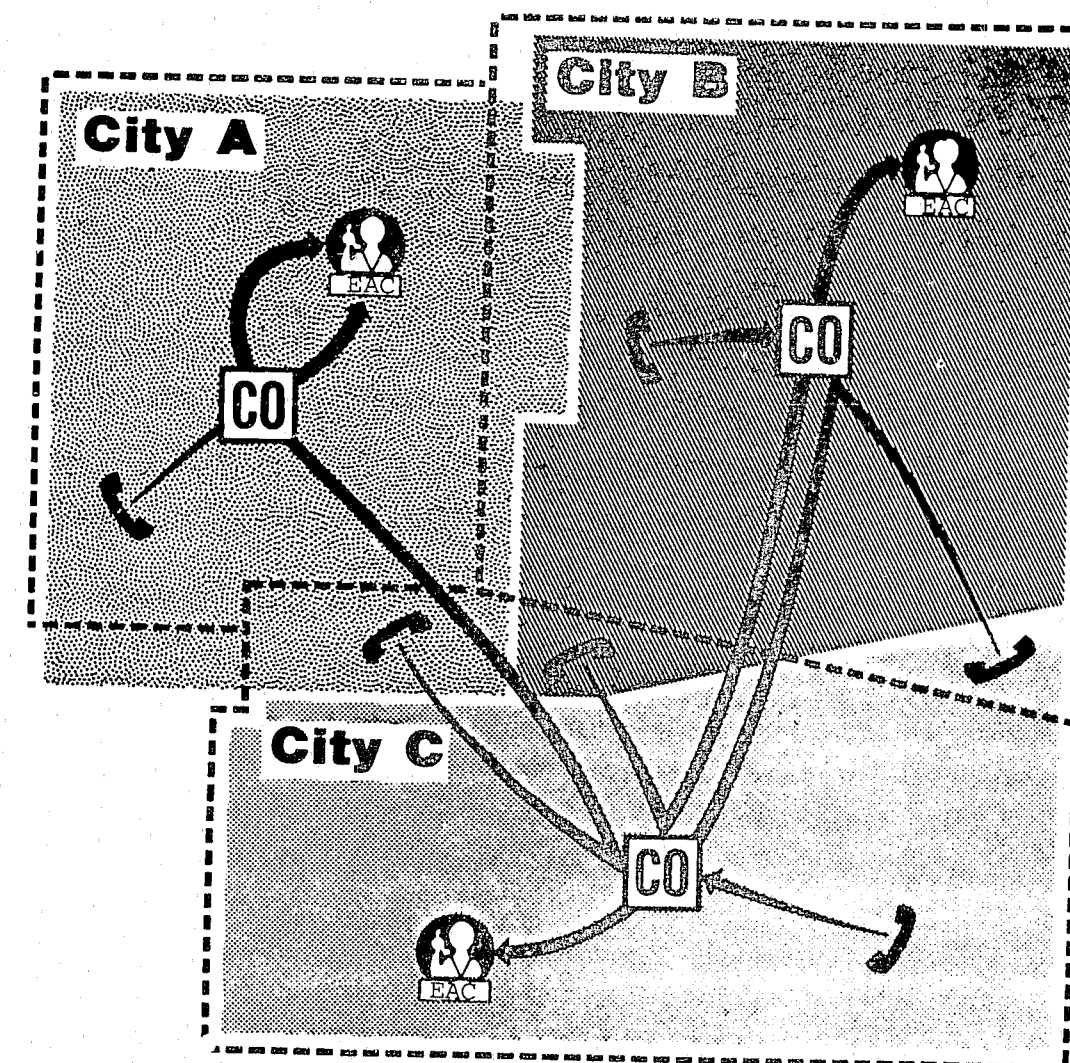


FIGURE 3

Legend:

EAC — Emergency Answering Center

CO — Telephone Central Office

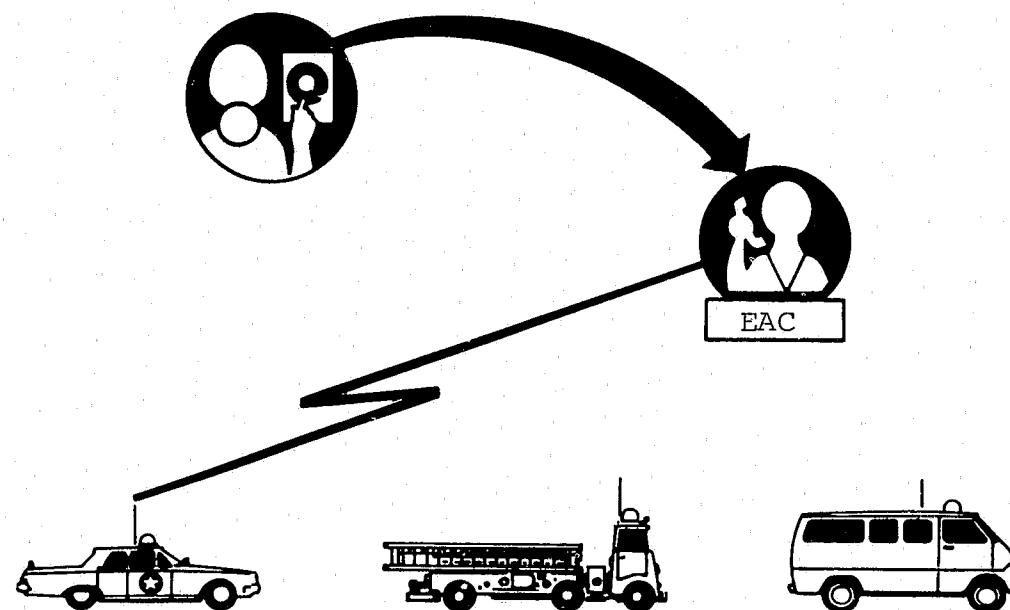
--- — Central Office (CO) Boundary

E. METHODS OF RESPONSE

There are four methods of response for an EAC to communicate the need for service to the responding emergency service agency:

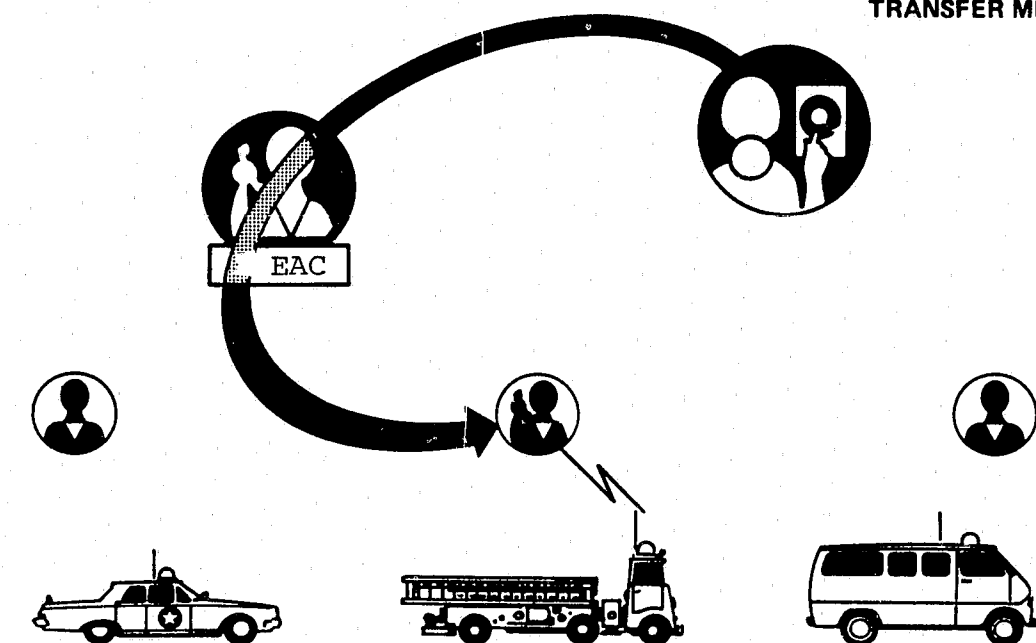
1. DIRECT DISPATCH METHOD. In the "Direct Dispatch Method," all call answering and dispatching is done by the personnel at the EAC.

DIRECT DISPATCH METHOD



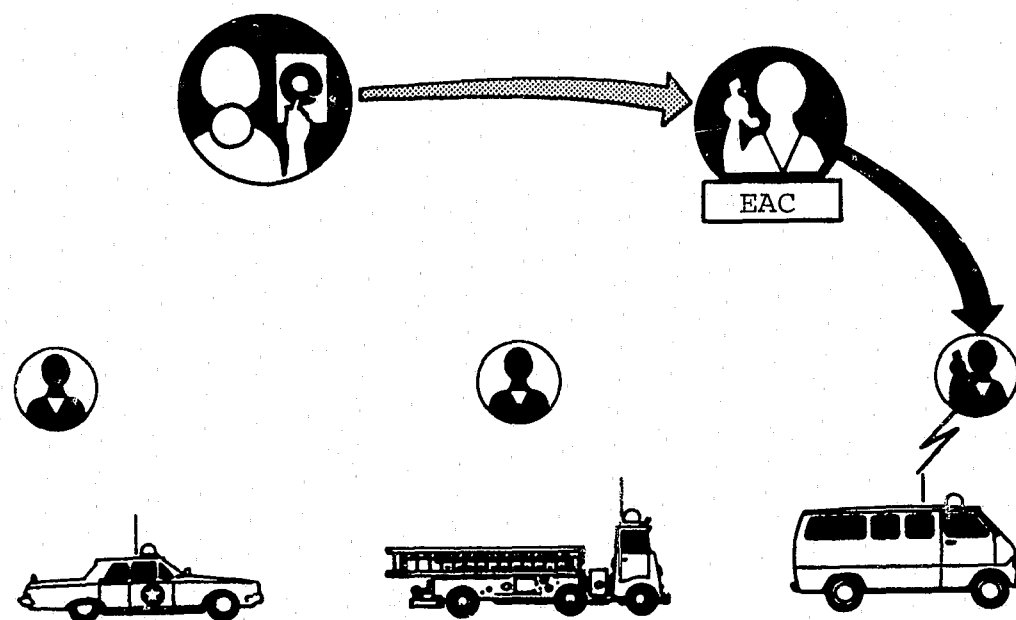
2. TRANSFER METHOD. In the "Transfer Method," personnel of the EAC determines the proper responding agency and transfer the caller to that agency for further interrogation and for dispatch of the appropriate response.

TRANSFER METHOD



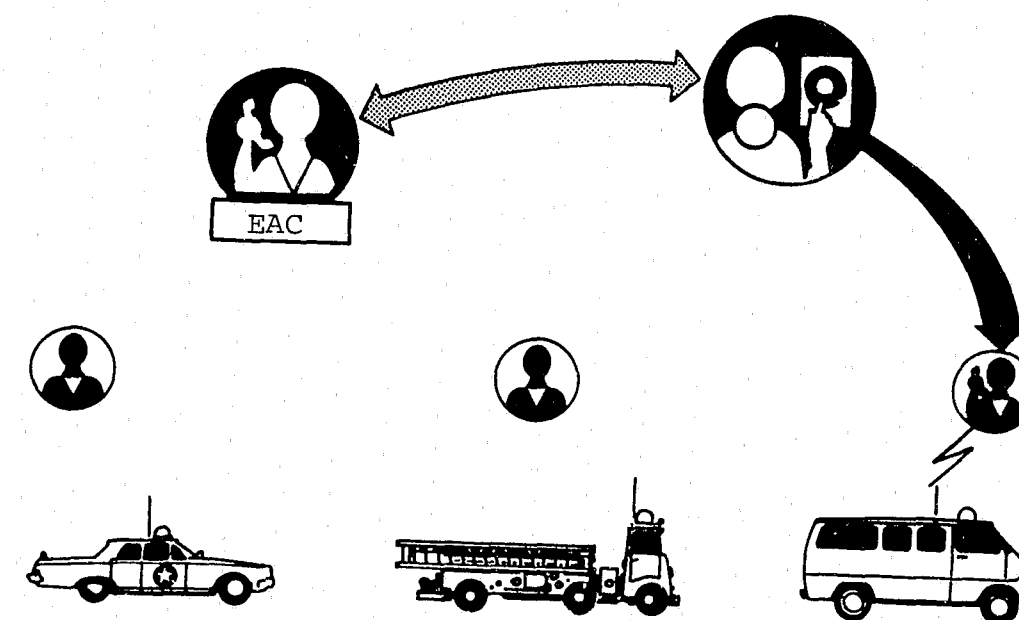
3. RELAY METHOD. In the "Relay Method" of response, the call is answered at the EAC where pertinent information is gathered; and then the EAC personnel relay that information to the proper public safety agency for their action.

RELAY METHOD



4. REFERRAL METHOD. The "Referral Method" is restricted to the handling of nonemergency calls only. The call goes to the EAC where the operator determines the nature of the call and refers the caller to the telephone number of the proper agency. The caller then reinitiates the call.

REFERRAL METHOD



V. THE FOUR MAJOR 911 PLANNING ELEMENTS

A. AREA TO BE SERVED

After careful study, the county jurisdictional boundary appears to define best the area to be served. Unfortunately, 911 calls can be routed to only one location for each telephone exchange (without costly computer equipment) because the telephone service areas normally do not match county boundaries. Since calls cannot be automatically separated out of exchanges (except with selective routing) which cross county boundaries, some basic compromises must be made.

