

PHYSICAL PLANNING FOR TRANSPORTATION

JEREMIAH D. O'LEARY, JR.*

A large proportion of the mileage that remains unbuilt under the interstate highway program consists of construction through urban areas. Though the unbuilt urban segment represents less than 15 percent of the total interstate mileage, it will accommodate half of the traffic volume and cost about \$25 billion, or 40 percent of the amount needed for constructing the entire Interstate system. In 1968 Congress extended the completion date for the interstate program from 1972 to 1974. There is serious question, however, whether even this revised timetable can be met.

Great controversies have stalled progress in Washington, Boston, New Orleans, Cleveland, San Francisco, Baltimore, and many other cities. Some of these controversies have gone on for a decade or more and are still unresolved. Community disruption, local participation in planning, and inadequate relocation housing are prime issues.

The Department of Transportation in its 1967 relocation assistance report to Congress indicated that 56,000 families, individuals, and businesses will be displaced each year by the federally-aided highway program, with the interstate program accounting for over half. Three-quarters of the total displacement will be concentrated in urban areas. The principal impact is being felt by lower-income households who live in congested, inner city neighborhoods through which important segments of Interstate mileage have been planned. Displacement will be particularly serious in the big city black ghettos where the supply of housing is inadequate and relocation beyond the confines of the ghetto is severely limited by racial segregation.

Given continuing unrest in the ghettos, rising black militancy, and restricted federal spending for housing and other domestic programs

*B.A., M.C.P., Harvard University. Member, American Institute of Planners.

to alleviate problems of the urban poor, attempts to carry out the interstate program with a "business as usual" attitude are certain to meet with increasingly intense local resistance.

OBJECTIVE VS. PERFORMANCE

As set forth in the Federal-Aid Highway Act of 1962, a main objective of the highway program is "to encourage and promote the development of transportation systems, embracing various modes of transport in a manner that will serve the States and local communities efficiently and effectively." In urban areas of more than fifty thousand population, highway programs must be based on a continuing comprehensive transportation planning process carried on *cooperatively* by States and local communities.

The aims of the 1962 Act are praiseworthy but the test of the program is surely in its actual performance.¹ Many reports and articles have been published recounting the lack of any meaningful cooperative planning process.² Portrayals abound of urban highway construc-

1. See, T. Morehouse, *The 1962 Highway Act: A Study in Artful Interpretation*, 35 J. AM. INST. PLANNERS 160 (1969). Mr. Morehouse feels that "instead of urban planning interests and needs, Bureau [of Public Roads] interpretations of the law were responsive to the concerns of state highway departments which sought (1) to maintain their control of highway planning and decision-making in the states and (2) to avoid delays in interstate highway construction schedules."

To achieve this, Mr. Morehouse maintains the Bureau and the state highway departments developed several policy positions: "First, initiative in establishing organization arrangements for planning with local governments would remain with the highway agencies. Second, formal agreements for cooperative planning would, as a general rule, be directly between state highway departments and individual local government—there would be no requirement for working through metropolitan planning bodies or other mediating agents of local governments in the metropolitan area. Third, to allow maximum flexibility in the form of the organizational arrangements devised, there would be no requirement that any specific numbers or types of local officials (for example, elected versus appointed) or their representatives would need to participate in the cooperative planning arrangements. Finally, the requirements for cooperation with local governments would not be interpreted to mean that any local government's refusal to cooperate would, in effect, block federal highway operations in the metropolitan area . . . In short, a local government's refusal to participate in cooperative planning with state highway departments was grounds neither for finding the planning process 'ineffective,' nor for subsequently disapproving specific highway projects that might be located in the non-cooperating jurisdiction. The Bureau's interpretation of the law was that it required only that 'scrupulous efforts' be made by the state highway department to obtain a local government's cooperation."

2. See, e.g., S. REP. NO. 1340, 90th Cong., 2d Sess. (1968); Dunhill, *The Freeway Versus the City*, 1967 ARCHITECTURAL F. 54; Dunhill, *An Expressway*

tion as a zero-sum game where what one player wins the others must lose and the sum total gain is nothing. In the typical encounter, citizen groups and city officials are pitted against the State highway department and the Bureau of Public Roads in long drawn-out conflicts. Friends and critics of the highway program can at least agree that the current rethinking of transportation planning policies serves a highly useful purpose.

