

The Case for Urban Expressways

Long-range planning of adequate highway facilities will save many cities from stagnation and decay.

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THE opposition that has developed in several cities to the construction of expressways and other boldly planned highway improvements is not surprising.

Between 1890 and 1916, when early good-roads advocates and far-sighted civic leaders were campaigning to get the farmer out of the mud with gravel and macadam roads, they were met with apathy and inertia. Most states and communities preferred mud roads to the "luxury" of stone or gravel surfaces that cost \$5,000 or \$6,000 per mile.

From 1916 to 1925, when federal-aid and state systems were being designated and improvement begun, there was again strong opposition. The program was too big and too costly. There was no real need. In the early twenties, a prominent economist actually asserted that the country could not stand the drain that highways would impose on its resources.

During the early period, farmers objected to building roads for city autoists, and the non-owners of automobiles in cities objected because they saw no reason for being taxed for roads for farmers. These arguments subsided as our states and their subdivisions eventually decided that they could not live and prosper without improvement of rural roads.

It seems that history is to repeat itself about express highways for our cities. A number of our cities are debating an important question: "Shall we build highways which will enable traffic to move into and through the city quickly and safely, or shall we try to get along with things as they are?"

The decision they reach will have a far-reaching effect upon business and industrial expansion during the next ten years.

Traffic congestion on main rural highways and city streets was a serious problem long before the war. It had become so serious, in fact, that President Franklin D. Roosevelt appointed

the National Interregional Highway Committee to study conditions and to suggest a solution.

In its report to the President in 1944, the committee recommended, among other improvements, the development of an interstate highway system consisting of modern highways which would connect principal cities and industrial centers throughout the country, and the construction of multiple-lane, controlled-access expressways in both urban and rural areas where the volume of traffic justified this type of highway.

The Interregional Highway Committee's recommendations were widely approved by state highway officials and municipal authorities. Legislation giving effect to the recommendations was included in the Federal Aid Highway Act of 1944.

Traffic Increases

However, traffic has increased much faster than we had expected. Late in 1946, the load on our major highways exceeded the records for 1941, the previous peak year, despite the fact that approximately 1,800,000 fewer cars were in operation. A few months after the end of the war, traffic reached a volume that had not been anticipated for at least five years.

Traffic generally tends to avoid congestion if it is at all possible to do so. Cities that ignore this obvious fact and refuse to modernize their arterial routes will pay a heavy price in loss of business and depreciation of property values in central business districts.

One of the most important purposes of the current highway program is to unsnarl urban traffic tangles as quickly as possible by providing facilities commensurate with traffic requirements. This purpose will be defeated if city officials and other local authorities spend years in debating whether the need for an expressway through the city warrants the cost, or whether this thoroughfare or that thoroughfare should be developed as a controlled-access highway.

Objections raised by opponents of expressway plans are based upon the contention that (1) the width of the right-of-way required for an expressway necessitates razing a large number of dwellings at a time when the city is

in the throes of an acute housing shortage; (2) depressed sections of the expressway would be "big ditches" which, in effect, would disrupt the customary activities of the community by creating a barrier between neighborhoods, and (3) it would be less costly to widen streets which, if moderately improved, would serve present traffic needs. The loudest objection is that express highways cost too much.

These objections can readily be answered by anyone who is familiar with expressway design and has had an opportunity to study the service value of controlled-access highways built before the war, such as the expressways in and around New York, the Merritt Parkway in Connecticut, the Davison Expressway in Detroit, Chicago's Lake Shore Drive, and the Arroyo Seco Freeway out of Los Angeles.

Admittedly, an expressway through a densely populated area does involve razing numerous buildings, including many dwellings. In most instances, routes selected for expressways, as they approach the center of the city, pass through "blighted" sections where property values are low, and most of the buildings are of the type that should be torn down in any case, to rid the city of its slums.

Housing First

On the other hand, *no matter how urgently a highway improvement may be needed, the homes of people who have nowhere to go should not be destroyed.* Before dwellings are razed, new housing facilities should be provided for the dispossessed occupants. This question of housing should be accepted as one of the major planning problems when a city decides that it needs and wants an expressway.

