

TRANSPORTATION AND LAND DEVELOPMENT: SOCIETAL PROBLEMS AND INTERRELATIONS

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This paper touches on some of the more important interrelations of important societal issues and transportation and land development. In the past, better mobility through transportation improvement was viewed primarily as a goal or end in itself and was undertaken quite independently of the likely effects on other goals or issues. Many people now feel, however, that other goals are more important than improved mobility and that future transportation development policies must be integrated and coordinated with them. Better land use, managed growth, environmental improvement, energy at reasonable prices, economic stability, employment, housing, and higher real incomes are some of the important goals in society that transportation should be serving.

•THERE is no doubt that we are now living in a time when profound changes in our society are taking place. These changes will be increasingly felt at all levels—international, national, state, and local. The large and rapid increase in the costs of energy, which is the lifeblood of a modern technological society; the tremendous flow of wealth assets from energy-consuming to energy-exporting nations; food scarcities; worldwide inflation accompanied by growing unemployment; the possibility of rapidly rising prices for some nonenergy resources; the demands for environmental improvement; the growing disenchantment in many communities with unbridled growth; and the intensifying conflict between the rights of the individual and the rights of society in how private land resources are to be used are some of the more important developments that are forcing changes in our way of life.

What are the manifestations of these changes in terms of transportation and land development? How should these changes and their interrelated effects on other social problems and goals be accommodated in our transportation and land use planning decisions? It is impossible, in this paper, to explore all of these issues in depth. Rather, I will touch only on some of what I feel to be the more important interrelations of these issues and transportation and land development.

In the past, transportation planning and transportation development have been undertaken independently of many other goals in society. In other words, transportation improvements have been viewed as goals or ends in themselves. Only in the last few years have highway planners been concerned about the effects of highways on the environment. How many years have transportation planners been concerned about minimizing energy costs? How many highways have been designed to use more efficiently urban and rural land, reduce the costs of urban services delivery, and improve the capability of communities to manage growth? Have highway improvements been designed to help the mobility of the poor, to enable them to find better employment, or to improve their incomes? I could continue with examples, but I think the point has been made. Transportation improvements should never be considered as ends in themselves. They must be viewed only as means to accomplish other goals in society.

I do not wish to imply that highway agencies were solely to blame for this situation. There were no means or procedures established by which the public's nontransportation interests or goals could be considered in highway planning decisions. Moreover, until recently, the public itself was not really concerned about emerging conflicts. But the realization by many people today that some of these other goals in society are of more

importance than improved mobility has created the new situation that Hammer discussed (1). Energy, environmental quality, inflation, unemployment, sprawl, congestion, growth, housing, property taxation are behind an urgent need to reorder our priorities and redefine our goals. The implication, then, for purposes of transportation planning is quite clear. Transportation improvements must be examined in terms of serving other goals in society.

When we recognize that our primary goals are of a nontransportation nature, then we must ask ourselves how transportation improvements, as one of several tools, might help to achieve these other goals. This is a crucial question because it may be that other ways of accomplishing such goals are more efficient and equitable than transportation developments.

Managed growth of urban areas is one goal that transportation should be serving. In the past, however, better highways were often the primary if not the only goal, and land use decisions were left solely to the whim of time and private market considerations. No wonder we have urban sprawl, decaying cities, inefficient community services, and high taxes. Transportation should be planned for as a land use just as any other land use is planned for. Transportation must be in balance with other forms of development and must contribute to the capability of a region to meet the needs of its residents. Development in an area should not exceed the capacity of the infrastructure, of which transportation is but one element, to serve it. This is the essence of a sound land development and managed growth policy.

Much has been written about energy, and there is little more to add. But I see some real benefits emanating from higher energy costs. It is certainly true that low-cost energy is a tremendous stimulant to economic development. It obviously played a most significant role in the growth of our economy. However, there are many aspects to growth, some of which are of more dubious value than others. Growth should not be thought of in terms of a single, 2-ton, 300-hp (1.8-Mg, 225-kW) automobile moving 1 person through urban streets. Residential location decisions in urban areas to a considerable extent are a function of the trade-offs between land costs and transportation costs. Cheap energy coupled with extensive highway development has dictated the settlement patterns of our urban areas in the past 30 years. A recent study (2) estimated that planned housing developments can save local governments millions of dollars in capital costs, produce 20 to 30 percent less air pollution, and result in the use of between 8 and 14 percent less energy.

For some time now energy has been underpriced in our economy. It has not reflected the social costs associated with either its production or consumption. In the long run the oil-exporting countries may be doing us a favor by forcing the price of energy to a level nearer to its real market and social cost.

If higher energy costs result in a more efficient allocation of urban land resources, thus leading to less sprawl and lower unit costs of delivery of community services, this will be good. If higher energy costs improve the ability of various forms of public transit to compete with the private automobile, this also will be good. Interrelated benefits will be less congestion, cleaner air, fewer accidents, and improved accessibility for the poor to employment opportunities. If higher energy costs hasten the day when it is realized that people must come first and the automobile and highway must come second and when our communities realize that they cannot continue forever to prostitute themselves to the needs of motorists, then the benefits from the recent actions of the oil countries will outweigh the losses.