One compromise which must be made is to define a service area by the boundary of a telephone exchange or a group of telephone exchanges. This approach presents no problem for those exchanges which lie entirely within a county's borders. Those exchanges which lie in two or more counties, however, create some unique call handling problems that must be addressed in the planning process.

No matter where the 911 calls are answered for these exchanges which lie in several counties, some of those calls will be answered by the "wrong" emergency answering center. The most effective way to minimize the effect of this situation is to route all 911 calls to the answering center which services the majority of people who live in an exchange area. If this procedure is followed, the majority of all 911 calls in the state will be answered at the appropriate answering center. For those

that are not answered at the appropriate answering center, this problem can be resolved by the use of tie-lines between the adjacent 911 EAC's. The handling of the calls is discussed in D, below.

It is probable that all counties will not convert to a 911 system simultaneously, and temporary arrangements will have to be made to assist people who do not live in the county who might dial 911 by mistake. Where it is feasible, two or more counties may desire to implement a multijurisdictional system.

B. LOCATION OF EMERGENCY ANSWERING CENTER(S)

Available information indicates that approximately 80% of all calls for emergency service are for law enforcement assistance. Almost all counties have a 24-hour law enforcement facility, and that facility is the most likely candidate for a 911 emergency answering center.

The important difference between existing emergency answering locations and potential 911 answering centers is that the 911 centers must be prepared to accept and answer all emergency calls, including law enforcement, fire and emergency medical services. If a facility is not equipped for 24-hour answering, it cannot serve as a 911 emergency answering center.

Before basic agreement can be obtained for participation by fire and EMS agencies, a discussion of the alerting methods described in Element C below may be required. All of the available methods

are acceptable except Call Referral. In some counties, multiple answering centers may be appropriate.

Provision of 911 does not provide a significant cost difference to justify by itself consolidation of answering/dispatch facilities. Any evaluation of consolidation must be made comparing the operation of separate facilities only, with or without 911.

C. METHODS OF DISPATCHING CALLS

When a 911 call is received, the operator has four basic methods of dispatching calls to the appropriate agency. It is important in the preliminary planning phase that these methods are reviewed with the participating public safety agencies to obtain their approval. All public safety agencies involved can be alerted by any one of the following dispatching methods regardless whether an initial call is received at a local or neighboring 911 EAC:

1. DIRECT DISPATCH - A method whereby answering personnel at 911 centers select and dispatch response personnel and equipment.
2. CALL TRANSFER - The process of connecting a calling party directly with the public safety agency required.
3. CALL RELAY - The process of receiving a message from a calling party and passing the message either verbally or in written or visual form to a different location.
4. CALL REFERRAL - The process of giving the calling party a telephone number to call for the service required. (This method is not recommended for emergency situations.)

D. TELEPHONE ROUTING METHODS

There are two primary methods for routing calls from a telephone company central office to the answering point that should be considered by the 911 planning committee: 1) Direct Dedicated Trunks; and 2) Tandem Trunks.

Direct dedicated trunks are telephone lines dedicated to a specific use. In 911 Systems, these lines are used only for incoming emergency calls. The caller does not have to compete with the rest of the telephone network for an open line. The total number of lines provided should be sufficient to insure the probability that less than one caller in 100 will receive a busy signal on the first try during a normal busy hour.

Tandem trunks allow the Telephone company to route a group of trunks to an intermediate location and combine them into a reduced number of trunks in order to reduce the mileage charges from that point to the EAC. The main disadvantage to this trunking arrangement is the loss of the capability to incorporate Called Party Hold, Emergency Ring-Back and Forced Disconnect features. The planning committee should keep in mind that if these features are desired then direct dedicated trunking must be employed.

The committee should verify all options available with the local telephone companies.

VI. PRELIMINARY 911 PLANNING

A. LOCAL COMMITMENT

Effective planning for 911 implementation requires a significant commitment from local officials. Since 911 planning will be a new experience, local groups and agencies must be relied upon to provide expertise and leadership.

B. ORGANIZING THE PLAN

The following checklists are provided as a guide to the activities which are usually necessary in order to develop a 911 system. Not all the activities listed here will apply to every community.

1. 911 PARTICIPANTS

- a. All law enforcement emergency services within the 911 system.
- b. All fire emergency services within the 911 system.
- c. Emergency medical and ambulance services within the 911 system.
- d. Poison control
- e. Suicide prevention
- f. Civil defense
- g. Public utilities for calls reporting dangerous conditions such as fallen power lines or gas leaks.
- h. Drug abuse centers

2. COMPOSITION OF A PLANNING COMMITTEE OR TASK FORCE

- a. County and city elected officials
- b. Law Enforcement representatives
- c. Fire Service representatives
- d. Emergency Medical representatives
- e. Telephone Company representatives
- f. State of Georgia, Department of Administrative Services, Telecommunications Division 911 coordinator
- g. Others as needed

3. SOURCES OF INFORMATION

- a. Reviewing of existing information on 911
- b. Tentative Plans
- c. Contacts with communities already having 911
- d. Georgia 911 coordinator, Telecommunications Division
- e. Information provided by local telephone company

4. DECISIONS ABOUT AREA

- a. Central office boundary considerations
- b. Single or multijurisdictional participation

5. INVENTORY OF EMERGENCY SERVICES IN THE PROPOSED 911 AREA

- a. Fire Services

b. Law Enforcement

c. Ambulance Services

d. Hospitals

e. Poison Control Centers

f. Suicide Prevention Centers

g. Drug Abuse Centers

h. Civil Defense Agencies

i. Public Utilities

j. Others

6. SELECTION AND LOCATION OF EMERGENCY ANSWERING CENTER

a. Law Enforcement headquarters

b. Fire Department

c. Separate communications center

d. Other public safety locations

7. DECIDE ANSWERING CENTER MODES OF OPERATION

a. Direct dispatch

b. Call transfer

c. Call relay

d. Call referral (For nonemergency calls only)

e. Combination of above

C. PLANNING ACTIVITIES CHECKLIST

1. COORDINATION WITH CONTIGUOUS AGENCIES

a. Arrangements for sharing responsibility for operating answering center

b. Accountability for service quality

c. Cost sharing arrangements

2. ASSIGNMENT OF RESPONSIBILITIES AND DRAWING UP OF MUTUAL AID AND INTERLOCAL AGREEMENTS

a. Mutual aid agreements are required between local governments operating the Emergency Answering Center within the county served by the Emergency Answering Center.

b. Interlocal agreements are required between adjacent county Emergency Answering Centers' when the telephone central office boundaries overlap. See Section X for additional information on Mutual Aid and Interlocal Agreements.

3. ESTABLISHMENT OF PROCEDURES FOR HANDLING 911 CALLS

a. For emergency calls

b. For nonemergency calls

c. For nuisance or false alarm calls

d. Overflow calls

e. Others

4. PLANNING OF PUBLICITY CAMPAIGN

a. 911 publicity coordinated with telephone company directories

b. Notices in telephone bill

c. Decals or signs painted on public safety vehicles

d. Telephone stickers

e. Television, radio, newspaper

f. Signs on highways entering county

g. Printed materials

i. Presentations to school and citizen's groups

VII. THE PLANNING SEQUENCE

A. COUNTY BOARD RESOLUTION

The appropriate group to initiate 911 planning is the county board of commissioners. The board should lend authority to the project by passing a general resolution in support of 911 and by concurrently establishing a committee and appoint a chairperson to start the planning. City governments within the county should be invited to participate in the planning and also pass a general resolution in support of 911. (See Appendix C for a sample board resolution.)

B. CHARGE TO THE COMMITTEE

Before the planning committee gets under way, the major planning elements of a 911 system should be defined by the county Board. Along with these elements, the Board should set a date for completion of the task. The major planning elements are:

1. The area to be served by the 911 system.
2. The location of the 911 answering point(s).
3. The methods for dispatching calls from the answering point to emergency personnel.
4. The basic type of telephone trunking used in routing 911 calls to the answering point (s). (Section V contains a detailed discussion of these elements.)

C. TECHNICAL ASSISTANCE

During the preliminary planning sequence, technical advice

may be required to supplement the information outlined in this plan. The purpose in seeking such assistance would be to develop options and associated cost estimates for consideration by the committee. Information regarding the availability of technical advice can be obtained from the Department of Administrative Services, Telecommunications Division, 900 Peachtree Street NE, Suite 101, Atlanta, Georgia 30309. Telephone Number 404-894-4977.

D. COMMITTEE ORGANIZATION AND EDUCATION

1. THE FIRST MEETING: The first meeting should be to introduce the subject of 911 and to organize the committee. The chairperson should designate a secretary to prepare and distribute minutes, Meeting schedules should be established and agreed upon so the work of the committee will be completed by the date specified by the Board of Commissioners.
2. THE SECOND MEETING: Prior to the second meeting, the chairperson or secretary should obtain and distribute background information about 911 to the committee. The background information should include:
 - a. Copy of Georgia 911 legislation
 - b. Information explaining the value of 911
 - c. Data on the status of 911 in Georgia and the United States.
 - d. Data on telephone exchange areas and public safety agencies.

- e. The suggested plan or plans for the 911 service area
- f. Recommend year of implementation (negotiated with telephone companies).

During the meeting, this background information should be reviewed. A discussion of the basic information will most likely to a requirement to obtain additional information about local public safety operations.

3. CONTINUING MEETINGS. Additional meetings should be conducted until a consensus is reached by the committee regarding the four major elements of the planning sequence. This agreement should then be submitted as a recommendation to the Board.

4. BOARD ACTION ON MAJOR PLANNING ELEMENTS

The Board should review the major planning recommendations of the committee. Assuming the Board approves the recommendations, they would then instruct the committee to prepare a complete configuration plan for Board and State approval.

VIII. DEVELOPMENT OF CONFIGURATION PLAN

A. PLANNING GUIDELINES

After a consensus has been reached regarding the four major planning elements, a configuration plan can be developed. The configuration plan will be used for price estimations by the telephone companies. Initial and recurring costs are important considerations; implementation cannot be achieved without a price agreement.

Before development of the plan begins, the committee should refer to Appendix C which contains the State of Georgia 911 Standards. The 911 Standards have been prepared to assist in the development of a uniform level of 911 service throughout the State.

Appendix G is an example of a configuration plan format designed to assist the local committee in writing a plan that considers the Planning Standards and the essential features of an operational system.

The number of direct lines needed depends upon the population of the exchange service area, the grade of service required, and eventually the cost of those lines. The telephone companies can provide assistance in this area.

B. ADDITIONAL OPERATIONAL PLANNING

1. ADVANCED FEATURES

Besides the four major planning elements, there are several operational options which can be provided. Features which are not wanted, or cannot be provided by the telephone companies, may be deleted from the plan. However, the optional features of Called Party Hold and Emergency Ringback can only be provided where dedicated (direct trunked) 911 trunks are installed and telephone company equipment can accommodate these features.

2. BACK-UP

In the event that 911 should become inoperative, some alter-

nate method of reaching the answering center should be provided. The center must have an administrative telephone number over which to conduct regular business. The current seven-digit telephone number should be kept as a back-up number for a period of time after cutover because of previous wide public usage.

C. ADMINISTRATIVE TELEPHONE CAPABILITY

The administrative telephone capability is included as a part of the back-up system mentioned above, and does not need to be a separate item of equipment in the plan.

D. EMERGENCY ANSWERING CENTER EQUIPMENT

Answering center equipment is an integral part of the answering center operation and will be described in Paragraph E of this section. Following are some general guidelines for the selection of this equipment:

1. SOURCE OF TELEPHONE EQUIPMENT

Telephone answering equipment may be leased from the telephone company serving the emergency answering center, or this equipment may be purchased from an interconnect company. If the equipment is purchased, a maintenance agreement should be included.

2. NUMBER OF ANSWERING INSTRUMENTS

At least two telephone answering instruments should be ordered for every answering center. Push button or rotary dial telephones may be selected, and, depending

on the need, two or more administrative lines may be utilized.

3. TOUCH TONE OR ROTARY DIAL

Though more expensive, the touch tone system, if available, is recommended because it is faster than rotary dialing. The extra cost must be evaluated in relation to frequency of use.

4. MAPS

Maps are needed by emergency answering center personnel to define the 911 service area of each public safety agency and the areas covered by mutual aid and inter-local agreements. These maps should be in prominent display for immediate reference by EAC personnel.

E. TECHNICAL INFORMATION REGARDING EQUIPMENT

The following technical information outlines descriptions of equipment that could be used in a 911 system. Complete information must be obtained from local telephone company representatives.

1. TERMINATING CONSIDERATIONS

The basic equipment required for call answering can range from an individual pushbutton-type telephone to a large pushbutton-type telephone to a large pushbutton answering system, multiple switchboard, or automatic call distribution system. Most of the equipment can be furnished by the telephone industry under their current tariff schedules. Where certain configurations

of required equipment are not offered in current tariffs, special assembly or contracts will be developed for a specific application. Also, there is a variety of equipment available from private vendors which may suit individual system needs.

