

Proposed Interregional Highway System as it Affects Cities.

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Thos. H. MacDonald
Commissioner of Public Roads

The structure which lies hidden within the mind of the architect is disclosed only after a mason has used his trowel and his stone cutting tools. The same artisan and the same tools may bring into physical existence a loft building without a line of architectural beauty, a suburban cottage open to the sun with its promise of gracious living or a world famous cathedral, ageless save for the savage destruction of war.

These buildings in their completed form, varying functionally and architecturally between such extremes, do not invite attention to the tools that were used in the actual building operations. They reflect faithfully the relative abilities of the architects who conceived them while they had as yet only an imagined existence.

So the interregional system of highways has potentials for beneficial effects upon urban areas beyond any tools that have as yet been devised if the use is designed and directed by superior intelligence. But the same tool may be used to produce disappointing, if not actually bad, effects.

Aristotle, the Greek philosopher, conceived of a city "not for the purpose of men's merely living together but for their living as

men ought." To the Greeks, a city was not merely an agglomeration of buildings, but an association of men with common habits, needs and interests. By united effort, they endeavored to create for themselves acceptable and convenient surroundings for life. Long before the war added its many difficulties, American cities were plagued by traffic congestion, sectional decadence of property values, blight, menacing tax delinquency, inadequate public transport facilities, growing deficits between costs of city government and revenues, high tax rates and a loss of confidence of investment capital in desirable housing ventures. This is a long but by no means a complete list of city ills toward the solution of which only limited, and in many urban areas no substantial progress is being made. Today's total of savings and trust funds invested in city property mortgages which could not be liquidated by the total proceeds from the sale of the property itself, is of dimensions sufficient to cause nightmares both for bankers and for those whose savings are thus placed in jeopardy.

There is nothing new in this incomplete inventory of urban problems. They have long been recognized by public officials and by students of urban conditions. In addition to the efforts to improve the long established routines of city administration, there has gradually come into use, in varying degrees, two additional tools with which to meet certain of the city problems. These are first, zoning, and second, city planning. Neither of these is adequate. In fact it is a serious question if zoning has

not contributed materially, as it has been operated, to one of the most serious city problems, that of the blighted areas contiguous to the very heart of the city. There are two major reasons why planning bodies have failed to secure strict and adequate adherence to their conception of a city master plan. Planning bodies, as a rule, have not been made up of the officials of city government who are responsible for the actual construction of the projects involved through the expenditure of public funds. This principle of government at any level is capable of a lengthy exposition, but it will surely be accepted that the man whose official position and public reputation are dependent upon his own performance of legally imposed responsibilities, must have an important part in planning the program of his use of public funds. The principle of constituting the planning body largely from the officials who have the legal responsibility and authority to carry the various elements of the adopted plan into effect, also carries the implication that a competent technical staff and experienced consultants should be established as a continuing unit of city government. Until city planning becomes a legally established tool for the determination of administrative policies, it cannot be a dependable remedy for certain city ills.

Zoning and planning are only tools for use in shaping and preserving a desirable structure for the city. Both are inadequate for many more reasons than those mentioned. The actual development of the metropolitan area sections of the interregional highway system, with the coordinated additional expressways, if located and designed in harmony with present needs, and an intelligent conception of the city of one and two decades in

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the future, have inherently a compelling force not present in either zoning as practiced or theoretical planning. The development of the system is a tool of high potential value to secure a more desirable city and, in common with all tools, depends for the actual results upon the soundness of the conception which determines the scope of its use.

The genesis of the proposed interregional highway system arises out of two inter-related characteristics. One is the pattern of population and the industrial, commercial, residential and cultural concentration in cities and metropolitan areas. Today, it is estimated that more than 70 per cent of the people in the United States live in urban and suburban areas. Two-thirds of these live in 140 larger metropolitan areas delineated by the Federal Census.