It is not true that depressed expressways are "big ditches" or barriers between neighborhoods. Overpasses at selected street intersections are a salient feature of expressway design. These overpasses, by separating through traffic from local cross movement and eliminating the need for stop-lights, tend to speed up the movement of local traffic on cross-streets, and thus increase the ease of communication and business interchange between adjacent neighborhoods.

As to the contention that express-

ways are too costly, and that it would be cheaper to widen existing thoroughfares, there is much that could be said in rebuttal.

Widening streets in central business districts where property values are high is expensive and usually is not practicable. At best, this plan is merely an expedient which may lessen traffic congestion temporarily, but it does not strike at the root of our troubles — the traffic conflicts at street intersections and with parking vehicles.

Traffic Counts

Actual counts of traffic on express highways and on city streets when being used at or near full capacity show remarkable differences. A 12-foot traffic lane of an express highway will accommodate 1,500 vehicles per hour, and a speed of 35 miles per hour is possible. Under particularly favorable conditions as many as 2,000 vehicles per hour may be accommodated. Counts have been made on a large number of city streets. On 35% of them the capacity was between 300 and 400 vehicles per hour of green light per 10-foot traffic lane. When traffic lights were set 50-50, not more than 200 vehicles passed over each lane each hour. For 67% of the streets the capacity did not exceed 500 vehicles per lane per hour of green light, or 215 vehicles per hour of actual time. The maximum traffic flow on a city street where all possible measures had been taken to increase the flow was 1,400 vehicles per lane per hour of green light, or 600 vehicles per hour of actual time. Few examples of this kind were found.

The service efficiency of a traffic lane on an express highway is from eight to ten times that of a traffic lane on ordinary city streets. This statement relates only to numbers of vehicles ac-

commodated and does not take into account savings in time and operation costs. Traffic studies and construction costs indicate that it will be far more economical to build expressways for large traffic volumes than to try to serve a growing traffic through street widening or other expedients.

Expressways located on routes which skirt the business district, with proper provision for the distribution of traffic, serve a dual purpose. They enable traffic bound for the central business districts to reach its destination quickly, without interference from cross traffic. At the same time, traffic headed toward some other section of the city or a destination beyond the city is removed from downtown streets. This in itself affords a large measure of relief from traffic congestion in the business district.

In several cities people are saying, "We simply cannot afford the cost of executing the plans that have been drawn." Many of them cannot afford the cost of carrying out the entire plan in five or ten years or even longer. This should not prevent them from making a beginning on the only course that will avoid traffic stagnation in the future. The growth and development of the city will then be according to the pattern of main routes that has been decided upon.

An examination of payments by motorists in order to own a car and travel on the highways, and the portion actually going for highway improvements, suggests that it would be good business for them to pay somewhat more for better highway service. The average motorist travels about 9,000 miles a year and the cost of owning a car, keeping it in repair, and buying license tags and fuel, amounts to about \$350 annually. If he carries insurance and uses a garage, the cost may be \$90

to \$100 higher. On the average he pays about \$24 in gasoline taxes and \$16 for registration. Of these payments, only \$30 is assigned for highways. Nine per cent of the \$350 expenditure for highway travel, or 7% of a \$450 expenditure, is for a road surface on which to travel.

Payments for the vehicle and for the surface on which to use it seem out of proportion. An increase in the contribution for highways would certainly result in reductions in expenditures for gasoline, tires, and repairs. The greater safety of divided highways, free of cross traffic, would save large losses from accidents. The value of the saving in time of highway user and lessening of tension in driving is difficult to estimate, but it would certainly be large.

Considering these various factors and the value of safe and rapid transport to business, the question for our larger cities to consider is not can they afford express highways, but how can they possibly afford to be without them.

When we plan major highway improvements, we should think in terms of roads that will serve the public ten and twenty years from now. These roads, developed with vision, will do much to stop the decay of our cities at their centers and prevent the attendant decrease in property values. They will help to check the accelerated growth of blighted areas, which are the product of traffic congestion, lack of planned land use, and the failure to create attractive opportunities for the investment of private capital.

The redevelopment of our urban areas is a whole book within itself, and highway planning is one of the most important chapters. What is or is not done will affect every property owner in concentrated population and industrial centers.

Right: Design for depressed section of proposed John C. Lodge Expressway in Detroit, showing parallel service roads at grade for local traffic and bridges at intersections for cross-traffic.

Below: Sketch showing the general features of a desirable design for a depressed express highway in a city.

