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ECONOMIC AND SOCIAL IMPACT CONSIDERATIONS IN HIGHWAY PROGRAMS

SIDNEY GOLDSTEIN*

INTRODUCTION

There is a pervasive interest in social matters in the Department of Transportation (DOT) and the Federal Highway Administration (FHWA). There is complete agreement that highway transportation influences communities beyond the immediate rights of way, through its effects on the people in their living, working, leisure, and spending habits, and on their travel. This is clearly evidenced in the description of program objectives of DOT in Table 1.

You will note that FHWA plays a significant role in dealing with various social, economic, aesthetic, and environmental problem areas as they are related to the goals and objectives of DOT and FHWA, namely economic efficiency, environmental impact, safety, and other National interests.

This article will place motor vehicles and highways into an economic perspective and then describe some of the socio-economic concerns in planning and research in connection with highway construction. The discussion of impact analysis will be from the community viewpoint, touching on economic development objectives and urban area impacts. Within the context of describing the FHWA interest in socio-economic matters in recent years, the article will point to particular legislative and administrative responses that have been generated within the highway field.

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DEPARTMENT OF TRANSPORTATION (DOT)
Table I. PROBLEMS AND INTER-RELATIONSHIPS

Basic Problem Areas	Goals and Objectives					Modes				
	Economic Efficiency	Environmental Impact	Safety	National Interests	FAA ¹	FHWA ²	FRA ³	CG ⁴	UMTA ⁵	
Urban Congestion—	X	X	X	—	X	X	X	—	X	
Terminal/Port Development—	X	X	X	X	X	X	X	X	X	
Intercity Movement—	X	X	X	X	X	X	X	—	X	
Safety—	X	—	X	—	X	X	X	X	X	
Pollution—	X	X	X	X	X	X	X	X	X	
Noise—	X	X	X	X	X	X	X	—	X	
Community Effects—	X	X	X	X	X	X	X	—	X	
Aesthetics—	X	X	—	X	X	X	X	—	X	
Source of Funds—	X	X	—	X	X	X	X	—	X	
Program Management—	X	X	—	X	X	X	X	—	X	
Defense Support—	X	X	—	X	X	X	X	X	X	
Social/Economic Development—	X	—	—	X	X	X	X	X	—	

¹FAA = Federal Aviation Administration.

²FHWA = Federal Highway Administration.

³FRA = Federal Railroad Administration.

⁴CG = Coast Guard.

⁵UMTA = Urban Mass Transportation Administration.
Transferred to DOT July 1, 1968.

Source: Goals and Objectives, Department of Transportation, May 1968

Highway safety, although of fundamental importance as a goal of the DOT and FHWA, is not discussed in this article.¹

ECONOMIC PERSPECTIVE²

Our Society has evidenced great changes in economic activity since World War II which are reflected in the travel market. While 86% of the Nation's highway mileage carrying 50% of the total vehicle miles of travel lies in rural areas, there has been a phenomenal rise in urban highway travel. This is due largely to the rapid growth of population, changing character of residential life in the central city-suburbia dichotomy—and the changing nature of industry structure and occupational distribution. Economic opportunity and highway development and travel have proceeded together so that every 20 to 25 years national vehicle miles of travel have doubled. This is twice the rate of population growth.

The role of the motor vehicle in our society has been firmly established. For instance, there are 1.2 motor vehicles to each of the 80 million persons currently counted in the labor force. In 1965, of the Nation's cost of passenger transportation by all modes, automobiles and buses accounted for over nine-tenths. Trucking accounted for almost three of each four dollars spent in moving freight. This trend is expected to continue. In fact, during the 20 year period from 1965—85, highway vehicular travel is estimated to increase by 71%, resulting in a total of 1.5 trillion vehicle miles of highway and street travel by 1985.