A great deal of legislation has been proposed and some passed during the last several sessions of Congress to improve the performance of the highway planning process. The Federal Highway Administration has recently adopted new policies and procedures to permit wider public participation in location and design decisions on federally-aided highway projects and to encourage multiple use of highway rights-of-way to meet local needs. One of these new policies sums up the broader view of the program that is gradually emerging:

In executing the federal-aid highway program one important objective is that to the extent possible and practicable, highways, in addition to their basic purpose of fulfilling the important goal of improved transportation, should make a positive contribution toward enhancement of the environment through which they pass and assist communities in attainment of their stated goals and objectives.³

BASIC CONCEPTS EVALUATED

Though these new policy directions are encouraging, the basic dogmas and doctrines underlying "orthodox" transportation planning remain largely unaltered. The pluralistic character of contemporary society with its many competing and conflicting interests is generally ignored. Instead, the conventional approach assumes consensus and a unity of viewpoint to be achieved through rational analysis. A future physical network of transportation facilities meeting abstract user objectives of economy, safety, and convenience is the end-product sought. Value judgments are transformed into "technical" standards that are not debatable by the layman (black or white) and all too often mask professional and class biases. Focusing on the physical aspects, social and political consequences, which in urban areas are frequently over-

Named Destruction, 1968 ARCHITECTURAL F. 72; MARCOU, O'LEARY AND ASSOCIATES, TECHNICAL REPORT ON THE EFFECTS OF THE PROPOSED RIVERFRONT EXPRESSWAY, BUREAU OF GOVERNMENT RESEARCH (1968).

3. Bureau of Pub. Roads, Fed. Highway Ad., INSTRUCTIONAL MEMORANDUM, 34-50.

riding, receive minor attention. Relevant social and community concerns, like racial discrimination and poverty, are coded into the computer as "land use inputs" for the highway planners' simulation models.

In spite of highly sophisticated computerized methods for data collection, processing and forecasting, transportation planning reflects little of the recent knowledge concerning interpersonal and social behavior derived from game theory, cybernetics, econometrics and decision-theory that is radically reshaping urban planning and other disciplines. These new ideas and concepts packaged together constitute the systems approach.⁴

Because the systems approach has been so frequently oversold, it seems necessary in discussing it to state at the outset that it is obviously not a problem-solving panacea. The perspective it provides, however, promises to help make all forms of urban planning—including transportation planning—more scientific and more effective.

METROPOLITAN DEVELOPMENT SYSTEM

The systems approach is directly concerned with planning and decision-making in situations of conflict and uncertainty like metropolitan development. The metropolitan development system can be regarded as a continuing conversion process. It takes in demands and resources from the environment as *inputs* and produces environmental improvements—social, economic and physical—as *outputs*. The system's conversion process functions through the constant interaction (conflict, competition, bargaining, etc.) of the key actors, the major public and private decision-makers, who are in turn influenced by the external forces of market demand and felt social needs.⁵

4. See generally, Simon, *Decision Making and Planning*, in *PLANNING AND THE URBAN COMMUNITY* (H. Perloff ed. 1961); Long, *The Local Community as an Ecology of Games*, 64 *AM. J. SOC.* 251 (1958); E. BANFIELD & J. WILSON, *CITY POLITICS* (1963); and J. ROTHENBERG, *THE MEASUREMENT OF SOCIAL WELFARE* (1961).

5. B. Gross has pointed out: "The performance of any social system consists of activities (1) to satisfy the interests of various 'interested' by (2) producing various kinds, qualities, and quantities of output, (3) investing in the system's capacity for future output, (4) using inputs efficiently, (5) acquiring inputs, and doing all the above in a manner that conforms with, (6) various codes of behavior, and (7) varying conceptions of technical and administrative (or guidance) rationality." Gross, *The State of the Nation: Social Systems Accounting*, in *SOCIAL INDICATORS* 184 (R. Bauer ed. 1966).

