

FIRE ALARM BOXES

LARGE CITIES

GEORGIA



I N T R O D U C T I O N

This report covers a short study of fire alarm boxes for 10 of the 11 largest cities in the State.

This evaluation covers the effectiveness of the fire alarm box as part of the communication system for fire calls. Box coverage per 1,000 population is compared to total boxes in each city. Further comparison is made with false alarms to total alarms received through the fire alarm boxes in each city.

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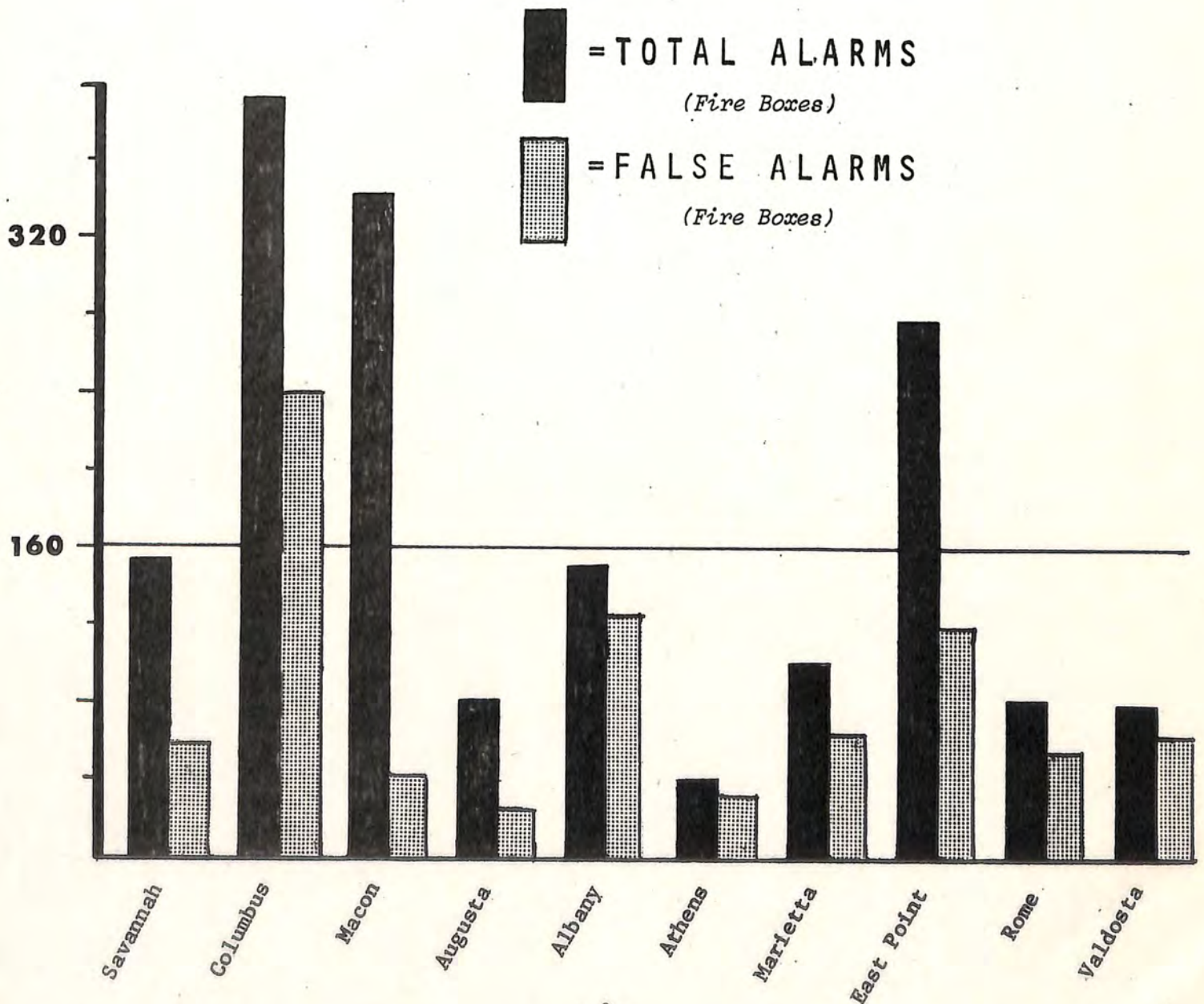
It is intended that this brief yet concise piece of basic information will contribute to improved effectiveness in municipal fire service.