There have been a series of highway transport problems occasioned by higher levels of aspirations on the part of the population—problems which have been underscored by steadily rising citizen pressures. The problems of core cities, such as chronic traffic congestion, pollution

1. The Federal Highway Administration's major safety programs are concentrated in the National Highway Safety Bureau and are authorized under two 1966 statutes. The Highway Safety Act, Pub. L. No. 89-564, (Sept. 9, 1966), authorizes grants-in-aid to States and communities for the adoption of various standards for implementation within the States, such as for driver education, driver licensing, motor vehicle inspection, etc. The National Traffic and Motor Vehicle Act of 1966, Pub. L. No. 89-563, (Sept. 9, 1966), authorizes the establishment of safety performance standards for motor vehicles. In addition, the Bureau of Motor Carrier Safety is concerned with safety regulations for interstate motor carriers. This function was transferred from the Interstate Commerce Commission by the DOT Act of 1966, Pub. L. No. 89-670, (Oct. 15, 1966).

2. 1968 NATIONAL HIGHWAY NEEDS REPORT, 90th Cong., 2d Sess. (1968).

of the air by motor vehicles and various industrial and commercial bottlenecks, are still with us in the urban areas. In addition, the restrictions on personal mobility to job opportunities still exist and attention in various transportation and development programs is being directed to solve them.

To give some inkling of the financial magnitude of possible solutions to these problems of congestion and need for increased mobility, to upgrade the highway physical plant now in existence and to provide for adequate facilities for increases in growth, the State highway departments have prepared preliminary estimates of their financial needs. These average annual estimated financial requirements for construction improvements to all roads and streets come to \$17.4 billion for the period 1973-85, more than double the \$8.5 billion per year average expected to be spent on capital improvements during the period 1965-1972.

CONSUMERS OF AUTOMOBILE TRAVEL IN URBAN AREAS

Highlighting the pervasive nature of the automobile in our society are the annual expenditures on automobile purchases and operation by urban families in different income classes, obtained in a Bureau of Labor Statistics Survey of Consumer expenditures in 50 urban areas in 1960-61. There is a steady upward progression by income group in dollars spent on automobile transportation by these families. At the income class of \$15,000 and over in 1960-61, some \$1,605 was spent for automobile transportation as compared with \$620 in the \$4,000 class; less than \$100 per year was, however, spent by those earning less than \$2,000.

Family size is particularly important in determining the auto travel demands in urban areas. The number of trips increases, of course, with the number of demanders. Thus, single person households spent \$254 in the year enumerated as compared with \$700-900 in households with 3 or more persons. Only in the largest family size where other expenses impinge on use is there somewhat of a decline in auto expenditures.

Another way of looking at these budget surveys may be illustrated by Philadelphia where auto expenditures equalled 12 percent of total current consumption in 1960 compared with 8 percent in 1950; the proportions spent for "other transportation" decreased from 2.4 percent in 1950 to 1.8 percent of total spending in 1960. And similar trends were observed in almost all of the cities.

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Automobile transportation, as expected, is more important in the budgets of residents of small cities than for those in large cities. In the smallest city size, population 2,500 to 30,000, families on the average spent 15 percent of their budgets for automobile travel in 1950. In cities over one million population, at the other extreme, 12.5 percent was spent for auto travel. In no city size group did "other transportation" account for more than 2 percent, even in those areas which possessed extensive rail and transit systems.

While the picture differs from city to city, dependent upon alternative modes available, size and age of city, dispersal of activities, and other such factors, the socio-economic characteristics described here generally show the national urban pattern. Highway studies in urbanized areas consider such factors in their development of area plans. Thus, economic and social characteristics form an important base of travel demand analysis in all urbanized areas in the United States.

IMPACT ANALYSIS

Traditionally, we have spoken of the economic and social impact of transportation in that order. It would only be fair to state that the rising aspirations of an affluent society have had their influence on highway programs just as they have affected other public programs at all levels of government. Because of the fact that highway transportation interacts with all linkages of society—be they social, economic, cultural, environmental, etc.—it is instructive to review changes in direction that have occurred in highway construction regarding such matters.

Such changes in direction are in many respects merely changes in emphasis. The concerns with socio-economic matters have been expressed by highway transportation planners in years past. Thus when the highway program was concerned with rural roads, or farm-to-market roads, its economic and social problems were implicitly included within the analysis. The studies focused on changes in living habits wrought in rural and small communities; and land economists, agriculturalists, and rural sociologists were in the forefront of this research.