Feedback allows decision-makers to control and, as necessary, modify the system to changing environmental conditions as it attempts to achieve its goals. The system is thus guided by actual experience—its successes and failures—as it adapts itself to change. The interactions through which development issues are identified, innovations are formulated, decisions are made by the key actors, and information flows between the system and its environment determine the system's adaptability. The metropolitan development process can be seen to have an explorative and formative character as key actors feel each other out, judge each other's intentions, and initiate commitments to action based on these judgments. The reflexive character of these interactions is best demonstrated in the self-correcting operation of the free market. An increased rate of environmental change, i.e., building-up of pressures acting on the system, requires a speed-up in the system's rate of innovating activity to achieve adaptation.

Since key actors in the metropolitan development system have different sets of governing expectations, their activities consequently criss-cross in changing patterns of coalition and conflict that polarize around discrete issues emerging on the agenda for decision and action. Allocating limited resources of time and money to alleviate specific community problems is achieved through the political process. Resource distribution is a continuing activity reached through incremental and adaptive decision-making, not through "objective and rational" analysis of "common" goals to be pursued in the "public interest" (though interest groups as a political strategy normally justify their claims in the name of the larger "public interest").

Planning promotes better decision-making by formulating the major available alternatives, evaluating the expected consequences of each alternative, and assessing their probability of occurrence. The systems perspective can be especially useful in improving the planning process by surmounting the overly narrow analysis of costs and benefits and the isolation of a component sub-system from the whole that has caused such past difficulties in the highway program.⁶ One of the

6. Planning for complex systems, like the urban development system, is difficult because of the frequent confusion between cause and effect: "In the complex system, when we look for a cause near in time and space to a symptom, we usually find what appears to be a plausible cause. But it is usually not the cause. The complex system presents apparent causes that are in fact coincident symptoms. The high degree of time correlation between variables in complex systems can lead us to make cause-and-effect associations between variables that are simply moving together as part of the total dynamic behavior of the system. Conditioned by our

prime results of this narrow view is a lack of relevancy to vital social concerns.

RELEVANCY IN PLANNING

In a period of world-wide social change, no form of planning—whether planning for transportation, urban development, social services, or economic growth—can hope to divorce itself from the critical issues of the day. At the metropolitan scale the “race issue” affects directly and indirectly almost all other concerns, including transportation. But even in overwhelmingly white metropolitan areas, the problems of intergovernmental decision-making, citizen participation and means for financing urban development are still critical. Institutional innovation to permit the urban development process to adapt itself to rapid social and technological change presents yet another problem, perhaps the single most pressing one. Without innovation, the resolution of other metropolitan problems will be largely futile.

A transportation planning process sensitive to social change could greatly contribute to the solution of metropolitan problems rather than adding to them. Planning for physical facilities of all sorts—highways, rapid transit, housing, schools, etc.—needs to be undertaken with full consideration of the entire spectrum of human needs that can be satisfied through development.

Building an expressway, for example, should no longer be viewed as the provision of a specific product, i.e., a facility serving travel requirements. Rather expressway construction should be seen as an opportunity for generating a whole series of socially beneficial results. An expressway, through proper location and design, can act as a significant stimulus to community renewal. Physical mobility can directly promote social mobility by opening up the ghetto through access to suburban employment centers, regional educational facilities, and other metropolitan resources. But if industrial plants, schools, and other facilities are not located with a view to such access, goals for increasing the mobility of ghetto residents will be vitiated in the end. Without planning transit service in conjunction with expressway construction, the many ghetto dwellers without cars will fail to share in the expressway's potential benefits. Similarly, social services are

training in simple systems, we apply the same intuition to complex systems and are led into error. As a result we treat symptoms, not causes. The outcome lies between ineffective and detrimental.” J. Forrester, *URBAN DYNAMICS* 10-11 (1969).

necessary to enable those without job skills and education to take advantage of the opportunities created by increased accessibility. It is not enough simply to build roads.