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Executive Director

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May, 1969

FIRE ALARM BOX USE
A Survey of Georgia's Largest Cities

The fire chiefs of Georgia's ten largest cities¹ favor the continued use of fire alarm boxes. Although false alarm rates are high the boxes are still considered the most effective and fastest means of communication to a fire department. The many valid calls received through the fire boxes result in the saving of lives and property value. This leaves the false alarms in the necessary nuisance category.



The survey revealed suggestions that boxes be removed from residential areas. Another area in which fire alarm boxes do not appear useful are certain industries with private alarm and sprinkler systems in use.

Several chiefs feel the conversion to a telephone alarm system might be better, but the costs are prohibitive. Savannah uses such a system through which the fire department, police department, or an ambulance can be summoned. For 212 such boxes, Savannah pays a yearly rental of \$11,448.

According to a report by the International City Managers' Association, the proper placing of fire alarm boxes in a city is important in effective fire control and in reducing false alarms.² Downtown office buildings are high value areas in which telephones cannot be reached at night. It is recommended that fire boxes be placed at two block intervals. High life hazard areas, such as schools, nursing homes, and hospitals, should be adequately covered. Fire boxes should be removed from residential areas where telephones are numerous. Slum areas are an obvious exception, since there are few available telephones.

According to the National Fire Protective Association 10% of all fires in the United States account for 90% of all property damage loss. It appears that the high value areas are most in need of easily reached fire alarm boxes. This is further substantiated by the assigning of deficiency points by the American Insurance Association. Concerning fire alarm boxes, the AIA assigns a maximum of 20 points for residential areas, 67 points for principal business districts and 40 points for other high value areas.³

Some cities have greatly reduced their percentage of false alarms by various means. Washington, D. C. reduced false alarms 45% in one month through an intensive education project with the public school children. Publicity given to the arrest and conviction of a few false alarm violators successfully reduced the overall false alarms in one city. Arrest of the guilty was a result of cameras placed on three of the city's fire alarm boxes.

Norfolk, Virginia found that 51% of all false alarms were placed on the weekends when children were out of school. Relocation of certain boxes greatly reduced the false alarms.

To receive the largest benefit from fire alarm boxes -- Consider:

1. What area needs the protection of fire boxes?
2. Where can fire boxes be eliminated and relocated?

To reduce the percentage of false alarms -- Determine:

1. Which boxes are most affected?
2. In those areas with most false alarms are telephones nearby?
3. Would these high false alarm boxes be more effective in another part of town?