2. PUSHBUTTON TELEPHONE EQUIPMENT

Incoming 911 lines, two way lines and direct tie lines are terminated on pushbuttons. The pushbutton modules are wired to an associated telephone set, headset, handset, or speaker phone. An incoming call on a line is noted by a flashing lamp associated with a pushbutton and an audible signal. Pushing the button answers the call. Pushbutton operated holding features allow calls to be held while other calls are answered or originated.

3. SWITCHBOARD EQUIPMENT

Switchboards' PBX's and PABX's are available in manual and automatic versions and also in cord type or cordless, i.e., pushbutton or lever switch, attendant operation.

4. EMERGENCY REPORTING SWITCHBOARD EQUIPMENT

These switchboards are designed to answer calls from streetside emergency telephones as well as central office lines and can be equipped to "transfer" calls to other locations. Calls are answered by both pushbutton and cord and jack methods described above.

5. AUTOMATIC CALL DISTRIBUTOR

Equipment to distribute large volumes of incoming calls to attendants. It also records call volume for traffic management.

6. CENTREX

A type of private branch exchange in which incoming calls can be dialed direct to any extensions without an operator's assistance. Outgoing and intercom calls are dialed by the extension users.

7. SPECIALIZED 911 SWITCHING

Switching equipment specially designed to serve 911 EAC's by providing both basic and sophisticated features.

8. CONFERENCING

This feature in a PBX or Centrex system facilitates conference - style transfers of 911 calls.

F. CONCURRENT PLANNING

The following item does not necessarily have to be included in the 911 planning process but it could assist in the prevention of some problems.

SYSTEM ADDRESSING

Providing the most appropriate emergency assistance in the shortest possible time requires precision in every step of the communications process. One of the most important steps is the ability to determine and to be able to tell response

personnel the exact location of an emergency event in the shortest time possible. To assist in reducing response time, it is preferable to have a specific street address or geocoded location for every parcel of property in the county. In some counties, location systems are already in use. Where there is no system, the planning committee should investigate the possibility of implementing a system either before or simultaneously with the cutover to 911.

IX. SUMMARY OF 911 PLANNING CONSIDERATIONS

1. Establish the local planning and policy organization.
2. Identify the agencies and/or services to be included.
3. Define the 911 system service boundaries.
4. Define the serving telephone company(s) capabilities.
5. Define and adopt appropriate response time criteria.
6. Identify interagency and/or service intercommunications requirements.
7. Prepare peak hour traffic requirements for initial implementation and future growth.
8. Analyze and adopt a 911 system design concept for basic, expanded, sophisticated or progressive upgrading.

9. Identify and adopt procedures and policies for dealing with nonemergency calls.
10. Define and adopt procedures and policies for dealing with fire and /or intrusion alarm servicing.
11. Prepare initial and continued 911 operation personnel training.
12. Provide for alternate back-up procedures, lines, power, etc.
13. Determine the "host" or agency responsible for management and operation of the 911 system.
14. Prepare uniform operational procedures, policies and manuals.
15. Identify and provide for the financial resources for implementing, expanding and operating the system.
16. Prepare an effective public information and education program.
17. Identify and comply with all legal requirements.
18. Prepare procedures which assure documentation of all aspects of the system planning, implementation and operation.
19. Provide for the secure operation of the system.
20. Prepare for system flexibility and expansion requirements.

21. Identify new communications technology.

X. MUTUAL AID AND INTERLOCAL AGREEMENTS

A. MUTUAL AID AGREEMENTS

Of prime importance when considering the public safety agencies being served by a single 911 emergency answering center is the possibility of a citizen's call being misdirected. In many areas in Georgia, overlapping of jurisdictional and central office boundaries is rather severe. This indicates the need for 911 operator familiarity with the area served and proper screening of incoming calls. Despite advanced screening techniques and accuracy of maps or other manual location techniques, misdirected calls can and do occur. It therefore becomes paramount for the effective operation of 911 in Georgia, that when a citizen dials 911, aid must not be delayed or denied by a misdirected call. As a preventative measure, this portion of the plan directs itself to the use of mutual aid agreements to insure aid to the citizen in the event of a misdirected call. A misdirected call is defined as a call resulting in a dispatch of a public safety agency to a jurisdictional area other than where the call originated. Generally, the dispatch goes to a public safety agency having boundaries coincident with the area of the originating call because the 911 center did not identify the proper jurisdictional area associated with the address. Specifically, all parties having contiguous boundaries in a 911 answering area will be required to sign a mutual aid agreement and attach a copy to the 911 plan. This also applies to boundary overlaps between counties since this agreement requests

agencies in the 911 answering area, as well as those in the county, to respond to a dispatch as a result of a misdirected call that requires they enter a contiguous jurisdictional area.

Although we are concerned here with the assurance of a citizen being rendered aid even if it is a misdirected call, it should not preclude agencies from exploring other areas of cooperation that could be included in a mutual aid agreement.

A sample mutual aid agreement for misdirected calls is included in Appendix E.

B. INTERLOCAL AGREEMENTS

Boundary mismatch problems between counties can present stumblingblocks for completing the 911 planning process. There is however, an effective way of handling these types of problems. Political entities can enter into agreements over items that would provide mutual benefit to each other. Thus the problem of telephone central office and county boundary overlap can be solved by an interlocal agreement.

The problem stems from the fact that a telephone company establishes its central office boundaries to maximize efficiency of its system irrespective of political boundaries. This can cause the type of problem that is shown in Figure 1. In this illustration, when the telephone company established its central office boundaries for its serving area, a portion of Central Office Two is in County B. This causes a problem for both counties A and B in planning a 911 system. Which county will the

residents in central office two call for 911 assistance?

The Telecommunication Division has established the following guidelines for resolving this issue.

Those central offices which serve citizens in two or more counties will be directed to the 911 emergency answering center serving the majority of citizens affected. If the majority of citizens in central office two live in County A, their emergency answering center is County A, or visa versa if the majority live County B. In figure 1, we have decided that the majority of the residents live in County A and all central office two calls would be received at the 911 EAC in County A.

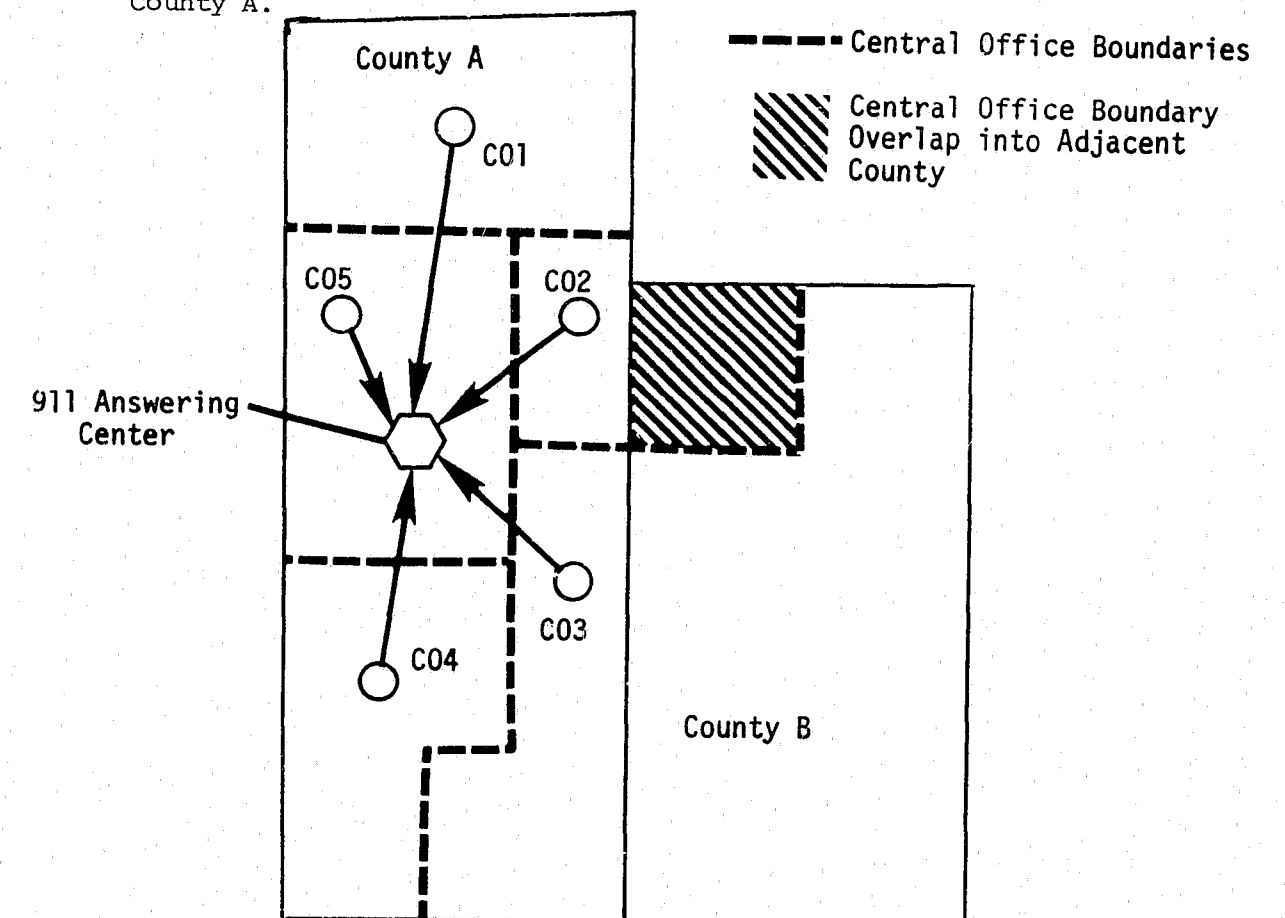


Figure 1 CENTRAL OFFICE ADJACENT COUNTY BOUNDARY OVERLAP

It must also be realized that more than one overlap could occur between counties. Using the Majority Citizens Served criteria, conditions may arise where two or more counties would reciprocally be handling calls for adjacent county citizens.

This brings up the next hurdle to overcome; that of getting county A and B to resolve how calls will be handled by county A so that public safety agencies in county B can respond to their citizens' calls.

First and foremost, county B has to decide the level of service it wants to give its citizens. The methods of call handling are discussed in Appendix D Element C. However, here are some brief descriptions of call handling options between two adjacent counties.

- 1) Call transfer via a Dedicated Line. In this method the citizen in county B calling the 911 EAC in county A is transferred via a dedicated tie line and talks directly to the 911 EAC or proper agency in county B.
- 2) Dial-Out-Transfer. The 911 EAC in county A dials a 7-digit number for the 911 EAC in county B or the proper public safety agency in county B and connects the citizen directly. Any toll charges should be chargeable to county B.
- 3) Call Relay Method. In this method, the 911 operator in county A notes the citizen's complaint and relays the complaint via a 7-digit number or by radio to the Sheriff's Office of county B. The Sheriff's Office of county B

then dispatches the proper agency. This again could involve a toll call chargeable to county B.

The Telecommunications Division has emphasized that to prevent the caller from becoming confused, the caller should not be allowed to talk to more than two people, the 911 answering person, and the answering person at the proper agency. Methods One and Two would transfer a call to another 911 emergency answering center only if it: (a) serves as dispatch center for the proper safety agency, (b) if the 911 center has prepatched the incoming circuit to the proper agency's circuit, (c) the 911 center will relay the call to the required agency. In order to directly transfer the citizen's call as in Method One, one or more dedicated lines are needed. In Method Two, the caller talks directly to the 911 center (if it is the dispatch center) or directly to the public safety agency. If it is not necessary that the proper agency talk directly to the caller, or if the call volume is low and the cost to allow the citizen in the boundary overlap areas to talk to his agencies excessive, the call relay method can be utilized.

County A and B must also formulate contingency plans to keep communications open if the standard method chosen should for some reason fail. Generally, this is accomplished using radio communications.

All the above methods involve some degree of cost for establishing the communications link from the 911 emergency answering center in county A to county B. Since the service is for citizens of county B, then rightfully the burden of cost should fall on them. This generally involves another area of agreement; that being cost sharing pro rata or cost reimbursement to county A.

In summary, Central Office boundary mismatch problems can most easily be handled by interlocal agreements between counties addressing the following specifics:

1. Both parties must agree on who will handle the mismatched population's emergency calls while adhering to the 911 standards.
2. Agree on the method of call handling.
3. Agree on contingency method for call handling.
4. Agree on cost burden for recurring and nonrecurring costs and distribution of these costs.

This method of agreement allows a fully operational 911 system to be made available to the citizens of two or more counties regardless of central office boundaries. The need for political agencies to cooperate in finding solution to common problems is becoming increasingly evident. Appendix E contains a sample interlocal agreement for reference.

XI. CONFIGURATION PLAN APPROVAL

A. COST APPROXIMATIONS

The first step in the process of gaining approval of the configuration plan is to give a copy of the plan that complies with the State Standards to the appropriate telephone company(s) in order to get cost information. It is recommended that the telephone company which provides telephone service to the answering center be the coordinator for price information and installation of the system.

In some counties, cost estimates will be well within the ability to pay from local sources alone. In other counties, the ability to pay for such services from local sources will be marginal and in some counties it will be virtually impossible. To determine final costs for 911 service, it is highly recommended that a plan be completed in the event that local funds or funding assistance becomes available in the future.

B. COUNTY BOARD REVIEW

Once the configuration plan has been prepared and cost approximations have been submitted, the county board should review the documents to insure its validity.