In the rural area, the market center was also the major social center and rural populations were interested in their accessibility because of the interest in enlarging their market and social areas and reducing both forms of isolation. When highway construction expanded, the traffic engineering art added other research and planning concepts.

These included the development of evaluation techniques of road construction efficiency, the measurement of user benefits to particular groups, the concern with local fiscal capacity, and various revenue producing techniques for local road improvements. The list is long and parallels techniques developed in the economics of other public works.

Within the past 12 years, there has been an increasing emphasis on social and economic or non-user considerations stemming from the authorizations of the National System of Interstate and Defense Highways in 1956 of a 41,000 mile network connecting major urban centers in the United States. To these 41,000 the 1968 Highway Act added another 1,500 miles.

This system, traceable to the 1944 Interregional System of Highways is dramatic, but also very costly; and by the time it is completed it will cost about \$60 billion. It is the largest single public works program in history, and it is a natural outgrowth of planning activities associated with other Federal-aid programs, i.e., the over 900,000 mile ABC systems—the primary, secondary, and urban connectors. The National System of Interstate and Defense Highways was concerned with economic and social considerations from the very start. It was planned so as to connect 90% of the population in cities of 50,000 and over, and consequently, similar large portions of agricultural, commercial, industrial and other activities. The focus was on service to all segments of society, to make up for World War II-deferred highway construction, and to serve the growing millions of automobiles and trucks in our society; today they number 100 million. The construction of this massive public works program led to various social and economic considerations in terms of community impact.

COMMUNITY IMPACT

When economists speak of community “impact” of a public works facility they are concerned not only with the level of activity but to a great extent also with the incidences of economic activity and the attendant redistributions that may occur. Thus, a highway construction program may occasion a number of “impacts” in this sense. They include the income multiplier effects of construction expenditures, that is, purchases of labor, materials and capital equipment and their income effects. In addition, these effects take place within a unit of space, of geography, such that these initial expenditures affect the spending habits of a locale to the extent that the earnings accrue to

the base of that locale. But this is a very limited and direct use of the word "impact" even in an economic sense.

There are longer range effects which occur both to the nation and to the localities. Within the nation resources are made available to highway construction on the assumption that highways in an automobile-dominant age lead to increases in transport efficiency and hence to the savings of resources over the life of the project. Among areas, highways set up a new series of economic equilibria from what had previously existed; thus comparative cost advantages are changed. This process of restructuring activities and benefits is truly the economic impact, for it affects the manner in which areas relate to each other, interchange goods and services, and determines the standard of living enjoyed by the affected communities.

For about twenty years the Bureau of Public Roads has been studying the economic effect on communities that have been bypassed or that have been divided, etc. This was accelerated within the past 10-12 years because of the authorization of the Interstate System and a congressionally-required analysis of highway cost allocation between users and non-users of the highway. The earlier reports were particularly interested in the effect of bypasses on local sales activities, local land values, local tax rolls, and the accommodation of research activities to aid in the solution of such problems for the bypassed areas. These studies provided justification for highway land acquisition and highway hearings for the particular locations selected. The 1956 Highway Act required consideration of the economic effects of land takings on the affected communities. Interest in planning interchange areas led to concentration on types of land uses that were most desirable at such locations. In addition, a number of theoretical studies were done, as well as central business analyses, etc. From these studies in perhaps 200 communities, knowledge of the ramifications of social and economic effects was obtained.

State highway departments and the Bureau of Public Roads researchers in evaluating local economic and business effects became involved in analyzing the social effects to a limited degree. Studies of travel patterns, business linkages, and population redistributions led naturally to such questions as: How does a highway affect community life, affect planning activity, and non-work associations? Is the problem of highway relocation a significant one? As highways, especially the Interstate highway program, became involved in urban highway building, the interest in the environmental issues became more intense.

In fact, the economic and social impact study program was soon turned around so that social effects, in sociological terms, and demographic concerns became the area of greater emphasis, and today relocation-assistance studies of community attitudes and community values are as significant as studies of land values. The social consequences of highways have become matters of prime concern. As a result, to further interest in these areas, the Federal Highway Administration sponsored a conference in June, 1968, at the American Academy of Arts and Sciences jointly with the Department of Housing and Urban Development on the subject of "Transportation and Poverty." (Another conference on "Transportation and Community Values" was held in March, 1968; it is described below.)

