

Police Communication System Fully Planned

Will Combine Radio With Teletype; Await Action by Governor

By JOHN W. EURE
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A statewide police communication system, combining a network of state police radio broadcasting stations and a system of teletypewriters connecting state and municipal police headquarters, has been drawn up on paper and awaits only the word "go" from Governor James H. Price, who holds the purse-strings on the conditional appropriation of \$150,000 for radio and \$88,000 for the teletype system made by the last General Assembly.

That was the situation presented at the recent convention of the Virginia Police Executives Association at Hot Springs by Col. Marion S. Battle, director of the State Division of Motor Vehicles.

Speedy Network

The teletype system, Col. Battle said, is designed to establish an accurate, speedy communication network between municipal and state police headquarters which will allow the interchange of all kinds of official information and the plan is so designed that all important towns and cities in the state can come in on the system at a small cost to themselves, part of the extension costs being borne by the state.

The radio broadcasting system, which is designed ultimately to cover the entire state, will establish communication between state police headquarters and patrol cars on the highways so that orders and information can be transmitted to the cars without delay.

Pending a release by Governor Price of the conditional appropriation (conditioned on there being an adequate surplus in the state treasury) of \$44,000 for this year for the teletype network, and of \$150,000 for the radio broadcasting system, the state police plan to make a start on both phases of the communications system.

The radio system will be begun with the construction of three transmitters, of 1,000 watts power, located in the eastern section of the state, since the western portion presents exceedingly difficult problems of broadcasting because of the mountain ranges. The three eastern transmitters have been roughly located, one between Richmond and Petersburg at a proposed state police barracks and headquarters; one near Culpeper to reach the northern part of the state; and the third at Appomattox to reach Southside and Tidewater Virginia.

The transmitters will operate on 1690 kilocycles, and will have a 300-foot tower plus a ground system utilizing over seven miles of wire and covering about 11 acres.

To Equip Truck

In addition to the three transmitters, it is proposed to equip a truck or trailer with a 300 to 500 watt transmitter on the same frequency as the main transmitters, and an antennae which can be set up in a few minutes at any spot. Power will be derived from a generator, operated by the truck motor. The truck can be carried to any spot which is not within perfect reach of the main transmitters, and from it the cars in that area can be directed in an emergency.

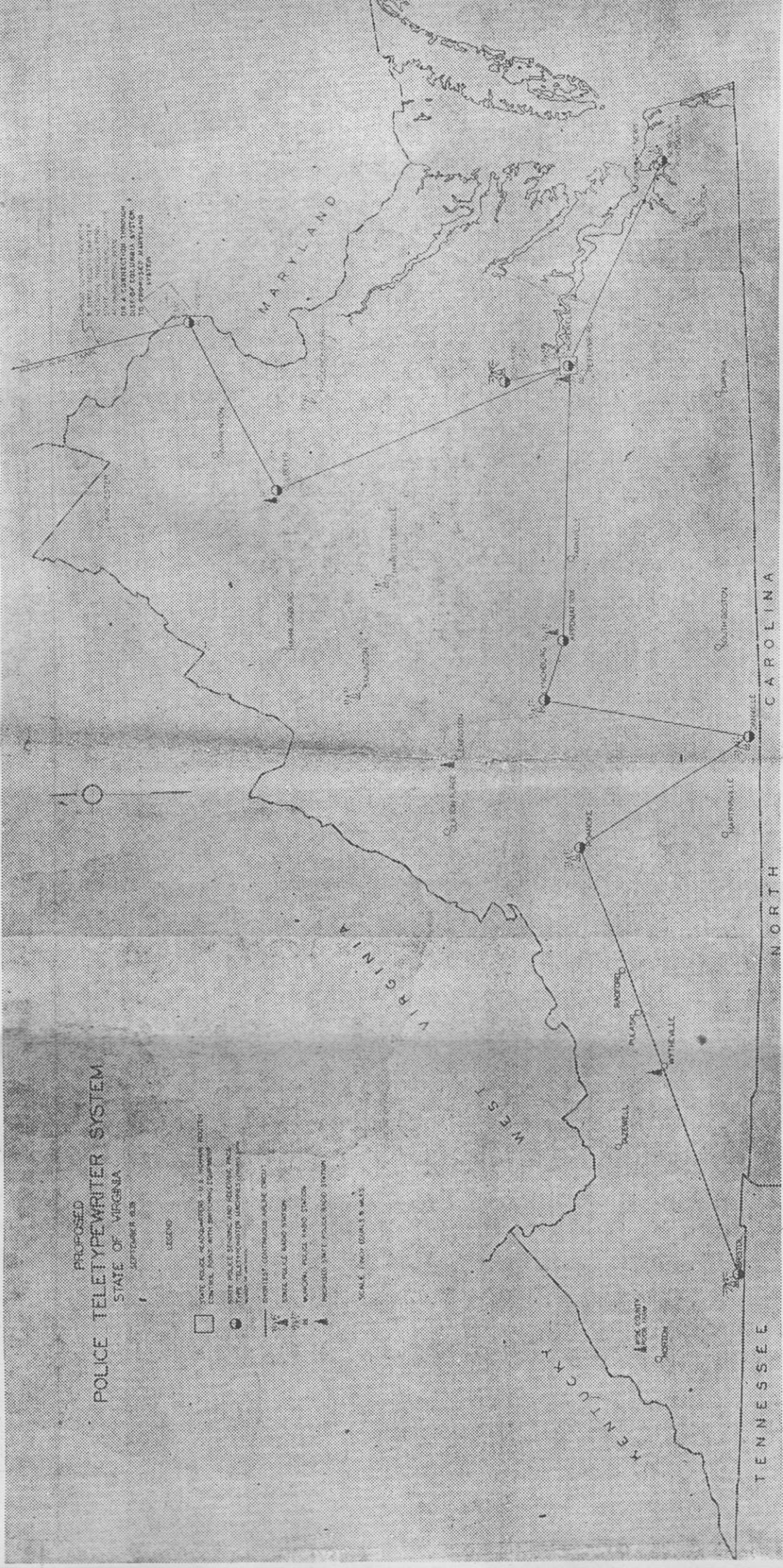
The portable transmitter will also be used, it was said, in making an intensive survey of western and southwestern Virginia to determine the number and location of permanent transmitters necessary to cover the section. It is considered probable that directional antennae will