C. COUNTY BOARD APPROVAL

If there is support for the recommendation, the County Board of Commissioners should formally adopt the plan and forward to the state for approval and designate individuals or a group to proceed with implementation upon receipt of state approval. If the

board does not decide to implement the plan immediately, it should still be formally adopted for future implementation.

D. STATE APPROVAL

All 911 system plans must be submitted to the Department of Administrative Services, Telecommunications Division for approval before the 911 system can be installed by the Local Telephone Company.

XII. IMPLEMENTATION AND CONTINUED 911 OPERATIONAL CONSIDERATIONS

A. FUNDING

At this time there is no outside funding (State or Federal) source available to assist in 911 implementation. For information about the current status of funding, contact the Department of Administrative Services, Telecommunications Division, 900 Peachtree Street NE, Suite 101, Atlanta, Georgia 30309.

Regardless of what outside assistance for funding may be available, there will be some cost for 911 services that must come from local sources. The County Board of Commissioners, in cooperation with other local units of government, must come to an agreement as to how these costs will be paid.

B. JOINT POWERS AGREEMENTS

Final agreement must be obtained in the sharing of service and/or cost.

C. ORDERING 911 SERVICES

After funding is provided for, joint powers agreements are completed, and approval received from the State, a contract for service must be negotiated between the designated organization and the telephone companies providing the service. An installation cutover date should be established.

D. PUBLIC EDUCATION

As soon as the 911 system has been ordered from the telephone companies, plans should be made for a public information program.

Releases should be written for radio, newspaper and television coverage informing the public on the capabilities and proper use of the 911 system. Information programs can be designed for presentations to school children, senior citizens and other special groups. When telephone companies issue new directories, 911 will be the primary emergency telephone number. Billboards and postings in public telephone booths can be used to inform people traveling through the area about 911.

The committee should include recommendations regarding public education as a part of the plan. Every effort should be made to inform all citizens within the service area about 911.

E. PERSONNEL TRAINING

911 call answering personnel will receive a variety of requests for emergency assistance. To assure effective service, procedures of these agencies should be easily understood and personnel should receive formal training accordingly. Answering personnel must be thoroughly familiar with the capabilities of their equipment.

Answering personnel are occasionally required to provide interim medical advice until medical personnel can reach the scene, or until the caller can be connected by telephone to medical personnel. Special emergency medical training should be provided to answering personnel in accordance with recommended local standards.

Fire support training can help personnel give advice regarding

actions to take until assistance arrives during fire events.

In general, an effective training curriculum can be developed and administered by public safety personnel at the local level through a coordinated effort of the agencies concerned. The 911 planning committee should review requirements and make specific training recommendations as part of its 911 plan.

F. IMPLEMENTATION ACTIVITIES SUMMARY

The planning of a 911 system should provide a logical base for the implementation of the system. Important factors to be considered in implementation are:

1. Responsiveness and accountability to the system users - Emergency service agencies and citizens.
2. Budgeting for 911 system - Consideration and mutual understanding of responsibilities for funding the 911 system must be documented.
3. Public education program - Continuous review of programs and updating must be considered.
4. Telephone equipment modifications - These must be thought out and designed for operational agency needs.
5. Training of 911 operators - The type of training, duration and responsibility must be delineated and understood by all.
6. Priority for accepting 911 calls - These procedures have to be documented and established at the beginning.

7. Discouraging nonemergency use of 911.

8. Record keeping activities - The types of records maintained and uses have to be understood and documented. Records regarding usage, time, number of calls etc., have to be planned for implementation of 911.

G. ASSESSING CONTINUED OPERATIONAL CONSIDERATIONS

Once the 911 system has been implemented, a program for continued assessment and performance should be enacted. These activities are essential to assess future needs of a 911 system:

1. Ongoing Training

2. Expansion Considerations

3. Workload and Performance Measurements

4. Statistics and Records

5. Public Education Programs

APPENDIX A. GLOSSARY OF "911" TERMS

ACD - (See Automatic Call Distributor)

Administrative Telephone - A telephone which answers calls on a regular seven-digit telephone number and is used for purposes other than emergencies.

Advanced Features - Any one or combination of several features beyond a basic "911" system, such as call-hold, re-ring, time-out, forced disconnect, selective routing, call extension, ANI or ALI.

ALI - (See Automatic Location Identification)

ANI - (See Automatic Number Identification)

Area Code - The three-digit code used when dialing calls from one Numbering Plan Area (NPA) to another.

Audible Signal - Buzzer or bell to indicate an incoming call.

Automatic Call Distributor - Equipment to distribute large volumes of incoming calls in approximate order of arrival to call answerers not already working on calls, or to "store" calls until call answerers become available.

Automatic Call Routing - (See Selective Routing)

Automatic Location Identification (ALI) - The process of automatically displaying the address of the calling party telephone in front of a "911" answering person as the call is answered.

Automatic Number Identification (ANI) - The process of automatically displaying the telephone number of the calling telephone in front of a "911" answering person as the call is answered.

Base Rate - The established telephone exchange service rate, exclusive of mileage, for main telephone, auxiliary line, or trunk line service.

Base Rate Area - That portion of the exchange area within which exchange service, other than rural line service, is offered at base rates for each grade of service.

Basic "911" System - A system which automatically connects a person dialing the digits "911" to an established Emergency Answering Center (EAC) through normal telephone service facilities.

Boundary Mismatch - A term used to describe the condition where the boundary of a political jurisdiction and the boundary of the telephone exchange which serves that political jurisdiction do not include the same geographical area.

B. H. - (See Busy Hour)

Busy Hour - The busiest hour of the busiest day of a normal week.

CAD - (See Computer Aided Dispatch)

Call Answerer - The initial answerer of a "911" call.

Call Answering Equipment - All telephone and recording equipment or answering devices used to answer emergency calls.

Call-Hold - The process where the answering point maintains con-

nection to the calling party telephone after the calling party has hung up.

Call Referral Method - Calling party is referred to a second party.

Call Relay Method - The call is answered at the EAC where the pertinent information is gathered and then the call answerer relay that information to the proper public safety agency for its action. This can be accomplished by radio, intercom, telephone, etc.

Call Transfer Method - The EAC call answerer determines the proper responding agency and connects the calling party to that agency without the calling party having to hang up and dial again.

Central Office - Sometimes called a wire center; the smallest subdivision within the telephone system which has relatively permanent geographic boundaries.

Central Office Identification - When an answering point serves more than one central office area, it is possible to identify the central office forwarding the call by dedicated (direct) trunking from the central office to the EAC.

Centralized Dispatching - A term which describes a facility that is shared by more than one public safety agency where all dispatching to the responding agency is done.

Centrex - A type of private branch exchange in which incoming calls

can be dialed direct to any extension without an operator's assistance. Outgoing and intercom calls are dialed direct by the extension users.

CNIL (Calling Number Identification and Location) - Sometimes used by the telephone industry in referring to the combination of automatic number identification and automatic location identification.

C. O. - (See Central Office)

Common Control - A type of dial telephone switching in which the dialed digits are stored temporarily in a sub-set of equipment that is shared by all of the line and trunk terminations; this sub-set of control is used only in setting up the connections and then goes to the next request for service.

Computer Aided Dispatch (CAD) - The normal operations of handling requests for service from the public are assisted by making use of the special capabilities of a computer.

Configuration Plan - Plans which describe in operational terms the area to be served by "911", where the calls will be answered and to whom and in what manner alerting will take place.

Connecting Arrangement Interface - A protective device between Telephone Company (TELCO) equipment and Customer Owned and Maintained (COAM) equipment.

Contiguous - Adjoining

DDD - Direct Distance Dialing: Telephone service which permits telephone subscribers to dial their own long distance calls.

Dedicated Trunk Line - A telephone circuit which is used for only one purpose and the users do not have to compete with other general purpose users. (In this case the circuit would only be used for "911" calls.)

Dial Tone First - Allows "911", "0" Operator, repair service or directory assistance calls to be made from a pay phone without the deposit of a coin.

Direct Dispatch Method - A "911" call is answered and the required public safety agency is dispatched by the personnel at the Emergency Answering Center.

Direct Progressive Control - A type of dialing telephone switching in which the dialed digits control the electro-mechanical switches (e.g., step-by-step or XY) to activate the connection through the apparatus; the switches remain connected for the length of the call.

Direct Trunking - An arrangement where a telephone line connection has no intermediate points before reaching the final destination (called) party.

Dispatch Point - The location from which a public safety agency's mobile units are dispatched.

EAC - Emergency Answering Center

Emergency Answering Center - Sometimes called a "911" center, the initial answering of a "911" call.

EAS (Extended Area Service) - Telephone service that allows subscribers in an exchange area to pay flat monthly or measured rates instead of long distance charges for calls to nearby exchange areas. See Exchange.

EAX (Electronic Automatic Exchange) - A central office with programmable phone switching logic.

Emergency Back-Up Provisions - Any communications, operational or physical precautions that are planned in advance to be implemented when the primary capability is unavailable for any reason.

EM - Emergency Medical

EMS - Emergency Medical Services

ESS (Electronic Switching System) - A central office with programmable phone switching logic.

Exchange - A defined area, served by one or more telephone central offices within which the telephone company furnishes service.

Expanded "911" System - A "911" system that incorporates any feature beyond a Basic "911" System, such as ANI, ALI or Selective Routing.

Forced Disconnect - The capability of the "911" center to disconnect a "911" call to avoid caller jamming of the incoming "911" phone line.

Key Telephone Equipment - An instrument that has the capability of multiple line terminations. Each line is accessed by depressing a button.

Local Government - Any city, county, or political subdivision of Georgia and its agencies.

Local Service Area - The area that can be called without incurring a toll charge.

Main Station - A telephone station that is connected directly to a central office and has a unique telephone number. It is not an extension station.

Misdirected Call - A call resulting in a dispatch of a public safety agency to a jurisdictional area other than the area the agency is responsible for.

Multi-Jurisdictional System - A system covering more than one political boundary or agency.

Multi-Party Line - A local subscriber line terminating on the switching equipment that serves two or more subscriber locations, requiring special equipment for discriminatory ringing and obtaining the correct number for billing.

No Coin Dialing - (See Dial Tone First)

ONI (Operator Number Identification) - A method for obtaining the subscribers telephone number for billing long distance charges whereby the special long distance trunks go through an operator temporarily so she can input the calling number into the automatic billing equipment.

PBX (Private Branch Exchange) - A telephone switchboard with many stations not individually identifiable to the telephone company's switching network.

Prefix - The first three digits of a local seven-digit telephone number.

Private Line - A telephone line which is used only for communication between two points, and which does not connect with the public telephone system.

Public Agency - The State and any city, county, municipal corporation, chartered organization, public district or public authority located in whole or in part within Georgia which provides or has authority to provide fire fighting, law enforcement, ambulance, medical or other emergency services.

Public Safety Agency - A functional division of a public agency which provides fire fighting, law enforcement, emergency medical, suicide prevention, civil defense, poison control or other emergency services.

Public Safety Mobile Unit - A term used to describe any vehicle used in public safety such as squad cars, ambulances, fire trucks, etc.

Redialer - A device which answers a normal telephone call and redials another number to reconnect the incoming call to a second location.

Ringback - Permits a "911" answering person to re-ring a telephone which has been hung up after placing a "911" call.

Rotary - A device which allows several telephone calls to be answered simultaneously through the use of one telephone number but several

telephones.

Selective Routing - Selective Routing terminates a call at a "911" EAC determined by the location of the calling telephone. This is accomplished by using a computer to process the calling telephone number.

Sophisticated System - A basic system with the additional capability of automatic identification of the caller's number or address, holding the incoming call, reconnection on the same telephone line, clearing a telephone line, call routing or combinations of such capabilities.

Standard Tone Signals - Regular dial tone, busy tone, trunks, etc.

Stored Program Control Office - (See EAX and ESS)

Step-By-Step - Any type of electromechanical switches used in switching equipment where the (dial) pulses cause vertical and/or horizontal movement of contact switches to select and connect the input to an output line; generally two to four "stages" of switches are used in a local office connection.

Switched Network - A complex of diversified channels and equipment that automatically routes communications between the calling and called person or data equipment.

Tandem Trunking - An arrangement where a telephone line connection has one or more intermediate points that are required or permitted (usually on a controlled dial pulse basis) before reaching the final destination (called) party.

Telephone Line - A telephone line from a telephone company central office that is connected to key or non-key telephone equipment.

TELCO - Telephone Company

Time-Out - The feature in telephone switching equipment which disconnects a call after a specified period of time even though only one of the parties has hung up.

Trunks - A circuit used for connecting a subscriber in a central office to all other services in/out of the switching equipment (e.g., "911" Trunk, Long Distance Trunk, Operator Trunk, Recorded Announcement Trunk, etc.)

UCD - Uniform Call Distribution

Wire Center - (See Central Office)

APPENDIX B. STATE OF GEORGIA ACT NUMBER 636

GEORGIA EMERGENCY TELEPHONE NUMBER "911" SERVICE ACT

AN ACT

To provide for the development of a cohesive statewide emergency telephone number "911" system; to provide a short title; to provide for legislative intent; to define certain terms; to provide for an Emergency Telephone Number Committee; to provide for a statewide plan; to provide for regional systems; to provide for administration by the Office of Telecommunications of the Department of Administrative Services; to provide for coordination between the telephone industry and the Public Service Commission; to provide for enforcement; to provide for existing emergency telephone number service; to provide for federal assistance to repeal conflicting laws; and for other purposes.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF GEORGIA

Section 1. Short Title. This Act shall be known and may be cited as the "Georgia Emergency Telephone Number '911' Service Act of 1977".

