

Limited Access Thoroughfares in the Community Plan

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As a preface to this discussion of limited access expressways, bypasses, and toll roads and for the purpose of providing a suitable background for these subjects, I wish to quote a forceful statement made several months ago before the Detroit Economic Club by Robert Moses. As you know he is the nation's "Mr. Parkways", New York City's and State's quarter-century incumbent of highway planning and administrative jobs, and the winner of the recent General Motors award for his presentation of the best essay on "How to Plan and Pay for Safe, Adequate Highways". On this occasion, commenting on the Detroit expressway development, Mr. Moses said:

"The current nationwide defeatist attitude toward urban street congestion is getting pathological. It will last and get worse until people generally get into the mood to let someone lift them out of their misery. There is no city traffic problem which cannot be largely solved, except at extraordinary peak hours, by simply giving adequate power and undeviating support to one official with guts, allowing him two years to do it and keeping the yapping critics, selfish interests and trembling politicians off his neck during this interval. Above all, it will be essential to ward off those outwardly virtuous citizens, the whited sepulchers, who heartily endorse the principle but object to its application.

"Certainly the remedies will be drastic and there will be loud cries for the head of the martyr who undertakes this chore. Palliatives, compromises and inoffensive tricks simply won't work. This is no job for diplomatic protocol boys."

It looks as if Moses laid down the law again! But those of us who remember the unsuccessful efforts to promote an expressway system in Fort Wayne several years ago are inclined to slant this philosophy in the direction of cities much smaller than those of which Mr. Moses was speaking so specifically.

Among the most permanent elements in the entire structure of our municipal developments are a city's streets. Once established by

plating, improvement and use, the street becomes almost hallowed ground to those persons owning more than several inches of real estate abutting it. Add to their "inviolable" interests the utilities and the city departments whose facilities have at some time or other been buried under the street pavements and we can then realize the obstacles to any major street revision program.

Once the utilities have been established and the abutting lots have been improved, physical changes to the street, such as widening, relocation, elevation or depression, become difficult and costly. Traffic adjustments—such as one-way systems, parking restrictions, and channelizations—are subjects of bitter arguments. But these are the short term remedies with which we are usually forced to work, because the rebuilding of an entire street system—even in the smallest community—would be unheard of.

In spite of the obstacles, in spite of the critics, in spite of anything, changes in street systems do occur. Most of them happen within the framework of the existing streets but once in a while a new street is opened, or an old one is closed, or a street is converted to pedestrian use only. Circumferential routes are planned and built. Major interstate toll roads are sweeping the country and in general, the public is becoming more and more transportation conscious.

In the interest of public expediency, it should be our aim that each of the changes that occur within our own communities should be *permanent* and should be so well planned as to cover every situation humanly possible to predict.

How can the community insure this? They can do it only by the preparation and continued reappraisal of a major street plan and by religious adherence to it.

THE THOROUGHFARE PLAN

As an element of the community Comprehensive Plan, the Thoroughfare Plan (or Major Street Plan) is the responsibility of the local planning commission. The Planning Commission, after gathering its local experts and engaging the services of several visiting experts, if they are so fortunate, assembles as many pertinent facts and figures as it can, and upon the basis of those statistics and its own tempered optimism, the commission itemizes the existing facilities, the present needs and the future necessities of the community's street network. The situation maps are then prepared, justifications are written and there you have it: the Comprehensive Thoroughfare Plan.

Simple, isn't it!

I don't mean this to sound asinine! Far from it! The procedure outlined is the exact pathway to be followed in the preparation of a sound development plan for a city's streets. The outline was merely over-simplified. Each of these steps requires a lot of careful work and the resultant will be a serviceable plan, worthy of careful adherence, and periodic reappraisal to stave off obsolescence.

The Thoroughfare Plan will generally depict only the needs of major street networks of the city. It will show the present and future arterial streets, those of regional importance and the general highway traffic streets. It will also show the major access and connecting streets, those serving various sections of the city and feeding the arterials.

Careful economic and engineering research must precede the formulation of a thoroughfare plan. This is to be emphasized. The facts assembled will afford the kind of ammunition needed to present the facts to the public and to enable the officials to develop a rational long-range program.