Papers presented at the jointly-sponsored poverty conference in June, 1968, illustrate the varied interests of highway researchers and planners today. These papers were concerned not only with the effects of highways on poor people and minority groups regarding the unity of their communities, but also considered how highways might be used as a force to accomplish a social result more meaningful to the poor. Consideration was given to legislation that could accomplish such ends. The subjects covered included free transit, new modes of personal transport, social costs of freeways, and concern with the income and employment effects of transportation.

ECONOMIC DEVELOPMENT OBJECTIVES

The Public Works and Economic Development Act of 1965 and the Appalachian Regional Development Act recognized the need to uplift areas of the United States that were the victims of structural imbalances. Areas that were no longer able to compete effectively because of disruption and/or loss of their industry, technological displacement, the poverty of their soil and their population, were the targets of these economic development programs.

One means of assistance was the provision of adequate transportation connections. This was the objective of the Appalachian Regional Development Act of 1965 which provided for 3,350 miles of development highways and access roads in 12 States. As amended in 1967, the Act authorized almost 1000 additional miles and added Mississippi to the Region. This program was supplemented by manpower, education, health, and social programs of various types which it was hoped would make the Appalachian area a viable one. The same philosophy became the basis for a number of other Regional Development Com-

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missions: the Ozarks, New England, Upper Great Lakes, Four Corners, South Atlantic. Through concern for adequate highway transportation in such areas and in cooperating with these various programs, the Bureau of Public Roads and State highway departments are furthering objectives of improvement of economic and social circumstances of the areas involved.

URBAN INTEREST

Concurrent with the intensity of interest in social and economic research, the 1962 Highway Act included a provision which emphasized the socio-economic nature of urban highway planning. That Act stated that projects must be based upon a continuous, comprehensive, cooperative planning process in urban areas of 50,000 population and over. To implement the Act, the Bureau of Public Roads required certain inventories and analyses to be accomplished as follows:

1. Economic factors affecting development.
2. Population.
3. Land Use.
4. Transportation facilities including those for mass transportation.
5. Travel patterns.
6. Terminal and transfer facilities.
7. Traffic control features.
8. Zoning ordinances, subdivision regulations, building codes, etc.
9. Financial resources.
10. Social and community-value factors such as preservation of historical sites and buildings, environmental amenities, and aesthetics.

You will note that most of the subjects listed are basically social and economic matters. The highway planning process in each State has for years been concerned with the needs of travelers for different end purposes. It has been recognized that highway transportation just as any other form of transportation is a derived demand. This means that transport is not undertaken for its own sake, but rather for its end-purpose—for a work, social, recreational, or other purpose. For these reasons, highway planners early concerned themselves with trip purposes and with land use.

In the urban areas, highway builders were, however, faced with inadequate social science guidelines. They sought out assistance from

other disciplines. City planners, political scientists, economists, sociologists, psychologists, geographers, became part of urban study teams. A series of meetings were held to stimulate interdisciplinary activity, such as the Sagamore Conference, the Woods Hole Conference, and the Williamsburg Conference.

It's particularly interesting to note that economists avoided the field of urban economics to a considerable degree. A diligent search of 700 published articles in economic journals in 1962 revealed that only 17 dealt with subjects that could be classified as urban.³ Yet this was the field into which highway engineers were plunged by the 1962 Highway Act which required the establishment of an urban transportation planning process in urbanized areas. There had already been some experience under the usual federal-state cooperative highway planning in Chicago, Detroit, and elsewhere with the types of planning studies envisioned in the 1962 Act. Highway planners were somewhat experienced for the task of consideration of local values. But a new range of community considerations developed within the next few years. As the planning and construction programs progressed, highway builders developed the various adaptive mechanisms already described for studying the socio-economic effects of transportation and for avoiding social disruptions. These were, however, not completely satisfactory since there was no agreed upon definition nor measurement tools to adequately integrate local values into the planning process.