Section 2. Legislative Intent. The legislature hereby finds and declares that it is in the public's interest to shorten the time required for a citizen to request and receive emergency aid. There currently exist numerous different emergency phone numbers throughout the State. Provision for a single, primary three-digit emergency

number through which emergency services can be quickly and efficiently obtained would provide a significant contribution to law enforcement and other public service efforts by making it easier to notify public safety personnel. Such a simplified means of procuring emergency services will result in the saving of lives, a reduction in the destruction of property and quicker apprehension of criminals. It is the intent of the legislature to establish and implement a cohesive statewide emergency telephone number "911" system which will provide citizens with rapid direct access to public safety agencies by dialing telephone number "911" with the objective of reducing the response time to situations requiring law enforcement, fire, medical, rescue and other emergency services.

Section 3. Definitions. As used in this Act, unless the context clearly requires otherwise:

- (a) "office" means the Office of Telecommunications of the Department of Administrative Services;
- (b) "local government" means any city, county or political subdivision of Georgia and its agencies;
- (c) "public agency" means the State and any city, county, city and county, municipal corporation, chartered organization, public authority located in whole or in part within this State which provides or has authority to provide fire fighting, law enforcement, ambulance, medical or other emergency services;
- (d) "public safety agency" means a functional division of a public agency which provides or has authority to provide fire fighting, law enforcement, emergency medical, suicide prevention, civil

defense, poison control or other emergency services.

Section 4. Emergency Telephone Number Committee. For the purposes of the development and implementation of a plan for the statewide emergency telephone number "911", there is hereby created the Emergency Telephone Number Committee to be composed of the Director of the Office of Telecommunications of the Department of Administrative Services, who shall serve as chairman; the Commissioner of Community Development, or his designee; and ten other members appointed by the Governor as follows:

- (1) Three members appointed from nominees of the Georgia Municipal Association,
- (2) Three members appointed from nominees of the Association County Commissioners of Georgia, and
- (3) Four members who are experienced in emergency telephone systems. When appointments are made, the associations making nominations pursuant to this Section shall submit at least three times as many nominees as positions to be filled at that time by nominees of the association. The appointed members of the Committee shall serve at the pleasure of the Governor. Vacancies shall be filled in the same manner as the original appointment.

Section 5. State Plan. (a) The office shall develop a plan for implementing a statewide emergency telephone number "911" system. The plan shall provide for:

- (1) The review and analysis of progress maintained by public agencies in developing emergency telephone communications requirements as

required for the "911" system;

- (2) Steps of action necessary for public agencies to effect the necessary coordination, regulation and development preliminary to a "911" system that will incorporate the requirements of each public service agency in local government of Georgia;
- (3) Identification of mutual aid agreements necessary to effect the "911" system, including coordination in behalf of the State of Georgia with any federal government agency to secure financial assistance or other activities desirable to take funding that may be provided to communities for the planning, development or implementation of the "911" system;
- (4) The coordination necessary between local governments planning or developing a "911" system with other necessary State agencies, Public Service Commission, all affected utility and telephone companies or other agencies;
- (5) A firm implementation schedule which will account for the progress achieved in each political subdivision and which can be reproduced in an annual report of progress;
- (6) The establishment of the public agency emergency telephone communications to meet the requirements for each entity of local government including law enforcement, fire, medical, suicide, rescue or other emergency services.

- (b) The plan shall be submitted to the Emergency Telephone Number Committee at least thirty days prior to its effective

date. The plan shall become effective on its effective date unless the Emergency Telephone Number Committee rejects the plan by majority vote of the members of the Committee prior to the effective date of the plan.

- (c) The office shall be responsible to encourage and promote the planning, development and implementation of each local "911" system plan. The office shall promulgate any necessary rules, regulations and schedules related to public agencies for implementing and coordinating such a plan and shall act as the deciding agency whenever disputes or agreements cannot be reached between the local political jurisdiction and other public agencies involving the "911" system.

Section 6. Regional Systems. Nothing in this Act shall be construed to prohibit or discourage the formation of multijurisdictional or regional "911" systems; and any system established pursuant to this Act may include the jurisdiction, or any portion thereof, of more than one public agency.

Section 7. Telephone Industry Coordination. The office shall coordinate with the Public Service Commission which shall encourage the Georgia telephone industry to activate facility modification plans for a timely "911" implementation.

Section 8. System Approval. After January 1, 1978, no emergency telephone number "911" system shall be established and no present system shall be expanded without prior approval and designation in the plan administered by the office.

Section 9. Compliance. All public agencies shall assist the office in its efforts to carry out the intent of this Act, and such agencies shall comply with the developed plan by furnishing a resolution of intent regarding a "911" emergency telephone number system.

Section 10. Federal Assistance. The office is authorized to apply for and accept federal funding assistance in the development and implementation of a statewide emergency telephone number "911" system.

Section 11. Repealer. All laws and parts of laws in conflict with this Act are hereby repealed.

APPENDIX C. OBJECTIVE AND STANDARDS FOR THE "911" EMERGENCY TELEPHONE SYSTEM

The Emergency Telephone Number System shall provide citizens rapid access to Public Safety Agencies in an efficient manner when emergency services are required.

To comply with this objective, the Department of Administrative Services, Telecommunications Division, has developed the following standards which a "911" emergency telephone system must meet. All new "911" telephone system plans and all modifications to existing systems will be approved by DOAS prior to implementation.

1. The emergency number "911" will be the universal emergency telephone number for all emergency services.
 - a. The primary published emergency number will be "911", and will be the only emergency number published on the "Emergency" page of the public telephone directory. Individual agencies may retain existing seven-digit emergency telephone numbers as a secondary telephone number, but they must also have a separate administrative number.
 - b. All agencies providing law enforcement, fire protection, emergency medical and rescue services within the boundaries of the "911" system shall be a part of the "911" system, including private EMS providers.
 - c. The Emergency Answering Center shall accept only those "911" calls requiring the dispatching of public safety personnel or the dispensing of specialized emergency advice. All other

calls shall be referred to the appropriate seven-digit administrative telephone number.

- d. Each "911" Answering Center shall have at least one unlisted seven-digit telephone number for administrative use by public safety agency personnel, Answering Center personnel, and telephone company operators.

2. The EAC shall be readily accessible upon calling for an emergency.

- a. The "911" Answering Center shall operate 24 hours a day, seven days a week.
- b. A sufficient number of incoming "911" lines will be provided between the telephone company central office (s) and the "911" Answering Center to supply at least P. 01 or better grade of service (no more than one busy in 100 attempts during the average busy hour). In any case there shall be a minimum of two incoming lines per office if direct trunking is used. If tandem trunking is used the grade of service provided over the interoffice trunks shall be at least the same level as exists for the Direct Distance Dialing network. There shall be a minimum of two incoming lines for the serving central office of each tandem network.

- c. The telephone company operators shall have dedicated lines or other means of connecting the operator or citizen with the "911" EAC.

- d. Access to a "911" system by any type of automatic dialing alarm system is prohibited.

- e. Each telephone company shall provide an automated answering service, accompanied by a recorded announcement, for all "911" calls originating from an area not served by, but directly adjacent to, an area served by a "911" Answering Center.

3. The EAC operator(s) shall answer a "911" call in an efficient manner to reduce delays in responding to the emergency.

- a. Sufficient "911" call answering positions and operators will be provided so that during the average busiest hour of the day at least 90 percent of the calls will be answered within 10 seconds (two or three rings).
- b. The "911" operator shall be dedicated to answering "911" calls and perform as a complaint writer. Other simultaneous functions such as radio dispatcher, clerk, or jailer can be performed if the operational standard 3 a. can be met.
- c. All incoming "911" calls will be answered on a priority basis before any other calls.
- d. The "911" operator will receive both an audible and visual indication of the incoming "911" calls.

- e. The caller must never be permitted to talk with more than two people: The "911" operator answering the call, and the complaint writer or dispatcher at the Public Safety Agency.
 - f. Each "911" call answering position will have access to all incoming "911" lines and all outgoing dedicated lines, tie lines and dial out lines.
 - g. "911" calls shall be answered by saying "Emergency - 911".
 - h. Training shall be provided to all "911" Emergency Answering Center operators.
 - i. If an Automatic Call Distributor (ACD) is used in the "911" Answering Center to terminate incoming "911" calls, a recorded announcement shall be provided to inform the caller that all operators are busy, or that a major incident has already been reported.
4. Whenever the toll-free calling area of a telephone system exceeds the political jurisdictional boundaries or includes multiple government entities thereby making the "911" answering center accessible to callers from more than one political jurisdiction, provisions shall be made to insure that a citizen originating a "911" call from within the calling area will be answered by a "911" operator and the request for service given to the appropriate serving agency within the citizen's jurisdiction. This shall be accomplished by the use of any or all of the following items, dependent upon

the design of the "911" system:

- a. Tie lines between adjacent "911" EACs.
 - b. Mutual Aid or Interlocal Agreements enacted between adjacent political entities.
 - c. Selective routing of "911" calls to the appropriate EAC.
 - d. Direct dedicated circuits or radio communications between the "911" EAC and the Public Safety Agency/ies of adjacent jurisdictions.
 - e. Call Transfer over the switched network to an unlisted Telephone number.
5. The EAC operator shall dispatch or connect the proper public safety agency to respond to the emergency in an efficient manner.
- a. The "911" Answering Center should be located at the public safety agency receiving the largest number of emergency calls.
 - b. Public safety radio dispatch centers not colocated at the "911" Answering Center will be connected to the "911" Answering Center by private telephone lines.
 - c. When the Call Transfer Method is employed, procedures will be developed to advise the calling party that the call is being transferred and to remain on the line. All transferred calls will be monitored by the "911" call answerer to insure the call has been properly

transferred and answered, plus, determine if other emergency services are required. This Call Transfer procedure shall assure virtually 100% reliability.

- d. In "911" Answering Centers utilizing the Call Transfer Method of operation, the circuits connecting the primary Answering Center to the secondary Answering Center(s) shall be dedicated circuits, such as PBX or PABX extensions, tie lines, or microwave facilities.

6. Proper procedures and records shall be maintained by the Emergency Answering Center.

- a. The official in charge of each EAC shall be responsible for developing and maintaining a system of documenting the "911" calls received at the EAC. Documentation shall include any form of record keeping wherein the following information is collected and retained for a period of at least 30 days from date of the call:

- (1) Date and time the call was received.

- (2) Nature of problem

- (3) Action taken by the "911" call answerer

A magnetic tape recording containing the above information will satisfy this standard.

- b. Written procedures for the operation of the Emergency Answering Center shall be prepared. Each participating agency shall determine the type of "911" call handling method desired and provide written instructions to the Emergency Answering Center so that the EAC operator can initiate the designated Call Handling Method.

7. The EAC should be installed and maintained in a manner to provide reliable service.

- a. All facilities associated with "911" service shall be equipped at all exposed terminations, including central office distributing frames, with protective devices that prevent accidental workman contact, and also to prevent intentional disruption of operations. Each protected termination shall be marked to identify circuits.

- b. Safeguarded circuits shall not be opened, grounded, short circuited, or manipulated in any way by telephone company workmen until the local test desk obtains prior circuit release from the "911" EAC director or his designee.

- c. Service measurements on the "911" lines shall be made after the first 60 to 120 days in operation, and thereafter the telephone companies shall take annual service measurements, or as required by the local agency, on the "911" terminating line/trunk groups to determine the actual grade of service being experienced to satisfy the agency's answering requirements. The telephone companies will provide

the involved agencies and the State of Georgia, Telecommunications Division with an appropriate report on the results of these service measurements. The cost, if any, of these measurements will be borne by the requesting agency.

8. Each "911" Answering Center shall have emergency operation capability with automatic start and changeover capability, for supplying electrical power to all communications equipment within the Center, and to all other electrically operated facilities necessary for the proper operation of the center.

APPENDIX D. SAMPLE COUNTY OR CITY RESOLUTION

RESOLUTION

RESOLVED, that the Board of County Commissioners/City Council of _____ (City/County) endorses the concept of a countywide "911" emergency telephone service and is committed to the eventual implementation of such a program on the earliest date feasible for completion of such service.

This resolution adopted by the Board of County Commissioners/City Council at their session of _____, 197__.

APPENDIX E. MUTUAL AID AND INTERLOCAL AGREEMENTS

A mutual aid agreement, endorsed by all public agencies and public safety agencies within a county and defining the responsibilities of each agency, is required.

An interlocal agreement is also required when a telephone central office boundary overlaps two or more counties. The agreement is required to define the call handling method and routing of each type of call received from county citizens located in an adjacent county and answered in another county's "911" EAC. The agreement shall be kept current through periodic revisions to reflect changing conditions, i.e., new public safety agencies, changed call handling methods, etc. Intercounty funding provisions shall be included.

Sample mutual aid and interlocal agreements are included in this appendix for reference.