The other is the dominant short trip use of the motor vehicle. The cities and metropolitan areas of the country include the origin and destination of much the greater part of the heavy flow of traffic that moves over the Nation's highways. Of all travel that uses the rural highways for any portion of the trip, more than ninety per cent of the number of trips is less than thirty miles in length. If, to this, is added the number of even shorter trips made wholly within urban limits, the preponderant pattern of motor vehicle use for short trips, broken by long hours of idle parking within metropolitan areas, is vividly defined and the traffic problems this pattern reflects are common to every metropolitan area in the country. Only a few have made any real progress in providing adequate highway facilities designed to prevent a further growth in existing problems.

The interregional system of highways and ancillary motorways intended to serve the modern city, must be designed to meet the needs of the whole metropolitan area. The U. S. Bureau of Census defines a metropolitan district as not a political unit but rather a region that includes all of the thickly settled territory in and around a city or group of cities---a composite of the central city and its satellite suburban communities. It is a more or less integrated area with common economic, social, and often, administrative interests. In each metropolitan area there are large numbers of governmental units, upon which are superimposed additional administrative units, each having legal authority and responsibility within independent or overlapping subareas, and each possessing a greater or lesser degree of autonomy. There are independent municipalities within the boundaries of some of our largest cities, like Highland Park in the city of Detroit.

The multiplicity of these governmental units in the metropolitan areas is revealed by Census data. In addition to a very large number of overlapping authorities, in 1940 there were 289 incorporated places in the New York metropolitan district, 118 in the Chicago area, 136 in the Pittsburgh metropolitan district, 93 in the Philadelphia region, and 56 in the Los Angeles area. There must be added to these, their overlayers of townships, counties, towns, sanitary and sewer districts, water and utility, even mosquito abatement districts, and literally hosts of others.

This is the core of an impossible area administrative problem in the absence of a legal organizational method to integrate common interests.

The plethora of independent governmental units, each bidding for municipal revenues, legal powers and administrative prestige, within a metropolitan area that is essentially a social and economic entity, is reflected in high costs for community services, in many inefficiencies in the services provided both by the community itself and by corporations, and in many conditions that definitely detract from the contentment and satisfaction of the average American home.

The storm center of the urban problem is the matter of decentralization—the explosion of the city beyond its fixed corporate limits. A series of maps prepared for any city, representing the areas of the city and its environs occupied by structures at successive periods of its history, presents a clear conception of the manner of city growth. One of the most striking revelations of such a time series of maps or explosion diagrams, is the manner in which the growth of cities has extended outward, beyond the corporate limits, in slender fingers, originally along the railroad routes, then following the lines of rapid transit, and more recently, along the main highways entering the city. This is due, in great measure, to the more satisfactory connection of bordering areas with the city proper, made possible by swifter forms of urban and interurban transportation, causing the emergence of the metropolitan district instead of individual cities as the actual areas of urban life. Chicago, Baltimore or Washington, D. C., provide good illustrations.

A similar time series of explosion diagrams prepared for the central business area of any large city, reveals the same trend of growth along the fringes of the central business area as along the periphery of the city itself, and for the same reasons. Long before the motor vehicle became a real factor in urban transportation, commercial and industrial uses in central city areas were pushing their tentacles into and through some of the then best residential neighborhoods, following the lines of transportation.

It is not generally understood how a slight increase in the effective radius of the business area results in the addition of a vast amount of potential business territory. For example, if the original central business area has a radius of one-half mile, say eight short city blocks, the total area of the circle constituting that central area is approximately 503 acres. But if the radius is extended another half-mile, the whole area then becomes 2,011 acres, and the added area 1,508 acres. A second increase of one-half mile results in a total circular area of 4,524 acres or nine times the original amount of land. It is this physical phenomenon of geometric increase in circular area, coupled with the many influences which recently have accelerated the uncontrolled growth of the effective radius of business areas in cities, that has fostered in a major way the present plight of American cities.

The indictment of zoning as a tool to prevent invasion of residential districts by business is well illustrated by Connecticut Avenue in Washington, D. C. Business concerns now line that major avenue, with only

occasional breaks, from downtown near the White House to the District line, running completely through one of the most important and desirable residential areas of the city. But, along the whole distance, only the frontage is used. Except near the center of the city, only rarely is the present business use more than one-half block deep.