The Federal-Aid Highway Act of 1962 required that a continuing comprehensive cooperative transportation planning process be established. The factors to be analyzed in this process have already been listed. Considerable effort has been expended on the economic and social factors associated with planning, and gains are being made on applying simulation models to the determination of highway impact on land use or "feedback" as well as the corollary effects of land use on highway requirements. Concurrent with the planning efforts in all urbanized areas of 50,000 population or over in the United States has been the research activity on economic and social impact by State highway departments and the Bureau of Public Roads. These latter studies have been concerned with the collection of factual materials

3. Paper presented by Leo S. Klaasen and Leland S. Burns, Meeting of the Western Economic Ass'n, Aug. 21, 1962, in John Kain's, *A CONTRIBUTION TO THE URBAN TRANSPORTATION DEBATE: AN ECONOMETRIC MODEL OF URBAN RESIDENTIAL AND TRAVEL BEHAVIOR* 3 (1962).

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about the economic impact of highways in communities over a period of time.

In the earlier period of building the interstate system in urban areas, land acquisition was a major concern. But as the program accelerated and as anti-highway and pro-highway forces polarized, it became evident that land acquisition brought with it many problems which had not previously been foreseen. Social changes were occurring in the urban areas with which highway planners had to contend.

In a recent paper, Professor Frank Colcord of MIT describes how highway planning in cities relates to metropolitan planning. He shows how the metropolitan bargaining process takes place and the changes that have occurred from a pro-highway consensus to various types of skepticism with the planning efforts and how they are being resolved.

This skepticism is illustrated through various political decisions. Professor Colcord concludes that:

“the planning profession has, for years, been demanding that transportation be planned and developed as a service to help achieve the major social and developmental objectives of the community. To achieve that aim, it is necessary to do two things: to plan transportation regionally and comprehensively, and to relate this planning to the planning for achievement of the other values and objectives of the region. . . . Through the process of politics, this is exactly the direction in which we are moving. Thus, through the creation of new interest groups, the establishment of new metropolitan agencies, and the recruitment of such major political figures as the central city Mayor and the State Governor, other values are increasingly being taken into account. These include the viability of the downtown, the integrity of urban neighborhoods, the quality and beauty of the environments, the preservation of the historic vintage of the community, and the desire for greatness. And, perhaps, in many of these cities, the desire to improve the social mobility of the Negro through increasing his physical mobility may well alter our plans in the future.”⁴

As group aspirations were raised within urban areas and as group advocacy developed, these newer highway planning problems cropped up in various locations. It was said that planning committees did not adequately represent all elements of the community. There was the now familiar request for balanced intermodal transportation, and ob-

4. Address by Frank C. Colcord, Jr., MIT Industrial Liaison Conference, Jan. 28, 1968

jections were raised to the methods of highway location and to the relocation of people and the alleged interferences with neighborhood activities. Added to these expressions were those of interest groups concerned with aesthetics, billboards, scenic highways and conservation. To meet such objectives, the urban planning and location processes were further improved to include the goal structure of a community. An outstanding example is the work in the twin cities of Minneapolis-St. Paul. To collect the relevant experience regarding treatment of community values in transportation planning, a recent Highway Research Board Conference was held in Virginia. Participants included social scientists, as well as engineers. Hopefully, guidelines emanating from that conference will be helpful in integrating community values into transportation planning.

Location and design decisions are now based in part upon a long list of socio-economic concerns that must be considered in the highway location process. The most recent hearing procedures promulgated by the Federal Highway Administration move a considerable distance toward active involvement and participation of local communities in the highway design and location processes. With reference to aesthetic values, a significant amount of information was developed in response to the 1965 Highway Beautification Act requirements for an economic impact study of the provisions of that act. A large number of studies on aesthetics, their quality, and the economic effects were begun. Furthermore, a specially commissioned analysis of "Freeway in the City" deals with the problem of integrating the highway into the social fabric of the cities. The latter is part of a renewed emphasis on city effects illustrated also in various urban design team approaches in a number of cities, such as Chicago and Baltimore and New York. The interest being shown in joint development activities so that highways can become more relevant organic parts of the environment led to the establishment of an interdisciplinary Environments Division within the Bureau of Public Roads and increasing planning and research on such matters.

