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Traffic Light Computers Get Green Light

By LEROY WILLIAMS JR.

A sign on the door said "storage."

And inside, amid constant 67-degree temperature, Memphis and Memphis 1 hummed a barely audible electronic tune while displaying their flashing red lights.

If they were mobile and spoke English they might land a bit part in a "Star Wars" spinoff. Instead, they hold their ground and settle for powering the computerized traffic system for which the city has waited several years.

Plans for developing a coordinated traffic system for the central business district and its arterial streets began 10 years ago. But it wasn't until last month that a decade of labor yielded a completed \$3.58-million digital computer system capable of controlling traffic signals at 147 intersections.

Federal grants provided 70 per cent of the funds with the remainder split evenly between the state and the city. Early plans included having the mechanically-run control boxes of 46 lights kept in Nathan Ficklin's office with wires running from there to the individual signals.

For the most part, Memphis, the primary computer, and its backup, Memphis 1, function without human interference. The job of

monitoring and using the information which the computers are capable of generating falls to Ficklin, city traffic engineer, and Rodney Worrell, acting signal system engineer.

"We've really only had it for two weeks. Right now we're mainly keeping it working. We haven't had time to do much studying of it," said Worrell. "But we do have a faster response time with the (signal) controllers coming off line. The public doesn't pick up a two-second timing delay on a light, but it does."

The system gives officials the capability of knowing almost instantly when a traffic signal on the computer system is not synchronized. In some cases officials can make repairs without leaving City Hall.

It is a system, Ficklin said, that should answer and alleviate the often-asked question of citizens, "Why do I keep going from a green light to a red light and have to stop?"

It also should lessen the potentially dangerous situations that occur when fire trucks attempt to cross intersections.

"Fire trucks will be equipped with pulsating strobe lights that send out a signal (detected by a device on overhead traffic poles.) If it sends back a white light to the fire truck, that lets the fireman know he can go

through. If he doesn't get the white light, that means there could be a truck coming in the other direction," he said.

The combination of using fire truck emitters along with the flashing red lights installed in the central business district is unique to Memphis, said Ficklin.

Robert Walker, Fire Department director, said, "We think it is going to work very well. The system we did have turned all the lights red, bottled up all the traffic and got everyone upset, especially on congested streets. We make runs almost every day to the medical center area."

When the fire trucks activate their emitters, a corresponding signal flashes on a computerized street map in Ficklin's office. The map, complete with blinking lights and arrows, allows Ficklin and Worrell to observe traffic patterns in the system area. Operators can solicit information on the number of vehicles in an area per hour, their speed and direction and indicate the information on the map.

In addition to coordinating green lights, the system can control the length of time the lights are on — a function that will prove

especially useful when applied to alleviate traffic congestion which results from large events held downtown.

The system area includes Exchange, Poplar, Madison, Jefferson and Union from Danny Thomas to Hollywood and the central business district between Auction and Vance and Danny Thomas and Riverside.

Although 147 signals are included in the system, it can be expanded to include 300 traffic lights.

However, the expansion can't be made without additional money. Requests to hire someone with the primary function of monitoring and operating the system have been rebuffed.

A shortage of funds may also hamper efforts to effectively evaluate the system later. But Ficklin said he planned to contact state officials about an evaluation.

Meanwhile, Ficklin said the opening of the northern leg of Interstate 240 had significantly reduced traffic on Watkins and Chelsea as well as traffic in the Raleigh-Fraser area and near Bartlett.

There are no statistics yet, but Ficklin said more people are using the section for trips to downtown and the medical center.

[I wrote comment here - on the Scripps Award copy - re Memphis's hardiness in setting up expensive traffic controls - esp. computers]