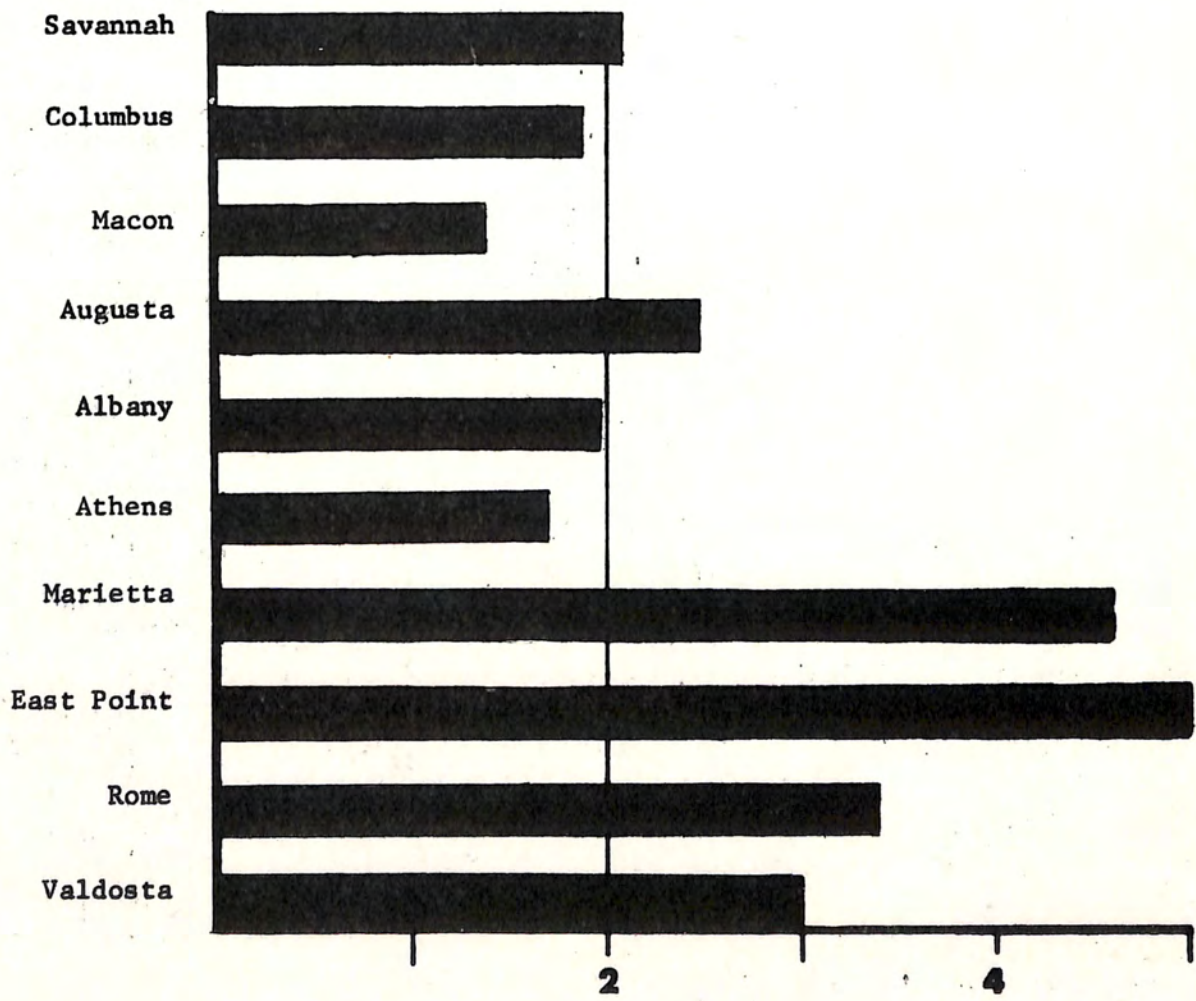
Another valid consideration might be the boxes in use per 1,000 population.

Use the following charts to see how your city compares.