Demand exceeding available supply is one of the main causes of inflation, and to no small extent our current inflation stems from higher prices for energy and food. If, as I have argued, we examine transportation developments in terms of their effects on achieving other goals in society, what can be said about curbing inflation? Reducing energy demand is one way to stem rising costs, and transportation planning and land development can accomplish much here. A recent study (3) showed that urban automobile travel accounted for 63 percent of all energy consumed by automobiles and 34 percent of the total energy consumed in transportation in 1970. Transportation accounted for 53 percent of all petroleum used in the United States in 1970. A policy to reduce urban passenger transportation demand rather than to maximize mobility could contribute

significantly to holding down future energy price rises, and thus inflation.

Because of the relatively high price inelasticity for many food items, it does not take much increase in food output to achieve a lowering of prices. To the extent that preserving our more productive agricultural lands becomes a primary goal in a land use policy that recognizes the subservient nature of transportation development, we will be helping to abate inflation. This will be of particular benefit to low-income groups in urban areas. A maxim worthy to keep in mind is that, if development must take place, and we must recognize that there will be considerable development in the future, it should occur on those areas least important to human survival. Governor McCall of Oregon recently remarked that "gobbling up farmland is gobbling up the future." Our future operations for food production on land are closed as soon as the land is committed to urban uses.

Much of the success of future attempts by communities and regions to manage growth through land use controls will depend on how the courts interpret and redefine property rights. Society has rights in land just as private individuals do. As our population grows, as it continues to concentrate in urban areas, and as our institutions and culture become more complex, the rights of society take on more urgency and meaning. What is the relationship of transportation development in this regard? To the extent that highway development has ignored in the past the consequent land settlement pattern it encourages, it has intensified the conflict between urban and rural interests in the use of land. Property taxation in the rural-urban fringe and the preservation of our better agricultural lands in these areas are manifestations of these conflicts.

If good land use planning is to achieve any modicum of success in directing and managing future growth, then public rights must gain equal status with private rights. But planning is still a disagreeable idea to many people who feel that profiteering at the expense of the community is their God-given right. Transportation planning must be in conjunction with land use planning and land use controls; it must not be conceived and implemented in isolation of them. Otherwise, it will serve to encourage the greed of those who would sacrifice the communities' goals and values for their own selfish gains.

The high degree of issue interrelationships can be well illustrated in the case of environmental quality. Reducing demand for urban passenger transportation through a more efficient use of land can, at the same time, make significant contributions toward rehabilitating urban environments and improving urban living conditions. Reduced noise and air pollutants, less congestion, more open space, and less scenic degradation are some of the environmental benefits that could be achieved from a policy that recognizes that good land use must come first and transportation needs must come second.

Even in the absence of a need to reduce demand for urban passenger movement, a good argument can be made to continue the additional expenditures necessary for transportation-related environmental improvements. Most of our pollution-abatement efforts are well worth their costs in terms of benefits achieved. We fail to realize, largely because of the inadequacy of our national income accounts, that the costs of environmental degradation and pollution are real, not imaginary, and are paid for by everyone, although not equally, of course. Environmental improvements merely shift some of these costs to those who should rightfully bear them. Moreover, the inflationary impact of pollution-abatement expenditures is negligible, as shown by a recent Environmental Protection Agency study. The economic case for environmental expenditures is sound.

One important aspect of this issue of transportation and land development remains to be considered. We must always attempt to determine the incidence of our policy recommendations. Who benefits and who loses? I cannot think of a public action in which trade-offs of some kind are not involved to some degree. It then becomes very important to identify those in society who are apt to gain and those who are apt to lose. When we argue for a policy of managed growth, we must ask, For whom is this managed growth? What implications does managed growth in suburbia have for low-income groups in the city or rural areas? Many people in Appalachia would welcome all the growth they could get. Will managed growth through transportation and land development indirectly result in managing the employment, housing, and income opportunities

of the poor? Is it another de facto segregation policy like much zoning and property taxation?

In our attempts to better the conditions in one area or for one segment of our population, we must not overlook the likely affects that may accrue in other areas or to other groups. Even if these negative impacts appear to be substantial, it does not follow necessarily that abandonment of the first goal is called for. Rather, we should see what can be done to alleviate the negative effects. Higher energy costs may be beneficial in the long run for middle and upper income suburban communities but costly to lower income rural residents. Rather than not choose higher energy prices because of their harmful effects, we should seek ways to improve welfare and income-distribution policies to lower income people.

In the past too little effort has been devoted to examining the effects, interrelationships, and interdependencies of transportation development and land use and the subsequent round of effects of transportation and land use decisions on other problems and issues in society. The variables affecting future developments in transportation and land use are different from those of the past, and the subsequent effects on other problems of society will be different also. It is imperative that future transportation development policies be integrated and coordinated with other goals. Transportation improvement is not an end or a goal in and of itself. Better land use, managed growth, environmental improvement, better health, higher real incomes, better housing, higher employment, and national and regional economic stability are the real goals in society that transportation should be serving.

REFERENCES

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