A. Sample Mutual Aid Agreement

MUTUAL AID AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 197__, by and between the County of _____ located in the State of Georgia, hereinafter referred to as the COUNTY, and the City of _____, _____, _____ County, Georgia, hereinafter referred to as the MUNICIPALITIES.

WITNESSETH

Whereas, the Parties hereto are desirous of implementing Georgia State Act 636, relating to a statewide Emergency Telephone Number "911" system plan, and

Whereas, the Parties hereto are desirous of ensuring that all of their citizens receive emergency service in time of need,

NOW, THEREFORE, BE IT AGREED among the parties hereto as follows:

1. All parties herein receive emergency phone calls relating to public safety from the "911" Emergency Answering Center and who is referred to as the Answering Center.
2. All parties herein recognize that there is a possibility that a call to a public safety agency may be inadvertently directed from the Answering Center to an agency with contiguous boundaries.
3. To ensure the citizen receives the fastest possible response time, all parties herein agree to respond to a call after it is dispatched

CONTINUED

1 OF 2

even though it may mean crossing jurisdictional boundaries.

This will be done pursuant to paragraph 6 of this document.

4. The misdirected call can be re-routed for dispatch to the proper jurisdictional agency if it is determined by the Answering Center that redirection would not increase response time.
5. No party to this agreement will charge another for rendering service in another jurisdictional area under provisions of this agreement.
6. There will be no reimbursement for loss or damage to equipment while engaged in activity pursuant to this agreement, nor shall there be any liability for compensation or indemnity to officers or employees by one party to another arising out of performance of this agreement.
7. This agreement will be in effect for an indefinite period, or until such time that the operating parameters of the "911" Emergency Answering Center make it unnecessary.
8. This agreement will be in effect immediately upon the signature of all of the parties listed herein.

B. Sample Interlocal Agreement

INTERLOCAL AGREEMENT

FOR CALL HANDLING IN BOUNDARY OVERLAP AREAS

THIS AGREEMENT, made and entered into this _____ day of _____ 197__, by and between the County of _____, located in the State of Georgia, hereinafter referred to as the "FIRST PARTY", and the County of _____, located in the State of Georgia, hereinafter referred to as the "SECOND PARTY".

WITNESSETH

Whereas, the Parties hereto are desirous of implementing Georgia State Act 636, relating to a statewide Emergency Telephone Number "911" system plan, and

Whereas, the Parties hereto recognize that telephone company central office boundaries do not coincide with jurisdictional boundaries and as such a portion of the emergency calls of the SECOND PARTY will be handled by the FIRST PARTY'S "911" Emergency Answering Center.

Whereas, the Parties hereto recognize that due to this central office boundary overlap, emergency calls will have to be routed back to a public safety agency or to the "911" Emergency Answering Center in the originating county.

Now, due to consideration cited above, the parties hereto agree as follows:

1. The _____ central office overlaps into _____ County. The people in this area will have their calls answered at the "911" center in _____ County.
2. All parties herein recognize that there is a possibility that a call to a public safety agency may be inadvertently directed from the Answering Center to an agency with contiguous boundaries.
3. To ensure the citizen receives the fastest possible response time, all parties herein agree to respond to a call it is dispatched even though it may mean crossing jurisdictional boundaries.
4. The misdirected call can be re-routed for dispatch to the proper jurisdictional agency if it is determined by the Answering Center that redirection would not increase response time.
5. The SECOND PARTY agrees to pay a pro rata share of the necessary costs including trunk lines or central office modifications that are necessary to route calls in the central office overlap area to the "911" Emergency Answering Center of the FIRST PARTY.
6. The SECOND PARTY additionally agrees to pay the nonrecurring and recurring costs for dedicated phone lines or toll calls to its public safety agencies and/or "911" Emergency Answering Center.
7. Reimbursements due the FIRST PARTY by the SECOND PARTY will be paid within 30 days of billing.
8. Any liabilities incurred by the Parties hereto as a result of the operation of the Emergency Answering Center will be paid initially by the County, with each of the Parties subsequently

- paying their pro rata shares; except that any individual action of one of the Parties hereto and not in furtherance of the purpose herein stated, shall be borne individually by that Party.
9. Any disputes arising between the Parties hereto that cannot be settled will be referred to the Director of Department of Administrative Services, Telecommunications Division, who shall serve as arbitrator and whose decision shall be binding on all Parties.
 10. All funds, payments and disbursements on behalf of the Emergency Answering Center shall be strictly accountable by the Finance Department of the County who shall conduct an annual audit of the Emergency Answering Center. A copy of this audit shall be available to the representatives of the SECOND PARTY. Neither party will attempt to rescind or amend this agreement without notifying the office of the Director of the Department of Administrative Services, Telecommunications Division, 30 days prior to action by either party. The Director will act in the interests of those affected by the central office boundary overlap and make his decision accordingly.
 11. The terms of this agreement shall become effective immediately upon the approval by the respective Parties to the agreement.

C. Sample Interlocal Agreement for County and Cities with Sheriff
as Administrator

INTERLOCAL AGREEMENT

FOR

COUNTY AND CITIES WITH SHERIFF AS ADMINISTRATOR

THIS AGREEMENT, made and entered into this _____ day of _____,
197__, by and between the County of _____, located in the State
of Georgia, hereinafter referred to as the COUNTY, and the Cities of
_____, _____, _____, incorporated
municipalities, located in _____ County, Georgia, hereinafter
referred to as the MUNICIPALITIES.

WITNESSETH

Whereas, the Parties hereto are desirous of implementing Georgia
State Act 636, relating to a statewide Emergency Telephone Number
"911" system plan, and

Whereas, the Parties hereto, are desirous to interface utilization
of "911" as a number for procuring emergency services among the
Parties hereto, and

Whereas, the Parties hereto desire to form a cooperative "911"
Emergency Answering Center, for the purpose of receiving and dis-
patching emergency calls.

Now, therefore, in consideration of the mutual promises made and
hereinafter set forth, the parties hereto agree as follows:

1. To form an association known as the _____ County
Cooperative "911" Emergency Answering Center, whose purpose is
to provide emergency answering services for the parties here-
in, and who is referred to as the "Answering Center".
2. The COUNTY shall provide emergency call answering services for
law enforcement, fire and emergency medical agencies 24 hours
a day, 7 days a week, 365 days per year.
3. The COUNTY shall hold the title, and have care, custody and control
of equipment, furnishings and the Answering Center. The COUNTY
shall further be responsible for planning, acquiring and maintain-
ing the common equipment of the Answering Center.
4. The COUNTY shall be in charge of hiring, training and disciplining
of employees working on the premises of, or in conjunction with,
the operation of the Answering Center, subject to the provisions
of applicable Civil Service and Merit Systems.
5. The COUNTY shall be in charge of the making and promulgation of any
necessary rules and regulations and their enforcement by and with
the assistance of the participating Parties.
6. The Parties herein agree to form the _____ County Cooperative
"911" Emergency Answering Center Board of Governors. The Board of
Governors shall consist of the Police Chiefs, Fire Chiefs, Sheriff
and Emergency Medical Agency Director (s).
7. All costs for operating and maintaining the communications center
shall be paid initially by the COUNTY and purchases and contracts

for the purpose of operating the Answering Center shall be in name of the County, provided:

- a. The Answering Center cost shall consist of the following items: Answering Center, recorders, phone lines, equipment, salaries and benefits, center supplies and materials, depreciation of equipment, employee training and related expenses, publicity expenses, and other expenses agreed on by a majority of the Board of Governors.
 - b. The cost shall be pro rated among the Parties based on the percentage of the population of all the Parties herein. Population will be based on the population records of the _____.
 - c. The COUNTY shall maintain financial records relating to the cost of operating and maintaining the Answering Center, and said records shall be available to the Parties herein, or their representative, upon request.
 - d. Answering service payments from the MUNICIPALITIES to the COUNTY shall be due the first day of each month.
8. The period of the contract shall be for 60 months, or until such time as all parties mutually agree to termination.
 9. All gifts or grants in furtherance of the purpose of the Answering Center shall be in the name of the COUNTY and shall be used for the purpose of reducing the overall operating cost of the Answering Center.

10. All claims for Federal or State aid for the operation of the Answering Center shall be made by the COUNTY.
11. Any liabilities incurred by the Parties hereto as a result of the operation of the Answering Center will be paid initially by the COUNTY, with each of the Parties subsequently paying their pro rata shares; except, that any individual action of an employee of one of the Parties hereto, and not in furtherance of the purposes herein stated, shall be borne individually by that Party.
12. Any disputes arising between the Parties hereto shall be decided by a majority vote of the Board of Governors and in the event that the controversy cannot be settled by the Board, the Director of the Department of Administrative Services, Telecommunications Division shall serve as arbitrator whose decision shall be binding on all Parties.
13. All funds, payments and disbursements on behalf of the Answering Center shall be strictly accountable by the Finance Department of the County, who shall conduct an annual audit of the Answering Center. A copy of this audit shall be available to the Representatives of any Party hereto.
14. By a unanimous vote of the Board of Governors, this contract may be wholly or partially amended.
15. It is agreed by the Parties hereto that the Sheriff of the County shall serve as the Administrator of the agreement in the manner provided herein.

APPENDIX F. TELEPHONE COMPANIES IN THE STATE OF GEORGIA

<u>COMPANY</u>	<u>TELEPHONE NUMBER</u>
1. Alma Telephone Company, Inc. P. O. Drawer 70 Alma, Georgia 31510	912-632-8603
2. Blue Ridge Telephone Company P. O. Box 607 Blue Ridge, Georgia 30513	404-632-2211
3. Brantley Telephone Company, Inc. P. O. Box 255 Nahunta, Georgia 31553	912-462-5111
4. Bulloch County Rural Telephone Cooperative, Inc. Northside Drive West Statesboro, Georgia 30458	912-764-7511
5. Camden Telephone and Telegraph Company, Inc. P. O. Box 410 St. Marys, Georgia 31558	912-882-4221
6. Chickamauga Telephone Corporation P. O. Box 308 Chickamauga, Georgia 30707	404-375-3161
7. Citizens Telephone Company, Inc. P. O. Box 187 Leslie, Georgia 31764	912-874-4145
8. Coastal Utilities, Inc. P. O. Box 585 Hinesville, Georgia 31313	912-876-8181
9. Continental Telephone Company of the South 705 North Caswell Glennville, Georgia 30427	912-654-2168

<u>COMPANY</u>	<u>TELEPHONE NUMBER</u>
10. Darien Telephone Company, Inc. P. O. Box 575 Darien, Georgia 31305	912-437-4111
11. Ellijay Telephone Company P. O. Box 406 Ellijay, Georgia 30540	404-635-2271
12. Empire Telephone Company Comer, Georgia 30629	404-783-4811
13. Fairmount Telephone Company, Inc. P. O. Box 36 Fairmount, Georgia 30139	404-337-5397
14. General Telephone Company of the Southeast P. O. Box 809 Moultrie, Georgia 31768	912-985-4000
15. Georgia Telephone Corporation 39 Court Square West Blakley, Georgia 31723	912-723-3141
16. Glenwood Telephone Company P. O. Box 235 Glenwood, Georgia 30428	912-523-5111
17. Hart County Telephone Company Hartwell, Georgia 30643	404-376-4701
18. Hawkinsville Telephone Company P. O. Box 607 Hawkinsville, Georgia 31036	912-783-4001
19. Interstate Telephone Company West Point, Georgia 31833	404-645-1011
20. Mid-Georgia Telephone Corporation 103 Georgia Avenue Commerce, Georgia 30529	404-335-3136

	<u>COMPANY</u>	<u>TELEPHONE NUMBER</u>
21.	Nelson-Ball Ground Telephone Company P. O. Box 128 Nelson, Georgia 30151	404-735-2000
22.	Pembroke Telephone Company, Inc. P. O. Box 68 Pembroke, Georgia 31321	912-653-4389
23.	Pineland Telephone Cooperative, Inc. P. O. Box 678 Metter, Georgia 30439	912-685-2121
24.	Plant Telephone and Power Company, Inc. P. O. Box 187 Tifton, Georgia 31794	912-382-4227
25.	Planters Rural Telephone Cooperative, Inc. P. O. Box 8 Newington, Georgia 30446	912-857-4411
26.	Progressive Rural Telephone Cooperative, Inc. P. O. Box 98 Rentz, Georgia 31075	912-984-4201
27.	Public Service Telephone Company P. O. Box 397 Reynolds, Georgia 31076	912-847-4111
28.	Ringgold Telephone Company P. O. Box F Ringgold, Georgia 30736	404-935-2345
29.	South Georgia Telephone Company 705 North Caswell Glennville, Georgia 30427	912-654-2168

	<u>COMPANY</u>	<u>TELEPHONE NUMBER</u>
30.	Southern Bell Telephone and Telegraph Company 125 Perimeter Center - West Atlanta, Georgia 30346	404-391-2427
31.	St. Joseph Telephone and Telegraph Company Port St. Joe, Florida 32456	904-227-2111
32.	Standard Telephone Company P. O. Box 400 Cornelia, Georgia 30531	404-778-2201
33.	Statesboro Telephone Company P. O. Box 807 Statesboro, Georgia 30458	912-764-9131
34.	Thomaston Telephone Company P. O. Box 510 Thomaston, Georgia 30286	404-647-5461
35.	Trenton Telephone Company P. O. Box 216 Trenton, Georgia 30752	404-657-4000
36.	Utelwico, Inc. P. O. Box 669 Reynolds, Georgia 31076	404-665-3521
37.	Walker County Telephone Company P. O. Drawer C LaFayette, Georgia 30728	404-638-1000
38.	Waverly Hall Telephone Company, Inc. P. O. Box 98 Waverly Hall, Georgia 31831	404-582-3333
39.	Wilkes Telephone and Electric Company Washington, Georgia 30673	404-678-2121

	<u>COMPANY</u>	<u>TELEPHONE NUMBER</u>
40.	Wilkinson County Telephone Company, Inc. P. O. Box 168 Irwinton, Georgia 31042	912-946-5501
41.	Winter Park Telephone Company W. Franklin Street Quincy, Florida 32351	904-875-2111

APPENDIX G. 911 CONFIGURATION PLAN FORMAT

911 SYSTEM PLAN

_____ COUNTY

SYSTEM SUMMARY

_____ County is a (single) (multi) county system serving approximately _____ people in _____ County. The 911 Emergency Answering Center is located in the _____ dispatch center. The system includes _____ Central Offices. Names of Central Offices, _____, _____ and _____. _____ Municipalities and _____ Public Safety Agencies. Each of the Central Offices will be (direct) (tandem) trunked to the emergency answering center. There are _____ dedicated transfer lines to the Public Safety Agencies. Calls from adjacent counties that are served by the _____ County 911 system will be handled in the following manner _____. Details of these boundary overlaps are shown in Figure 1. (If any citizens of the county are not covered by the 911 system explain why and what provisions have been made to access the Emergency Service.)