Findings from research and planning activity have made their way into the establishment of policy or have bolstered policy. For instance, some of the earlier relocation studies have been useful in developing current policy on relocation assistance. In addition, early location studies aided small towns and cities in distinguishing the important from the unimportant diversion effects of bypasses. In particular, the body of data on land value influences of construction became the basis

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for improved appraisal techniques and for improving the measurement of benefits and costs to individual property owners. The extension from such studies to attempts to apply concepts of welfare economics to highway consequences and the failure to adequately represent various factors have been described by Mohring and Harwitz in their volume on *HIGHWAY BENEFITS—AN ANALYTICAL FRAMEWORK*. Slowly but surely, socio-economic aspects have been included in the highway planning and location processes and a long list of criteria are considered in highway location. In many States, the interpretation of “economic effects” as used in the 1956 Highway Act hearings requirements had been broadly defined as including social factors. The 1968 Highway Act extended this definition as a specific consideration in urban highway location.

1968 HIGHWAY ACT

The recent Federal-Aid Highway Act of 1968 reflected the great concern that the Congress had with many social matters. The problems faced in our metropolitan areas by highway construction activities which have elicited requests for community participation have called for new approaches. To accommodate the highway program to community needs in the cities, the Bureau of Public Roads promoted the concepts of air rights, joint development, multiple uses of rights-of-way, enlarged concern for equal opportunity in construction employment and expanded the program for relocation of families and businesses beyond what was being done. These relocation provisions may be considered one of the most advanced pieces of social legislation in public works programs.

The Act required an emphasis on a program known as TOPICS (Traffic Operations to Increase Capacity and Safety), authorizing \$200 million for this activity for fiscal year 1970, and Federal participation in fringe parking at highway-transit junctions. These program areas deal with the general problem of urban congestion, and reflect concern with their social and economic impact. To the extent that cities can increase traffic flow and capacity with minor traffic engineering and similar adjustments in urban areas, socio-economic activities will proceed at a more efficient pace.

Hence, the 1968 Highway Act catapulted the highway program into newer areas of social concern, into areas that had been of interest but not to the extent required under the Act. With one fell swoop, the moderate relocation assistance program was expanded, an advance land

acquisition program became possible, an equal employment opportunity program became of immediate interest, and the concern with the social and economic effects of congestion were visible in the TOPICS and fringe parking programs.

POLICY CONSIDERATIONS

Highway transportation planning has been increasingly oriented toward the goals or needs of society. These goals are economic, social, aesthetic, among others. Highways serve as the connecting links in an automobile society to relate individuals, the social structure and the economic environment. While it is impossible to separate the individual in society from the transportation impacts upon him, there are specific items of effect upon the individual in his home, his work, his cultural and environmental influences, that can be identified and minimum of harm can be sought. Furthermore, communities can be encouraged to plan for the maximum feasible benefit to them from transport improvements. In seeking to accommodate highway planning to community goals, values and objectives, in encouraging community participation in highway location and sponsoring research and development of socio-economic matters that could lead to better techniques for decision making to accomplish the objectives, highway builders are seeking a satisfactory accommodation between highway mobility and other community values.

Research is going forward in many areas so that the individual impact and the community impact will be given their proper roles in highway construction. Thus we are considering the traveler as more than a travel decision-making unit, making decisions as to choice of transport mode, transport expenditures, with respect to places of work, residences and social and cultural activities. We are seeking to give consideration to the individual in his entire social setting as distinct from his economic income-cost calculus.

We must admit, however, that we are still groping with the part that highway transport plays in social organization and how to use highway transport in conjunction with other modes to enhance a multitude of social objectives. Our concerns to date have been as disparate as seeking the functional relationship of demographic factors to highway transportation or the determinants of neighborhood cohesion or the economic measurements of community welfare. We are still wrestling with how to define net social payoff (impact) to the community of a highway in understandable terms. At the other extreme,

we are also trying to solve prosaic problems such as proper social and economic weights to be given to alternate highway locations.