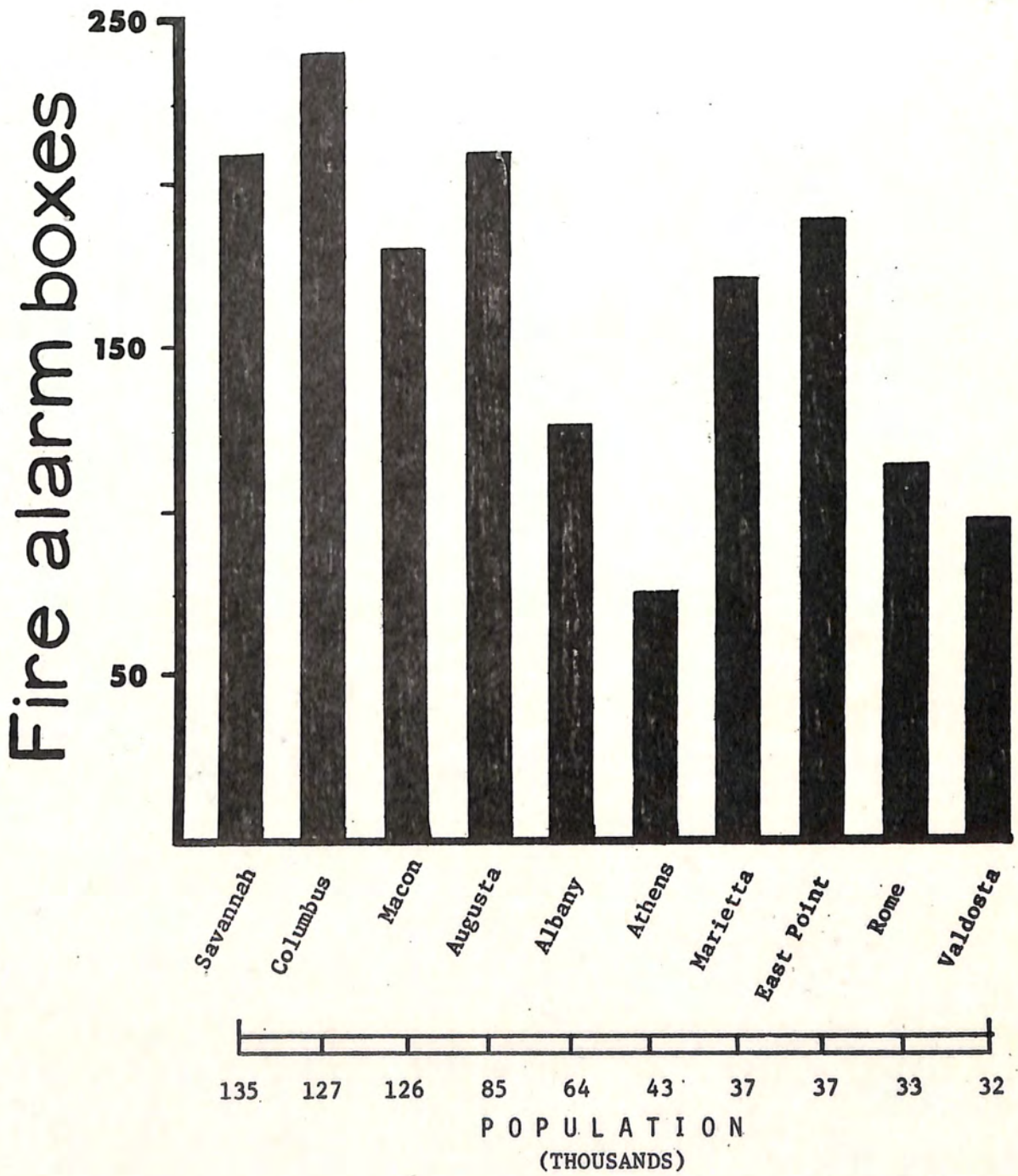
¹*Atlanta Excluded.*

²*"Fire Alarm Communications", Management Information Service. (Report 287) December 1967.*

³*Ibid*



Boxes per 1,000 population



<u>NAME OF CITY & NO. FIRE ALARM BOXES IN CITY</u>	<u>NO. OF FIRE CALLS</u>	<u>NO. VALID FIRE CALLS ANSWERED AS RESULT OF FIRE ALARM BOX</u>	<u>COST OF FIRE ALARM BOXES TO CITY</u>	<u>ARE BOXES RENTED?</u>	<u>WHO DOES CITY PAY FOR RENTAL OF FIRE ALARM LINES?</u>	<u>IF COST IS ADDITIONAL TO ANY OF PREVIOUS COSTS, STATE HOW MUCH IS PAID PER YEAR FOR LINE RENTAL</u>
Albany. 127	154	29	\$145.00, \$190.00 Auxiliary Side or Master Box	No	City Owned	-
Athens 75	41	11	\$200.00 Varies	No	-	-
Augusta 210	84	55	\$34,236.72 Annual	Yes	None	None
Columbus 241	394	152	\$200.00	No	None	None
East Point 190	302	182	\$172.50	No	None	-
Macon 182	366	323	\$250.00 (Box Only)	No	None	None
Marietta 172	106	39	\$250.00	No	None	-
Rome 115	84	26	\$250.00	No	-	None
Savannah 212 (Street Boxes)	157 (Year 1968)	89	-	Yes	Telephone Co.	\$4.50 per mo. per box \$11,448 per yr.
Valdosta 98	83	15	\$243.30	No	None	None City Owned

C O M M E N T S

"I feel every means possible should be used for the public to summon help in an emergency such as fire. Alarm boxes have been used for other emergencies other than fires. I think they are necessary. The most efficient emergency alarm equipment for the general public are emergency telephone boxes, but they are too expensive for most fire departments to install and the recurring charges are too high."