SYSTEM MANAGEMENT

The _____ County 911 System is operated by the _____ under the management of _____. The responsible fiscal agent is _____.

The County 911 System was accomplished by the following Committee/
personnel:

NAME

_____	_____
_____	_____
_____	_____
_____	_____

SYSTEMS COSTS

The costs associated with the implementation and operation of the
_____ County 911 System are detailed in Figure 2.

The cost sharing will be as follows:

<u>AGENCY</u>	<u>INSTALLATION CHARGES</u>	<u>MONTHLY CHARGES</u>
County	\$ _____	\$ _____
City	\$ _____	\$ _____
Other	\$ _____	\$ _____
TOTAL	\$ _____	\$ _____

MUTUAL AID AND INTERLOCAL AGREEMENTS

MUTUAL AID AGREEMENTS

A mutual aid agreement, endorsed by all Public Agencies and Public
Safety Agencies is required. (Attach copy of all mutual aid agree-
ments to the plan.)

INTERLOCAL AGREEMENTS

An interlocal agreement is required to define the call handling method

and routing of each type of call received from adjacent county/
counties citizens at the _____ County 911 Emergency
Answering Center (EAC) located in the city of _____.

The agreement shall be kept current through periodic revisions to
reflect changing conditions, i.e., new public safety agencies,
changed call handling methods, etc. (Attach copy of all inter-
local agreements to the plan.)

TABLE 1

_____ COUNTY 911 SYSTEM DEFINITION

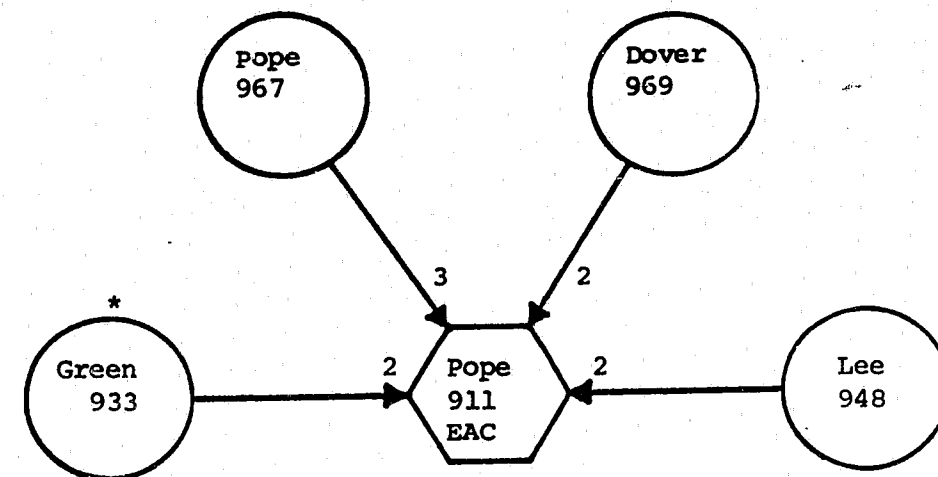
Location	<u>(Public Safety Agency & City)</u>
Population	_____ (As of date)
Emergency Calls per 24 Hours (Avg.)	_____
Number of Answering Positions	_____
Type of Answering Position	<u>Answering/Complaint Writer/Dispatcher</u>
Total Staff	_____
Additional Staff due to 911	_____
Number of Logging Recorders	_____
Number of Instant Play back Recorders	_____
Emergency Power	_____
Call Answering Equipment	_____
Incoming 911 Trunks	_____
Dial-Out Lines	_____
Transfer Lines	_____
Tie Lines	_____
Options (Direct Trunks)	_____ Call Transfer/ Called Party hold/Emergency Ringback/ Forced Disconnect/Switch Hook Status/ etc.

TABLE 2

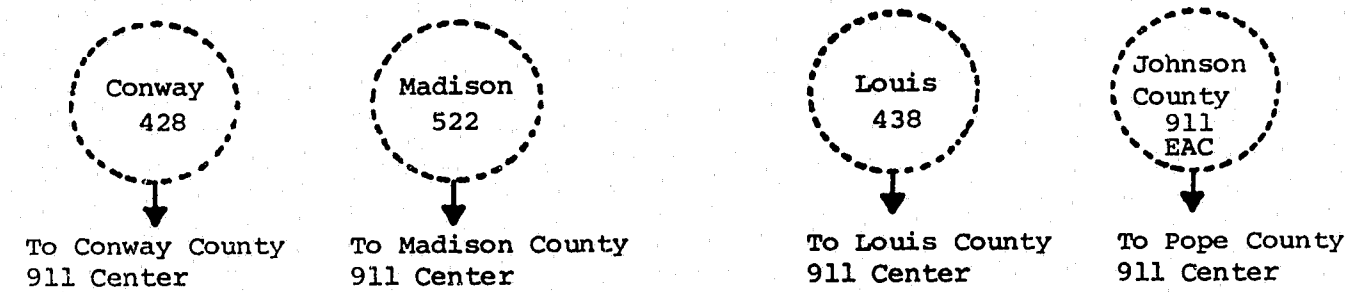
_____ COUNTY CALL HANDLING

AGENCY	METHOD	VEHICLE
Public Safety Agency/ Ambulance Provider	Direct Dispatch/ Call Transfer/ Call Relay	Direct Line/Radio/ Radio Pager/Telephone

TABLE 3

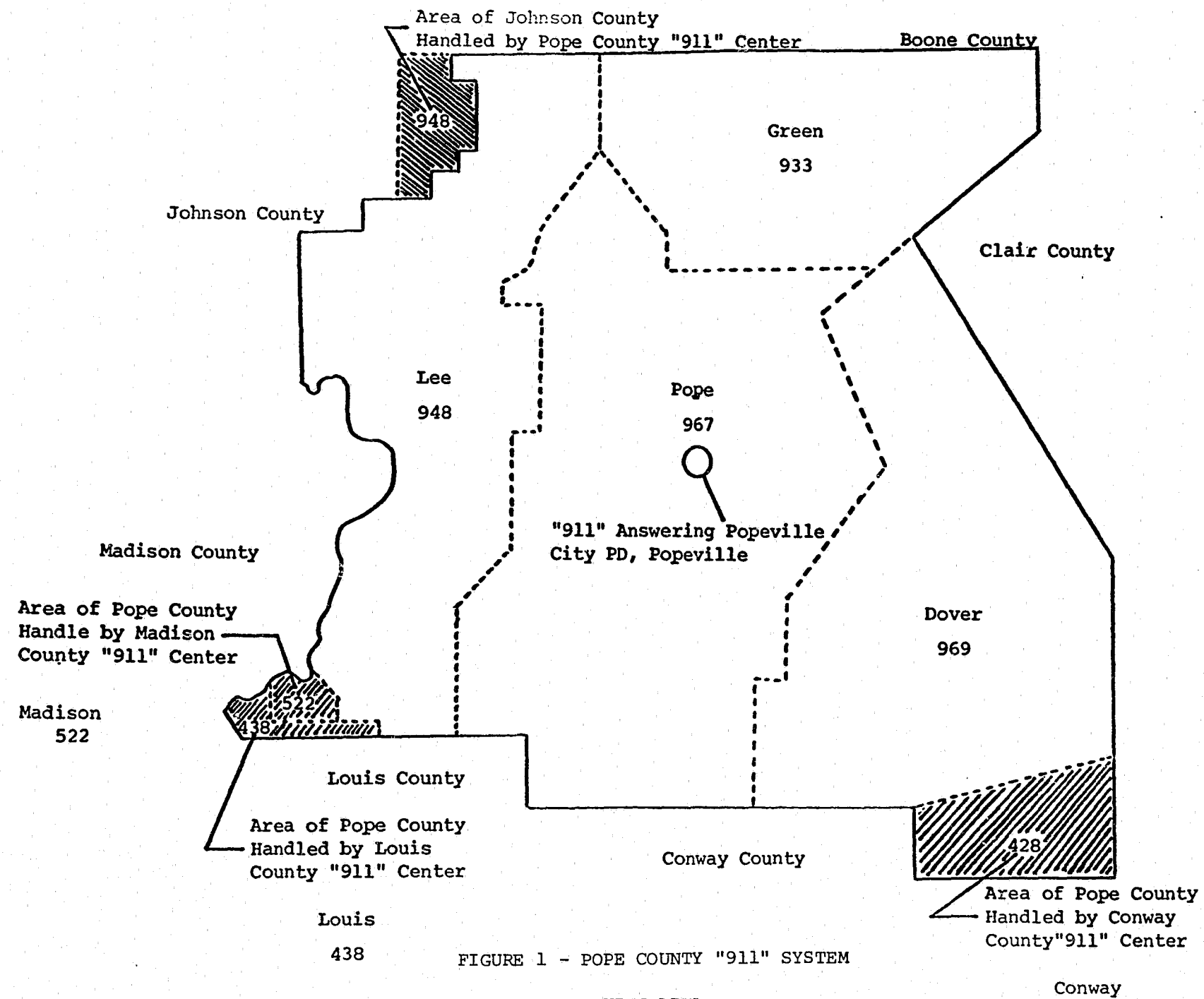


All Central Office are part of the Southern Bell Telephone Company except marked * which is part of the General Telephone Company



POPE COUNTY CENTRAL OFFICE
"911" TRUNK NETWORK

G-7



IMPLEMENTATION COSTS

911 TRUNKS	NO.	TRANSFER LINES	NO.	TIE LINES	NO.	OUT DIAL LINES	NO.	911 ANSWERING EQUIPMENT	MISC.	TOTAL COST IMPLEMENTATIONS
\$		\$		\$		\$		\$		\$

8-8

OPERATING COSTS (MONTHLY)

911 TRUNKS	NO.	TRANSFER LINES	NO.	TIE LINES	NO.	OUT DIAL LINES	NO.	911 ANSWERING EQUIPMENT	MISC.	TOTAL COST OPERATING
\$		\$		\$		\$		\$		\$

FIGURE 2 - _____ COUNTY 911 IMPLEMENTATION
AND OPERATING COSTS

APPENDIX H. SAMPLE 911 CONFIGURATION PLAN

911 SYSTEM PLAN

POPE COUNTY

SYSTEM SUMMARY

Pope County is a single county system serving approximately 15,000 people in Pope County. The 911 Emergency Answering Center is located in the Pope City Police Department dispatch center. The system includes four Central Offices, Pope CO, Dover CO, Lee CO, and Green CO, two Municipalities and seven Public Safety Agencies. Each of the Central Offices will be direct trunked to the emergency answering center, there are four dedicated transfer lines to the Public Safety Agencies. Calls from adjacent counties that are served by the Pope County 911 system will be handled in the following manner. Calls from Johnson County citizens will be transferred over a direct tie line to the Johnson County EAC who will dispatch the requested emergency service. Calls from Pope County citizens answered by the EAC's of Conway County, Madison County and Louis County EAC's will take the appropriate information and relay that information via local government radio to the Pope County EAC, who will dispatch the requested emergency service.

Details of these boundary overlaps are shown in Figure 1.

SYSTEM MANAGEMENT

The Pope County 911 System is operated by the Pope City Police Department under the management of the Police Chief guided in direction by the Pope City Council, Pope County Board of Commissioners and the Green City Council. The responsible fiscal agent is the city of Pope.

The County 911 System was accomplished by the following:

NAME	
	County Administrator (representing the Pope County Board of Commissioners)
	City Manager, Pope, Georgia
	Mayor, Green, Georgia
	Sheriff, Pope County
	Fire Chief, Pope County

NAME

	Chief of Police, Pope, Georgia
	Chief of Police, Green, Georgia
	Director, Pope County EMS
	Director, Pope County Civil Defense

SYSTEMS COSTS

The costs associated with the implementation and operation of the Pope County 911 System are detailed in Figure 2.