Without a systems perspective in such situations the unintended consequences of fragmented decision-making will continue to cancel out many of the benefits. The synergistic potentials of coordinated planning can be foregone only at considerable social and economic cost. Up to now these hidden costs of urban development have been mainly borne by the poor and the disadvantaged, but as the present crisis intensifies all groups are likely to begin feeling the impact more strongly in their everyday lives.⁷

JOINT DEVELOPMENT

For the past several years the U.S. Bureau of Public Roads has emphasized *joint development* of urban freeways as a major means for improving the transportation planning process by increasing community benefits, raising existing standards of urban design, and achieving local development objectives. The Federal Highway Administration has defined joint development as "coordinated actions by the highway agency, local governments and others to develop a corridor according to a pre-agreed plan."⁸ The purpose of joint development is to provide a range of urban facilities (schools, parks, housing, etc.) by making use of the space above, below and alongside urban freeways as part of an integrated design. Joint planning to carry out coordinated development along freeway corridors is currently under way by multi-disciplinary urban design concept teams in Chicago, Baltimore, and Phoenix.

Under procedures recently established by the Federal Highway Administration, joint development is to be carried out to relate a proposed highway to other plans, programs and goals of the affected jurisdictions.⁹ Opportunities for cooperation and collaboration between the State highway department and other public and private agencies in undertaking the development of a highway corridor as a coordinated public work are to be stressed. It is intended that an

7. Melvin M. Webber, *Comprehensive Planning and Social Responsibility*, 24 J. AM. INST. PLANNERS 232 (1963); and Davidoff, *Advocacy and Pluralism in Planning*, 31 J. AM. INST. PLANNERS 331 (1969).

8. Fed. Highway Ad., News release of Jan. 19, 1969.

9. See Fed. Highway Ad., Bureau of Pub. Roads, Interim Policy and Procedure Memorandum 21-19.

explicit framework for the discussion of alternative route locations in relation to a locality's stated goals and objectives will thereby be created.

Joint development planning can be initiated where the State highway department has been officially requested to undertake such work by an affected municipality or the federal Division Engineer. It is also authorized for other projects at the option of the highway department. The new procedures state that "the highway should, as part of the corridor plan, be so located and designed as to allow full benefits to be derived from the combined activities of all entities involved in the plan." This provides recognition, at least, of the need to realize the synergistic effects possible under a more comprehensive planning approach. Federal-aid highway funds can now be used to help in the highway-related costs of platform construction in the airspace above a highway and in the development of multiple use facilities within the highway right-of-way.

LIMITATIONS IN THE JOINT DEVELOPMENT APPROACH

The joint development approach is still in an experimental phase but it offers the potential of remedying many of the most critical abuses in current urban highway planning practice.¹⁰

Several serious limitations in the present approach to joint development, however, restrict its utility. Administrative and organizational mechanisms to carry out joint development on a continuing basis remain to be devised. Ad hoc arrangements between state highway departments and city governments have had only partial success in the past. A mechanism is needed possessing flexibility and initiative, together with an ability to tap flows of money and talent commensurate with the task at hand. Such a mechanism should also provide a framework for the ongoing participation of local residents and officials in planning and management. Procedures are also needed for coordinating joint development with model cities, urban renewal, public housing, and anti-poverty programs. Coordination is specially required in relocation programming for family and business displacement resulting from various forms of public action.

10. Joint development is now being most commonly used to improve situations where a highway's right-of-way has already been determined. *See e.g.*, J. O'Leary, *Evaluating the Environmental Effects of an Urban Expressway*, 1969 *TRAFFIC QUARTERLY*; BUREAU OF GOV. RESEARCH, *Plan and Program for the Preservation of the Vieux Carre* (1968).

Up to now, joint development has overemphasized the physical aspects: relating land use to highway development within a narrowly defined corridor made up of a highway and immediately adjoining properties. Though dramatic, air rights construction is expensive and applicable to relatively few situations. The social aspects, especially in ghetto corridors, have received too little attention, but present by far the major challenge.

Perhaps the most serious shortcoming is limiting joint development to the central city. Transportation corridors constitute primary structural components of the metropolis, the spines along which growth is channeled. In most metropolitan areas principal transportation corridors radiate from the central business district outward for many miles and extend several miles or more in width. These corridors, which generally encompass the area actually affected by a major transportation facility, include deteriorating portions of the inner city, changing central city neighborhoods, suburban areas, and open land beyond. They include a cross-section of metropolitan problems: racial segregation, unemployment, traffic congestion, slum housing, urban sprawl, and fragmented governmental jurisdictions. In short, each radial corridor represents a microcosm of the metropolis and thus a highly useful testing ground for exploring metropolitan-wide strategies to solve metropolitan-wide problems.