be used on the transmitters so that the signals can be sent up and down the valleys, since it is not feasible to attempt to broadcast over the mountain ranges.

Another phase of the radio transmission system will be a two-way arrangement between the main transmitters (and the portable transmitter) and the cars of the superintendent of State police and perhaps some other ranking officer may be equipped with ultra-high frequency transmitters which can be received at the main transmitters and the truck.

Thus the superintendent of police can control the entire radio system from his car on the scene in case of an emergency. His messages and orders would be received at the main transmitter nearby or the truck, and relayed to the cars on the lower frequency to which their receivers were tuned.

Combined State Police Teletypewriter and Radio System to Cover Virginia



Pictured above is a reproduction of a map showing the proposed State Police communications system on which work will be begun as soon as the conditional appropriation made by the last General Assembly is released by Governor Price. The system will use both radio and teletypewriter; the dark lines on the map indicate the basic teletypewriter system, and the six dark towers near Petersburg, Culpeper, Appomattox, Lexington, Wytheville, and Norton indicate radio transmitter stations to be installed. The transmitter stations, designated to broadcast messages to State police cars, will supplement the teletypewriter system which will connect state and municipal police headquarters for two-way sending of messages. The transmitters in the eastern part of the state—near Petersburg, Culpeper, and Appomattox—are more or less definitely lo-

cated and will be constructed as soon as funds are available. Those in the western part are tentative, will probably be relocated with the strong possibility that more will be added, since the mountains interfere with proper coverage. The basic teletypewriter system, as can be seen, will radiate from a central switchboard in the state police headquarters between Richmond and Petersburg, one line going to Alexandria and the other connecting with Harrisburg, Pa., and an eight-state teletypewriter network; a second line going to Norfolk and the third line going to Bristol via Appomattox, Lynchburg, Danville, Roanoke, Radford, Pulaski, Wytheville. Other cities can be joined to the system at any time.

The range of the ultra-high frequency transmitters is only 10 to 15 miles, so their use in direct communication between the car of the superintendent and those of the patrolmen is not feasible. They are, however, used to establish two-way communication in some city police systems.

Costs \$26,000 Yearly

The basic teletype system, which it is proposed to establish immediately upon release of the funds, will cost the State about \$26,000 a year, chiefly for rental of wires and teletypewriters. It will be operated from a central master switchboard at the State police headquarters near Richmond, at or near the location of the radio transmitter there.

From the central switchboard, trunk lines will radiate to Norfolk and the coast region, to Alexandria and the northern portion of the State, and to Bristol via Appomattox, Lynchburg, Danville, Roanoke, and Wytheville. From Alexandria, connection may be made to eight other eastern States with a teletype network connecting 450 city police systems. Further, through this eight-State hook-up, messages can be relayed by radio to many mid-western and western States.

To be of greatest value, the teletype network must extend to every important town and city in the State, and, realizing this, the legislature made provision for municipalities to join the State system, the State paying part of the cost whenever a city is added.

To any municipality, the cost of joining the system is an installation charge of \$15.00, and a monthly rental of \$27.50. To the State, the cost of a city's joining the system is a minimum of \$13.00 a month, plus \$3.00 a month for each mile of wires necessary to add the city to the trunk network.

Not Yet Approached

Contacted last night, Mayor Walter W. Wood, of Roanoke, said he believed the city could be counted upon to take a cooperative attitude toward the system, but he said the

city officials had not been approached so far as he knew.

"If the cost is no more than you mention," he told The Times reporter after hearing the figures quoted above, "I don't think we could afford to be without that service."

Where city police departments cooperate, it was understood the teletypewriters would be placed in the municipal police headquarters, and would be operated by municipal police employees. The machines would be maintained and serviced by the telephone company from whom they are rented, it was said.

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