Specifically, consideration must be given to the location of existing highway facilities—their inadequacies, bottlenecks, incidence of poor alignment, steep grades, grade crossings, and other conditions interfering with the orderly and safe flow of traffic. Consideration must be given to the adequacy of services rendered by non-highway streets—service to residential areas, principal shopping centers and major industrial concentrations. Present traffic volumes and the desired lines of traffic should be ascertained and after comparing the present day facts and figures with similar data assembled in past years, predictions of future traffic volume and directions may be scientifically developed. Such predictions should be weighted on the bold side if they are to mean anything. We have a word for such margins: the Factor of Safety. Since traffic predictions have a habit of falling short, we can logically use a factor of optimism in planning future works. Ten years ago there were few planners predicting the traffic increases that have since become the major problems of our cities.

Traffic volume and flow, present and predicted, may be translated by reference to land use plans. These are perhaps the most dependable sources of information regarding long range requirements for traffic. The land use plan shows where the residential centers of the future will be, it also should show the areas of future industrial development.

When the diagnosis is reached there should be no doubt of the remedy needed. Future traffic needs may be planned for in advance; the plans should be developed to keep pace with need.

After the plan has been prepared in a comprehensive manner it should be a constant source of reference for those officials charged with responsibility for the community's development.

Once a plan of this nature is developed, the city administration has scientific evidence for determining priority of individual projects. It can relate the individual projects to the plan and from that point on, a different viewpoint will be evident for such every-day problems as street paving, bridge building, subdivision approval, traffic control and safety, widening of streets and off street parking. Major works, such as the setting up of limited access road plans and effectuating them, will, of course, be worked out in detail using all the research facilities available to determine their justification and necessity.

PLANNING FOR LIMITED ACCESS

After skirting, and flanking the subject, it would now seem logical to become as specific as possible in the discussion of planning for limited access. The prefacing statements relative to the comprehensive plan pertain just as directly to the research, planning and development of limited access ways as they do to that of any other type of unlimited access streets. This is the field, however, in which the planner had better be right. Here's where the money will be spent in quadrimultiples of other street development work if expressways are built.

Limited access routes have utility only in their ability to move many vehicles across busy cross-traffic ways in as short a time and as safely as possible. Why is this desirable? Are we dabbling in luxuries when we consider this type of development? Or are they necessities? How can they be justified? What are their advantages?

There are several major reasons for limited access thoroughfares. Briefly they are as follows:

1. *To relieve congestion.* They must be a part of a comprehensive plan. If the plan is not comprehensive, it might correct a bad traffic situation at one point only to aggravate it at another point. Remember that one lane of an expressway can deliver so much traffic that three or more lanes of regular city streets are kept busy absorbing it. An overall plan takes cognizance of the fact that all portions of the city have traffic problems and that relief for any one section requires not only correction there but a study of its effect upon other sections. Our movements within a city are bound up inseparably with the goings and comings of every other citizen in our community. We must take this into consideration and make certain that our efforts to relieve congestion with limited access thoroughfares meet the traffic problem squarely and are comprehensive in scope and character.

2. *To save time and expense.* Traffic congestion is expensive. Trucks which would otherwise be about their business are delayed in traffic jams. Large truck fleet owners could, for example, do business with less equipment if their vehicles were constantly on the move making pickups and deliveries. Economic surveys have revealed that the establishment of freeways in most cities where they are in existence has reduced travel time by as much as 50%. Applying nationally accepted figures for time savings of 2 cents per minute for automobiles and 5 cents per minute for commercial vehicles it has been estimated that where the 50% time saving is obtained—and the traffic is sufficient—that the value of time savings will amortize the cost of most expressways in a period of 5 to 10 years.

3. *To reduce accidents.* Many traffic accidents are due to poor street design such as sharp curves, steep grades, poor visibility, narrow pavements and intersections. Most of these accident generators are removed from the design of the limited access thoroughfare. The savings accruing in lives and equipment can be measured only in the improved safety records of a community after the limited access facility has been in operation for some time. Comparisons of accidents and lives lost, before and after, usually show a marked reduction after the expressway is operating.