Congress has responded to the rising social aspirations of the United States. A mile of federal aid highway is different today from what it was but a few years ago. We need but consider the various social factors that are currently included in a mile of highway-relocation assistance, joint development, aesthetics, roadside development, environmental concerns, traffic operations improvements, safety and fringe parking, among others.

The qualitative nature of this total social upgrading of highways is completely omitted when we discuss miles and costs of highways. These social additives are changing the nature of a mile of highway. Hence, social and economic impact and service considerations on and off the highway are primary in highways that are built today.

It should be pointed out that the Federal Highway Administration has the responsibility to prepare a study of highway needs every two years. The 1968 study indicated various economic and social concerns in determining highway needs. With the near term completion of the interstate system, the posture of highway programs and the determination of the Federal interest in particular types of problems will be indicated in these studies.

From the 1968 Highway Needs Report, it is apparent that we will be giving primary consideration to alternatives for obtaining a more efficient highway planning role within our large metropolitan areas. The intergovernmental relationships involved will require consideration of the role of Federal-State-local representation and various means of financing to accomplish recommendations resulting from such analyses. The entire question of joint development which includes joining public and private activities to relate community and highway efforts will raise questions of financing policy. For instance, some officials at various levels of government have proposed public recoupment of a portion of benefits of such types of combined development. In addition, intermodal or joint modal efforts will no doubt be accelerated.

The mixture of policy decisions affecting the planning and construction of future highway programs may generate legislative and other changes at the State and local level. As these develop they will certainly consider the highway compatibility with the social and economic framework.

Hopefully, the near future will see the development of usable and agreed upon measures of the social and economic community aspects

of highway construction. To the extent that this is accomplished, highway programs will be more adequately woven into the fabric of society.

Secretary Volpe summed up the Department of Transportation policy regarding economic and social considerations as follows:

"The integrated transportation network that President Nixon and you and I dream of cannot be created overnight. But a system providing channels of choice out of the ghetto to suburban factories, insuring ready access in our leisure time to the varied pleasures of the countryside, safeguarding our precious heritage of historical sites and natural beauty, and saving the land from irresponsible exploitation—such a system must be started now if we are to achieve our objective within the next generation. It may even be necessary for physical survival."⁵

APPENDIX A

EXCERPTS FROM PERTINENT LEGISLATION

1956 Highway Act, 23 U.S.C. § 128 (a).

"Any State highway department which submits plans for a Federal-aid highway project involving the bypassing of, or going through, any city, town, or village, either incorporated or unincorporated, shall certify to the Secretary that it had had public hearings, and has considered the economic effects of such a location."

1962 Highway Act, 23 U.S.C. § 134.

"After July 1, 1965, the Secretary shall not approve under Section 105 of this title any program for projects in any urban area of more than fifty thousand population unless he finds that such projects are based on a continuing comprehensive transportation planning process carried on cooperatively by States and local communities in conformance with the objectives stated in this Section."

1968 Highway Act, 23 U.S.C. § 138.

"It is hereby declared to be the National policy that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the States in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of the lands traversed. After the effective date of the Federal-Aid Highway Act of 1968, the Secretary shall not approve any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuges of

5. Address by Secretary of Transportation Volpe, Fourth Annual International Conference on Transportation, Mar. 10, 1969.

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national, state, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of national, State or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use."

1968 Highway Act, 23 U.S.C. § 501.

The relocation assistance provisions are very far reaching. Congress in its declaration of policy stated that "the prompt and equitable relocation and re-establishment of persons, businesses, farmers, and nonprofit organizations displaced as a result of the Federal highway programs and the construction of Federal-aid highways is necessary to insure that a few individuals do not suffer disproportionate injuries as a result of programs designed for the benefit of the public as a whole." Congress then provides various assurances of relocation assistance, through payments and services to those so affected.

1968 Highway Act, 23 U.S.C. § 128(a).

The first sentence of subsection (a) of Section 128 of Title 23, United States Code, is amended by striking after the word "economic" down to and including the period at the end thereof and inserting in lieu thereof the following: "and social effects of such a location, its impact on the environment, and its consistency with the goals and objectives of such urban planning as has been promulgated by the community."