While the motor vehicle and the improvement of some city streets and connecting rural highways in the recent past have been decentralizing influences, there are many other organic centrifugal tendencies inherent in residential and commercial activities, - tendencies which had manifested themselves long before the era of the automobile. Modern industrial processes, requiring more ground space than is available at permissible cost within the city, have been, and will continue to be, the cause of a preference for outer locations as industrial sites. Suburban home developments have been made attractive at reasonable cost, supplying a type of environment quite in contrast to the blight of some central city areas. Suburban business centers have followed the clustering of suburban homes. And the inadequate provision of parking and street facilities in downtown areas has accelerated the outward movement of some large commercial establishments, as well as branch and chain stores, into suburban communities. Added to all these, increased centralization of population in urban areas and the modern tempo and dimensions of business and industries, reasonably complete the dynamic forces that have made decentralization of the original city inevitable.

These decentralizing tendencies universally associated with the modern city, have left in their wake blight, decadence, and higher costs for poorer municipal services and, at the same time, are warping the whole city structure. The dispersive tendencies of most centrifugal movements when not controlled result in the waste of public facilities and of urban land. Sporadic urban expansion left largely to the operations of the subdivider creates ribbon developments along the transportation corridors, with large undeveloped interstices between them, greatly increasing the cost and difficulties of providing essential public facilities and services.

The instrument of zoning has reinforced these unbalanced developments by legal sanction. The zoning of land for business, industrial and residential purposes has often established these areas so designated greatly in excess of actual need or reasonable future demand, creating unfounded and illusory property values. For example, in Milwaukee County, Wisconsin, over 90 per cent of lots platted are not being used; 89 per cent in Redford Township (Detroit) Michigan, and 54 per cent in Chicago. Many structures, particularly in and around the hearts of our cities, are neglected, vacancies are high, rents low, and nonconforming uses widespread. While values steadily deteriorate, assessed valuations remain high, resulting in menacing tax delinquency. While recognizing that decentralizing tendencies are inherent in modern processes of commerce and industry, or in the several transportation media, there are few if any students of city structure who foresee any economic or social reasons that justify robbing the historic business center of much of its importance as the location of a large part

of the city's activity. Within the foreseeable future, this area is likely to remain the objective and source of a large part of the daily street and highway traffic. The existing business center can be preserved and assured if it is or becomes truly the city center - if municipal and cultural activities are grouped in functional and artistic fashion; and if its business and commerce are of such a character and quality that they can be supplied only in that city center. To survive, the city center must become economically, socially and functionally the heart of the city.

In this setting, the proposed interregional highway system looms as perhaps the most plausible solution to the transportation deficiencies of the modern urban area. If the cities so determine, the interregional highway system can provide an unparalleled opportunity for rebuilding along functional lines, following rational master plans.

To facilitate the orderly remodeling of the city structure over a period of years, it is urgent that the undertaking begin by the establishment of a metropolitan master plan. Such a community plan will serve to indicate the general lines to be followed for the functional replanning of the city and its metropolitan region. If the plan is given effect, values in decadent areas will be progressively restored and those in the central business district will be preserved by the conversion of all urban land to its best use. Destructive and uneconomic decentralization will be checked and nucleated, rather than linear expansion will be fostered.

In terms of transportation needs, a functional metropolitan plan will provide for both local traffic and through traffic, by express highways

separate and apart from land service streets. Until the era of the motor vehicle, practically all of our highways and streets were utilized largely for access to farms and homes, factories and business establishments, and recreation facilities. These were the land service roads in city and country alike. Today, because of new needs and new conditions of travel, we have learned that some highways must be designed and constructed as through streets and highways that will facilitate the safe movement of large numbers of vehicles with a minimum of interference and loss of time.