4. *To get the most from present and future expenditures.* Since each major street improvement, including the limited access facility, should be a part of an overall pattern to improve the land values of the community as well as to do the right thing in the improvement of the traffic situation, the street improvement program should be coordinated, when possible, with the community redevelopment program. The needed right-of-way expansions that will be a necessary part of an expressway program should be made in areas where the removal of structures lining existing facilities would do the least damage to the community and where it would, in fact, improve the general economic status and tax base of the city. Abutting properties to future expressways will be used extensively for industrial and manufacturing purposes and for wholesale business because of the accessibility provided. The site of the expressway should be selected with a view toward the enhancement of those property values. The values of some slum areas could easily be increased by 10 or 20 times by the location of a free-way facility.

A recent survey conducted by the Texas Highway Department of the areas through which the Gulf Freeway of Houston passed has revealed that property values within the zone of influence of the Freeway have increased 65 per cent more than the increase generally noted for

other properties throughout the city of Houston. This increase in property values in the zone of influence of the Freeway would be sufficient when placed on the tax rolls to retire the right-of-way cost of the Freeway in nine years. Other cities could look for similar accruals of benefit.

Another consideration that is important and which may have a larger part in the planning of such facilities is one that has recently become a practice in major redevelopment projects over the country, excess condemnation. Many of these redevelopment agencies have found that their projects can be amortized more readily if the public becomes the beneficiary of the value increase of properties abutting the redevelopment area. Until recently, redevelopment agencies acquired only the properties within their own project boundaries and allowed the owners of abutting properties to reap the tremendous benefits of increased value at the expense of the city. Several agencies have now adopted the policy of acquiring additional ground in the area of influence and have been able to substantially reduce the final cost to the public of redevelopment by profiting from the sale of marginal properties after the redevelopment has been completed. Although these methods may be controversial, they may be utilized with considerable justification in expressway development where the cost of acquiring one-half a lot may in some cases exceed the purchase of the entire property. Situations of this nature are often encountered in the purchase of right-of-way.

5. *To reduce the decentralization of central business districts.* This is a problematical value. Expressways make it just as simple for people to travel out to the suburban shopping centers as it is for them to travel in to the downtown business district. However, we are firm in our belief that the owners of downtown property are able to take advantage of the added convenience of the expressway to hold their own against decentralization. Correlated with the establishment of expressways to make the downtown areas more accessible must be effective measures to increase the ease of movement and the improvement of parking facilities in the downtown area.

6. *To provide emergency facilities for civil evacuation.* Although cities have been reluctant to undertake major projects of this nature for the sole purpose of civil defense, this of course would be an added feature to which consideration should be given in the planning of the expressway. This is an important role that should not be minimized.

Although most of the limited access thoroughfares would naturally be a part of the regional traffic scheme, falling naturally in the realm of the state highway planners, there are a few instances in which the community itself would realize the major benefits from a limited access facility. One such example would be the highway connecting the down-

town area with the airport. Few cities have airport facilities accessible without a long drive into the suburban area. In order to realize the greatest benefit from air travel, the passenger must be able to save time. This he cannot do when he loses as much time traveling to and from the airport as he saves by traveling by air between cities. Direct expressway routes from airports to business sections are therefore greatly to be desired and should be planned for if the city expects to hold its own in the coming development of air transport.

In addition to planning the expressway for the movement of private and commercial vehicles, the utility of the limited access thoroughfare for the city's mass transit facilities should not be overlooked. Economic feasibility of the expressway is dependent upon the ability of the facility to serve as an artery for mass transit.

Expressways, under present day standards, are generally considered feasible when the potential traffic for such routes approaches 25,000 vehicles per day. Planning for such routes should certainly get underway well in advance of such ultimate congestion.

WHO DOES THE PLANNING?

The question arises: Who does the planning? The city or the state?

A comment was made previously regarding the incidence of such heavily traveled routes, most of them located in cities and fed by regional highways. The natural reaction therefore would be that the state should initiate and develop the plans for the improvement and transition of expressways. The state, of course, is interested, but its limitations are apparent. Its interests are spread rather thin, just like its financial means. The state's gasoline taxes are not calibrated to the expressway development problem. There are in Indiana perhaps a dozen city routes that could easily be justified for expressway development. Just a small beginning has been made; few of these beginnings can be placed properly within the classification of planned expressways.