The cost sharing will be as follows:

AGENCY	INSTALLATION CHARGES		MONTHLY CHARGES	
Pope County	\$ XXXX	60%	\$ XXXX	60%
Pope, Georgia	\$ XXXX	30%	\$ XXXX	30%
Green, Georgia	\$ XXXX	10%	\$ XXXX	10%
TOTAL	\$ XXXX		\$ XXXX	

MUTUAL AID AND INTERLOCAL AGREEMENTS

Mutual Aid Agreements, endorsed by all Public Agencies and Public Safety Agencies located within the county are attached.

INTERLOCAL AGREEMENTS

FIRST PARTY	SECOND PARTY	SUBJECT
Pope County	Conway County	An interlocal agreement is attached that defines the call handling method and routing of each type of call received from Pope County citizens at the Conway County 911 center located in the town of Conway. The agreement shall be kept current through periodic revisions to reflect changing conditions, i.e., new public safety agencies, changed call

FIRST PARTY	SECOND PARTY	SUBJECT
Pope County (Cont'd)	Conway County (Cont'd)	handling methods, etc. Intercounty funding provisions shall be included, as required, for pro rata sharing of 911 costs.
Pope County	Madison County	An interlocal agreement is attached that defines the call handling method and routing of each type of call received from Pope County citizens at the Madison County 911 center located in the town of Madison. The agreement shall be kept current through periodic revisions to reflect changing conditions, i.e., new public safety agencies, changed call handling methods, etc. Intercounty funding provisions shall be included, as required, for pro rata sharing of 911 costs.
Pope County	Louis County	An interlocal agreement is attached that defines the call handling method and routing of each type of call received from Pope County citizens at the Louis County 911 Center located in the town of Louis. The agreement shall be kept current through periodic revisions to reflect changing conditions, i.e., new public safety agencies, changed call handling methods, etc. Intercounty funding provisions shall be included, as required, for pro rata sharing of 911 costs.
Johnson	Pope County	An interlocal agreement is attached that defines the call handling method and routing of each type of call received from Johnson County citizens at the

FIRST PARTY	SECOND PARTY	SUBJECT
Johnson County	Pope County	Pope County 911 center located in the town of Pope. The agreement shall be kept current through periodic revisions to reflect changing conditions, i.e., new public safety agencies, changed call handling methods, etc. Intercounty funding provisions shall be included, as required, for pro rata sharing of 911 costs.

TABLE 1

POPE COUNTY 911 SYSTEM DEFINITION

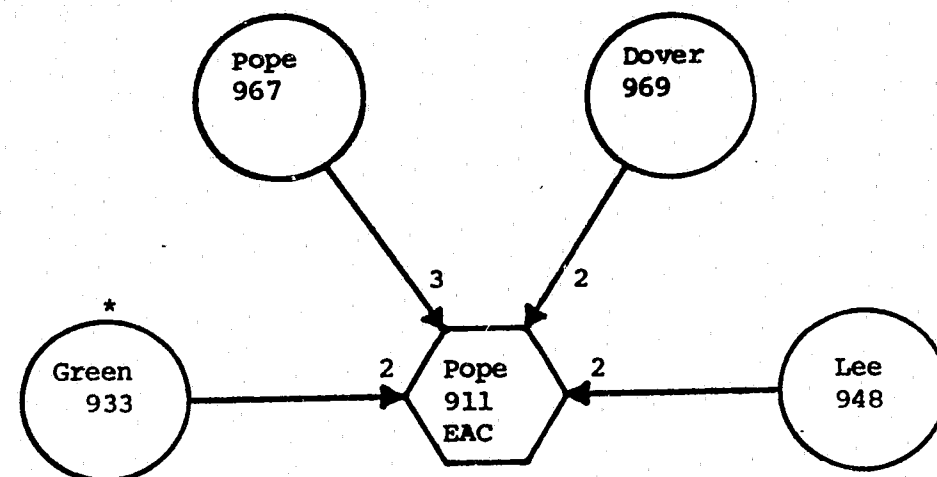
Location	Pope City Police Department, Pope Georgia
Population	15,000 (1970 Census)
Emergency Calls per 24 hours	20
Number of Answering Positions	1
Type of Answering Position	Answering, Complaint Writer & Dispatcher
Total Staff	4
Additional Staff due to 911	0
Number of Logging Recorders	1 - 10 Channels
Number of Instant Play Back Recorders	1
Emergency Power	Yes
Call Answering Equipment	8A Key
Incoming 911 Trunks	9
Dial-Out Lines	2 (1 unlisted)
Transfer Lines	4
Tie Lines	1
Options (Direct Trunks)	Call Transfer, Called Party hold, Emergency Ring back, Forced Disconnect and Switch hook Status.

TABLE 2

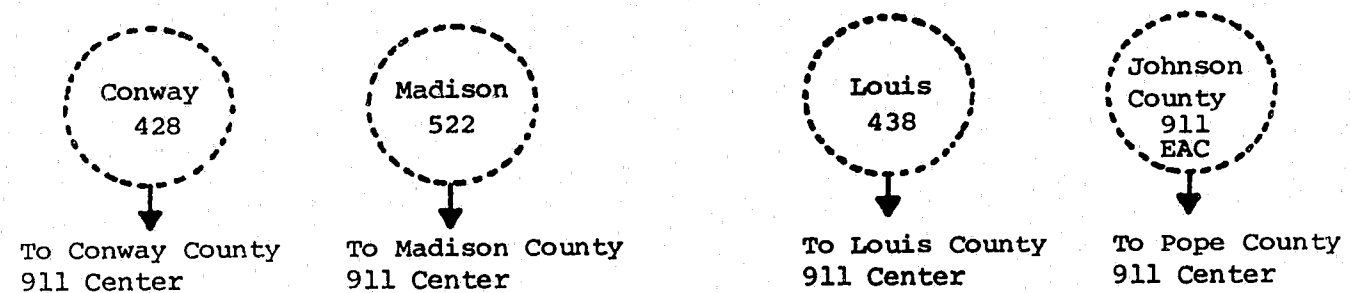
POPE COUNTY CALL HANDLING

AGENCY	METHOD	VEHICLE
<u>Pope County 911 Center</u>		
Pope Police Dept.	Direct Dispatch	Radio
Green Police Dept.	Call Transfer	Direct Line
Pope County Fire Dept.	Call Transfer	Direct Line
Pope County Sheriff's Dept.	Call Transfer	Direct Line
Pope County EMS	Call Transfer	Direct Line
South Volunteer Fire Dept.	Call Relay	Radio Pager
North Volunteer Fire Dept.	Call Relay	7-Digit Telephone
Madison County 911 Center	Call Relay	Local Government Radio or 1-xxx-xxxx unlisted number
Louis County 911 Center	Call Relay	Local Government Radio or 1-xxx-xxxx unlisted number
Johnson County 911 Center	Call Relay	Local Government Radio or 1-xxx-xxxx unlisted number
<u>Conway County 911 Center</u>		
Any Pope County Agency (via Pope City Police Department)	Call Transfer	Direct Tie Lie

TABLE 3

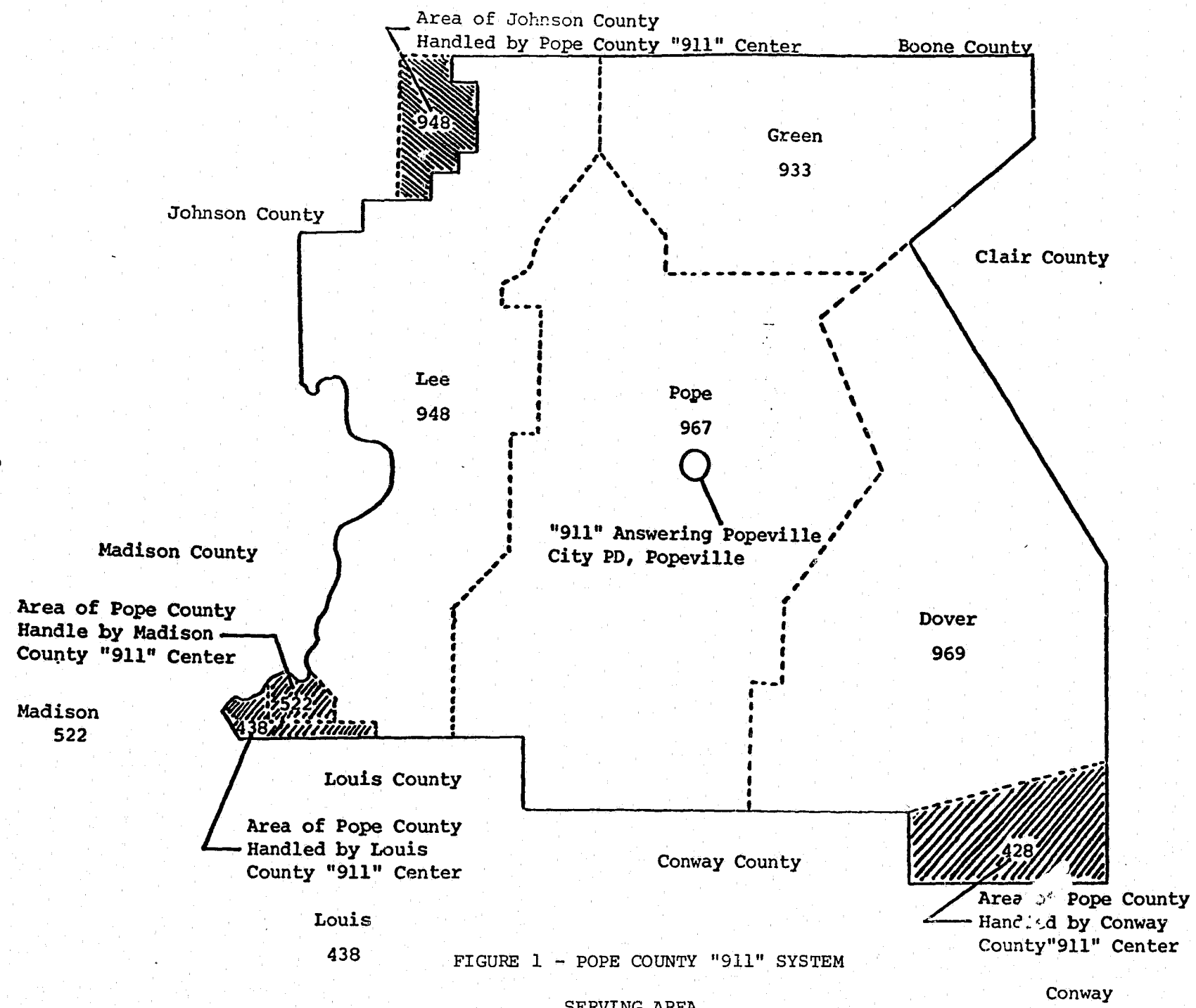


All Central Office are part of the Southern Bell Telephone Company except marked * which is part of the General Telephone Company



POPE COUNTY CENTRAL OFFICE
"911" TRUNK NETWORK

8-H



IMPLEMENTATION COSTS

911 TRUNKS	NO.	TRANSFER LINES	NO.	TIE LINES	NO.	OUT DIAL LINES	NO.	911 ANSWERING EQUIPMENT	MISC.	TOTAL COST IMPLEMENTATIONS
\$		\$		\$		\$		\$	\$	\$

OPERATING COSTS (MONTHLY)

911 TRUNKS	NO.	TRANSFER LINES	NO.	TIE LINES	NO.	OUT DIAL LINES	NO.	911 ANSWERING EQUIPMENT	MISC.	TOTAL COST OPERATING
\$		\$		\$		\$		\$	\$	\$







FIGURE 2 - POPE COUNTY 911 IMPLEMENTATION
AND OPERATING COSTS

APPENDIX I. INDIVIDUAL COUNTY AND LOCAL GOVERNMENT 911 SYSTEM PLANS






This section is reserved for the County and Local Government 911 Plans. As each 911 plan is submitted and approved by the State, it will be added to this section. However, copies of local 911 plans will be included only in the master copy of the State 911 Plan on file at the Department of Administrative Services, Telecommunications Division. Ultimately, there will be 159 individual County 911 plans plus any individual local governments that submit a 911 plan.

Once the 911 plan is included in this section it will be the plan approved by the Telecommunications Division for operational implementation by the County or Local Government. In accordance Georgia State Act 636, Section 8, "After January 1, 1978, no emergency telephone number '911' system shall be established and no present system shall be expanded without prior approval and designation in the plan administered by the Telecommunications Division." (See Appendix B.) Thus, deviations from the plan presented herein require prior approval of the Telecommunications Division.

COUNTY 911 SYSTEM SERVING AREA MAP LEGEND:

-  911 Answering Center
-  Central Office Overlap area in county where calls are handled by a 911 center in an adjacent county
-  Central Office Overlap area in adjacent county where calls are handled by subject county 911 center
-  County Boundary
-  Telephone Company Central Office boundaries
-  Unless otherwise specified, Telephone Company Central Office boundaries and county boundary coincide.

CENTRAL OFFICE 911 TRUNK NETWORK DIAGRAM LEGEND:

-  Denotes a Central Office
-  Tandum trunk arrangement
-  Trunk line to 911 center
-  Denotes 911 center
-  Central Office to adjacent county 911 center