

ARE OUR SUPERHIGHWAYS OBSOLETE?

By DONALD MacDONALD

PACK UP THE CAR and head for anywhere. Chances are your route soon will take you onto a smooth, new, four-lane divided highway.

Distance melts as you bypass towns, duck under intersecting roads, and flash by slower traffic. Everyone relaxes. Most of the little emergencies, once part of every trip by car, never happen. There are no stop lights, no sharp curves, no steep hills. No one can blunder out of a driveway and into your path.

Problems were engineered out of this road, for it is one stretch of the more than 10,000 miles already completed in our projected 41,000-mile National Interstate Highway System. Not a bad record for only 4½ years, especially so when you add another 14,500 miles currently under construction and still another 11,500 miles surveyed and designed. Almost every city, large or small, will be affected by this network in some way. These statistics make some experts proud, others angry.

"In the past few years we have shown the Amer-

The American

safety, speed, and

ican public that highways can be built which will handle our rising traffic problem," says Bertram D. Tallamy, Federal highway administrator. "The new highways have stimulated industry, business, housing, and recreation, and have raised land values. New industrial parks, new shopping centers, new housing developments, and revitalized central cities are another plus for the program in an expanding economy."

Not so, say other highway authorities; we are strangling ourselves in concrete and asphalt ribbons, they point out. A report by the National Research Council of the National Academy of Sciences claims that the nation's transport system is in a mess. Its conclusion: "The transportation system has grown up so haphazardly, often without full realization of its economic, social, and cultural impact, that it is in need of almost total review."

Who is right? Are we spending hundreds of millions of tax dollars for highways that are as obsolete as the horse and carriage? Or are we building byways that will last as long as the roads of Rome?

Those who take the negative view cite Los Angeles county as an example of our "highway strangulation." This area has by far the biggest

and most highly developed freeway system of any area in the country. Yet last November when a strike of bus and trolley mechanics turned 400,000 additional motorists loose—a number smaller than the projected population growth in the next five years—the system collapsed. "The traffic jam was so monstrous," said an observer, "that if one more car had arrived, we would have had to pave over the stalled autos and start all over again."

The National Research Council points out that the highway problem is not just a matter of private automobiles, but affects all means of transportation. Urban bus service is mushrooming while commuting rail lines are dying on their steel vines; freight carrying is shifting from boxcar to semi-trailer and truck.

What does the Council suggest? Here are some major recommendations:

- Use of more pipelines and belt conveyors to move bulk freight.
- Automatic and crewless trains and subways.
- Developing to a practical reality the high-speed monorail train.
- Automatically controlled highway vehicles.

taxpayer has spent millions for a dream — motoring on roads that offer

comfort; instead, he may have invested in a traffic nightmare

—Automobiles that ride on a cushion of air over both paved and unpaved roads, rough terrain, and water.

These devices already exist, but actual production is slowed by staggering financial problems, resistance to automation, and the fact that transportation policies at the Federal level are divided among 30 agencies.

Obviously, highway-using citizens won't benefit much in the next decade or so from any of these "egghead" proposals. And by then, highways being built today will handle a third again as many cars and trucks as the 72 million now in use!

Among the authorities who believe we are headed in the right direction in our highway-building program is John C. Mackie, Michigan highway commissioner. Mackie has a warehouseful of statistics and an electronic computer to sort them out. He concludes:

"The highways we are building now for the National Interstate Highway System will never be obsolete, and we have projected traffic volume into the 1980s, based on a comprehensive study of land-use patterns and population growth."

These highways, which Mackie and other experts

believe will carry mobile America for years to come, call for a 300-foot-wide right-of-way. This leaves plenty of room for four 12-foot-wide traffic lanes in each direction, the optimum number for safety and speed. These lanes can handle 1,500 vehicles an hour compared with less than 400 on the old two-lane roads.

Safety records bear out the efficiency of our present system. There has been a 70-percent reduction in accidents on these highways, along with decreased travel time and easier driving conditions. Police records indicate that 10 lives will be saved annually for each 100 miles of superhighway in service—which means 1,000 motorists will miss a date with death this year alone.

The new highways have been designed to build community business, too—in both big and small communities. Unlike some older toll roads, the interstate system is not designed to go straight from one major city to another. Instead, the routings serve as many cities as possible—certainly each one with a population of 100,000 or more.

Experience has shown that an area's economy grows in direct proportion to its accessibility. This

message would automatically come in anyway. The device could warn of countless highway dangers that lay ahead, whether of temporary or permanent nature. Cost would be relatively nominal for both car owner and highway department.

More forward-looking is research into simplified car controls, which lead, in turn, to a car that could be controlled automatically from periodically spaced centers, much as military missiles are now.

We already have prototype vehicles that can be driven easily without benefit of steering wheel, brake, or gas pedal. The driver uses only a single, airplane-like control. Forward pressure accelerates the car; pulling back the control brakes it; and movement to either side steers it. Test personnel say that 15 minutes' experience makes an expert of the average driver. The control, however, is still complicated and bulky.

Other devices in the prototype stage include a signal wire imbedded on either side of a highway that would actuate a light or buzzer in the car to warn you if you strayed off course, and radar-actuated braking devices that would take over if you approached an obstruction. One trouble with

is the first consideration of an industry looking for a new home or expansion. As industry develops along the highway, new population is attracted. These people become customers for housing developments, and with that come the shopping and recreational centers. Over a period of time, relatively small cities should be stimulated in growth by the service provided by superhighways.

It's hard to deny that our current highway program is geared for the future. Yet it would be unfair not to consider what are bound to be problems someday. The time eventually will come when we probably will have to do more than just build highways; we may have to automate them for freer flow of traffic and safety. How?

The simplest device, available now but as yet unused, is a low-frequency radio warning device. Haven't you sometimes passed a truck on a freeway just as it obscured the exit sign you were looking for? This gadget is for you!

Transmitters located along the roadside would broadcast a taped message receivable on a slightly altered car radio. If your radio was on, the message would be superimposed over the regular broadcast, regardless of station. If it were turned off, the

latter is that so far, when approaching a curve, it cannot distinguish between a harmless stationary metallic obstruction on the side of the road and a stalled car actually on the highway.

State highway officials are watching the progress of these devices, but they are understandably reluctant at this stage to commit public funds to experimentation. Even the practical radio warning device still requires an expenditure by each car owner—something, in the view of these officials, that should not be forced. Therefore, they are unwilling to equip new highways with the necessary imbedded wiring.

Actually, most officials feel our present course in highway construction is adequate, except in and around major cities. In these cases, they feel the answer is more highways, with states and cities bearing a greater share in paying for the limited-access mileage used mostly by local taxpayers.

Next time you find yourself wheeling down one of our superhighways, play the role of "expert" yourself. More than likely you'll agree that our highway system won't be out of date for a long time. Meanwhile, like any expert, you'll find yourself thinking of ways to improve it.