The community plan commission is in a unique position whereby it can spark the development of expressways where they are needed but it can also by application of its plans assure the acquisition of rights-of-way for those facilities at the most economical level possible by reserving ground in the areas through which the routes will pass. Local planning should of course be coordinated closely with the state highway department. Such cooperation is not only welcomed, but is absolutely needed. Here is a field of endeavor in which the highway commission needs an expression of local desire and assurance of official local cooperation to avoid the common criticism that local policies are

being made by state agencies without local consultation.

States are usually credited for doing a better job of building highways than of solving the metropolitan governmental problems which the highways produce. This criticism is usually unwarranted because too often there is no local agency willing, or qualified, to cooperate with the state department.

BY-PASSES AND TOLL ROADS

Other limited access facilities, which have been mentioned only in passing but which have a major impact upon community planning are highway by-passes and regional toll roads.

By-passes have been built around Indiana cities and towns in the past with little regard to the restriction of access. The last session of the General Assembly has placed a nominal restriction upon the construction of future by-passes, requiring that all of them be declared limited access-ways. The job of defining the term seems to have been left to the State Highway Commission. How limited is limited-access to be? We hope that the law will provide the commission with sufficient means to preserve the utility of future by-passes that are built.

Direct access to by-passes is not an essential to the businesses and industries that are often attracted to the locations along such facilities. In fact, where such access is permitted the sites soon lose their original desirability. Shopping centers, with access to secondary roads but adjacent to the by-pass, are much more desirable than are string developments along the road. Protective restrictions, if they are not provided by the state highway commission—which by the way has no jurisdiction over land use beyond the rights-of-way—should be carefully provided by the local planning commission. Modern zoning ordinances have recognized the responsibilities of local government in the preservation of the by-pass' utility. Although few ordinances have restricted access from individual residential properties, a number of the latest ordinances are requiring the location of businesses in developments with common entries to the by-pass facility, or to the side road connecting to the by-pass.

The experiences of local planning commissions which have had toll roads placed in their jurisdictional laps are just now taking form here in Indiana. Unfortunately, no provisions were placed in the enabling statutes of the Toll Road Commission requiring consultation with local agencies preparatory to the site selection of such facilities through the communities involved. The resultant confusion and major problems inherited by the communities will not be fully apparent until the roads are in operation. In the meantime, cities and counties along

the routes and within the zone of influence of the toll roads, should take stock of their inherited liabilities and assets and be prepared to develop the assets accruing to them as well as to neutralize the liabilities.

Communities along the routes of these toll roads may anticipate lighter traffic demands on roads parallel to the toll road. The feeder roads, leading up to the interchanges will however be swamped with traffic unless relief routes are prepared to take some of the volume. City streets over which this feeder traffic will travel will necessarily be reappraised in light of the traffic that will flow over them—traffic not anticipated when the thoroughfare plans of those cities were originally devised. Demands for readjustment of land use regulations will be fast and furious with the advent of industries and service installations depending upon the toll road for quick access to markets and supply. Motels, service stations, shopping centers and restaurants will be in fierce competition for land at the several interchanges along the routes of the toll roads. Resort areas will in some situations be brought several hours closer to metropolitan centers. These areas will develop rapidly because of easier access to the population centers, such as Chicago, Toledo, Indianapolis, Cincinnati, Louisville, and St. Louis.

In general, the experiences of the first toll road location should govern to a great extent the future policies of the Toll Road Commission in the selection of sites for future facilities. One of the lessons learned must certainly have been the need for better relations with the communities affected most by the location of the facility. Local planning considerations should be respected in future developments.

In conclusion, I should like to refer once more to a comment by Mr. Moses, this time in his proposal that won the General Motors' award. These are his remarks:

"It would be pleasant if these problems could be solved by some inventor working in an obscure laboratory or office, working with an entirely new formula, recipe, or sleight-of-hand device or alchemy, to be immediately recognized by experts and instantly accepted by the public. However, democracy as we practice it, is a tedious and irritating business. Therefore, nothing much will come from wishful thinking and over-simplification. It is more likely that the answer for the next decade at least will be a concerted, unremitting attack on established, orthodox lines."