"It is necessary to properly maintain the system that carries the fire alarm boxes, service them and test them often. I know of no better way to have a fire alarm system."

"Fire constitutes the most destructive force encountered in an Urban Community. And yet, it is the most easily controlled when dealt with in its incipient stages.

The general public can sound a Fire Alarm quickly and easily by operating the PULL LEVER on the alarm box. A coded signal automatically flashes to the Fire Department in seconds. Complete fire defences are responding immediately.

We very definitely need them and they are effective even with the rate of False Alarms."

"A Municipal Fire Alarm System is reliable means of notifying a fire department that a fire emergency exists.

There are two basic elements in the communication requirements of a modern fire department:

- (a) An effective system of rapid communications between the operating units of the department.
 - (b) The devices which provide for prompt reporting of fires to the department upon discovery.
- (A) It is necessary for fire department officers to be able to communicate rapidly with the officers in charge of individual fire commands. These officers in turn must keep in touch with fire headquarters. A means of calling off-duty firemen to duty with minimum delay when emergency demands. It is also desirable that the communications system permit a fire department to contact departments in neighboring communities. For these various purposes all forms of communication are used in one way or another, including radio, telephone and telegraphic equipment and messenger service.
 - (B) The second basic element of fire department communications is the provision of means whereby a person discovering a fire may promptly report it to the fire department, utilizes the telephone, and the municipal street box fire alarm system.

The American Insurance Association grading schedule assigns the communication and fire alarm system five hundred fifty of 5,000 possible deficiency points. There

is some questions whether such a high percentage of the total points should be assigned to the street box system and related equipment, the purpose of the grading schedule is to measure factors involved in large fires or conflagrations. Actual fire experience shows that delayed alarms have resulted in many important fires in the large loss class.

Street fire alarm box systems are used in three out of five communities of more than 5,000 population in some areas of the United States. This ratio is much higher in some parts of the country where 9 out of 10 cities of more than 5,000 population have fire alarm systems.

Fire department communications and public fire alarm systems are supplemented by private fire alarm and supervisory systems.

Before a city discontinues their fire alarm system they should determine the effect removal will have on fire insurance rates within the city. Compare cost of leased service and municipal owned systems. The effect of delayed alarms."

"I do not think that there is any faster or more positive means for a department to receive and respond to an alarm. However, I feel that if we could cut out the unnecessary street boxes, this would definitely cut down on our false alarms, as over 50% of our box alarms in 1968 were false."

"In determining a city's classification according to American Insurance Association we must have fire alarm boxes. Due to the number of false alarms, I'm sure there must be a better way. Yes, this is a needed thing."

"We do need fire alarm boxes. They are effective. There is no better way. American Insurance Association requirement."

"Under the present insurance grading schedule, it is almost mandatory to have fire alarm boxes to achieve a low base insurance rating.

For the transmission of fire alarms, they are effective. But, in my opinion, the high cost of procurement, installation and maintenance for the number of valid alarms transmitted does not justify the expense, taking into consideration that the majority of homes and business areas have telephone service. Also, most cities have police patrol cars with radios at all times for transmission of fire calls."

"I think the fire alarm box in our residential areas is becoming less effective each year, because the number of alarms is gradually getting smaller each year. Also, many of the residents do not know the location of their nearest alarm box because they depend on the telephone for reporting fires.

I do think that our buildings with automatic sprinkler and other systems should have an alarm box connected with the fire department for several reasons which I will not go into.

I think we could have a better system but it would be expensive to make the change over."

"The telephone fire alarm system, in my opinion, is most effective in that the exact locations of fires and what is burning can be reported with fire equipment being dispatched accordingly. Phones in the fire alarm boxes are also used for emergencies other than fire such as for police, ambulance, etc."