Careful inventories of our highway plant, and thorough analyses of the use to which it has been put in recent years, reveal that we lack adequate facilities for uninterrupted traffic in areas of high traffic density, and in cities. The proposed interregional highway system will make initial provision for facilities expressly designed for arterial use in urban areas, with planned additions of other similar arteries, appropriately located in relation to neighborhoods. At the same time, it will provide the occasion for the remodeling of the city - now a more or less amorphous mass - and for converting it into an orderly arrangement of neighborhood cells connected by the arteries.

Provision must be made for terminal and parking facilities as an integral element of the major highway and street plan. This is in keeping with the recent recognition that an over-all service from origin to destination is necessary for the full realization of the speed, economy and convenience of efficient highway and street service.

Of necessity, such a metropolitan area plan must be implemented by adequate legislative and administrative techniques. Every city and metropolitan region must have its own planning body made up of the appropriate officials of the governments and interests in the area. Such a planning group must be legally committed to evolve and support the metropolitan area plan. In addition, whatever devices and funds are necessary to facilitate the assembly of the necessary lands must be supplied. Particularly, cities and metropolitan authorities should be given the right to acquire lands for public purposes, after certain preliminaries designed to protect the property owners have been complied with. With respect to transportation facilities particularly, legal authority for the establishment of limited-access highways--parkways and freeways--should be lodged with the State, the cities and other local units.

If the interregional highway system is to be truly effective for the uses for which it is designed, it must be conceived only after a careful and complete functional study of the city organism. It may then be possible to devise a rational plan of future land use that will assign more or less specific areas to each of the principal classes of use - residential, cultural, business, industrial, etc. Having planned such rational distributions of land use, it may be possible to obtain the public consent necessary to the establishment of legal controls and the machinery that will assure an actual development over a period of years in conformity with the plan. In such case, the city streets, the interregional routes and other express ways, and all other urban facilities would take the forms and locations necessary to serve the intended land uses, and these facilities would be

provided in essential time relationship to the development of the entire plan, and in a manner to bring about its undistorted realization.

But whether or not there is acceptance of a rational course and control of development, the provision of interregional routes will exert a powerful influence in the shaping of future development of the city. This beneficial force should be so applied as to promote a desirable development or, at least, to be consistent with a natural development. If it is so applied the new interregional facilities will speed the development and will grow in usefulness with the passage of time. The force of an unwise location of the facilities may not be sufficiently powerful wholly to prevent a natural or logical future development of the city, but it will at least retard that development and possibly distort it unreasonably. And the facilities created, which, as a matter of course, should be designed for long life, will finally remain as encumbrances to the city's functions and as all too durable reminders of the absence of good planning.

The national system of interregional highways proposed, within the limit of mileage adopted, connects the larger cities and metropolitan areas, directly joining region with region and major city with major city. For this reason, although in miles it represents one per cent of the entire highway and street system it will probably accommodate not less than 20 per cent of the total street and highway traffic. Intensive study has revealed that any other system, either materially larger or smaller than that proposed, would have a lesser average utilization. Accordingly, the system mileage as proposed may be accepted as close to the optimum mileage which will afford the greatest possible service per mile. To start with, a system

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of approximately 34,000 miles has been tentatively designated, of which some 4,500 miles is urban.

Thorough study of the problem indicates that the sections of the recommended system within and in the environs of the larger cities and metropolitan areas are the most important in traffic service and yet the least adequate in their present state of improvement. These routes include those around, as well as those into and through the urban areas. If priority of improvement within the system be determined either by the benefits resulting or the urgency of need, it is to these sections that first attention should be directed.

Our cities are worth preserving. The gradual remodeling of the existing amorphous city structure into neighborhood cells is both logical and natural. The city will always form the vital nucleus serving the essential needs of the metropolitan region. Because the building of highways and streets exerts such a profound influence on urban life, the proposed inter-regional highway system may well constitute the key to the functional rebuilding of our cities. But the cities themselves must recognize that while opportunity is at hand, they must exploit it to the fullest, if they are to survive. Like the Greeks, they must consciously endeavor to create acceptable and convenient surroundings for life.