METROPOLITAN FOCUS

Highway officials insist that they are responsible for building roads, not carrying out social programs. But with urban highway construction being the largest and most significant type of public investment in metropolitan development, highway officials are finding it impossible to divorce themselves from the critical social issues confronting the nation.

These issues underline the urgency of planning within a metropolitan context: Three presidential task forces have recently explored aspects of the urban crisis and come to similar conclusions on the growing racial polarization in America. The Kerner Commission (National Advisory Commission on Civil Disorders) concluded in its report that the United States is splitting into two nations, one white and the other black. The Douglas Commission (National Commission on Urban Problems) found that "the central cities increasingly are becoming white-collar employment centers while the suburbs are becoming the job-employment areas for new blue-collar workers." In the

view of the Douglas Commission, the continued exodus of middle-class whites to the suburbs will result in greater geographic separation between the races producing "a further polarization of blacks and whites, and the flight of more and more businesses, and therefore jobs, from the city. The suicidal consequences that such a possibility suggests are not pleasant to contemplate."

The President's Task Force on Suburban Problems in another recent report pointed out that "the suburbs do not stand alone, they are an integral part of the great metropolitan areas where two out of three Americans already live. Help to the troubled central city and the suburbs must move in parallel. Without the improvement of both, all will suffer."

Census data indicates that the outflow of white families from central cities rose rapidly in the last two years, intensifying further metropolitan segregation patterns.

Enormous political and other obstacles prevent comprehensive solutions to interrelated metropolitan problems, but a recognition is spreading that past and present approaches that separate the problems of the ghetto and central city from those of surrounding suburbia cannot hope to succeed.¹¹

THE METROPOLITAN CORRIDOR APPROACH

To surmount current limitations, joint development needs to be expanded into a metropolitan corridor approach. This broader approach would relate transportation and urban development planning within a metropolitan context and begin to treat the ghetto crisis, the issues of suburban growth, and the mix of transportation problems as part of a single system of physical, social, and economic concerns. Expanded joint development would permit the planning, programming, and implementation of solutions to critical growth and renewal problems of metropolitan-wide scope that cannot be achieved on a fragmented community-by-community basis. Without large amounts of open land for relocation housing, to use one example, the physical problem of building new expressways in the central city and rebuild-

11. "Underlying many metropolitan problems is the failure of governmental institutions to come to grips with the growing interdependence of people and communities within metropolitan areas. . . The realities of functional interdependence in metropolitan areas are in conflict with concepts of home rule that predate the age of metropolitan growth." Advisory Commission on Intergovernmental Relations, *Metropolitan America: Challenge to Federalism*, Rep. M-31 at 5-6 (1966).

ing the ghettos will probably defy solution within the built-up confines of the central city. The state highway department, an agency with jurisdiction across municipal and county boundaries, and the U.S. Department of Transportation have an opportunity to play principal roles in shaping a new action-oriented, metropolitan planning process.

Subsectors of corridors like declining inner city neighborhoods and individual suburban communities are now being planned for, not in the context of an interacting sector extending from the central area to the outer reaches of the metropolitan area, but as separate and discrete units. Even within subsectors, social, economic and physical problem-solving is similarly fragmented, following bureaucratic program categories rather than real world needs. The metropolitan systems approach does not represent a planning *nicety*, but rather a practical *necessity*, if the overriding issues of racial discrimination, poverty, inadequate administrative and financial resources, and a public inability to plan and act at a metropolitan scale are to be confronted and resolved.

A study in which the writer's firm recently participated illustrates how joint development could be broadened into a metropolitan corridor approach and applied in an actual situation. The study¹² was concerned with the Buffalo-Amherst Corridor, a part of the Buffalo, New York metropolitan area which has an existing population of over 1.3 million people.

BUFFALO-AMHERST CORRIDOR

The State University of New York at Buffalo acquired 1,125 acres of largely undeveloped land in Amherst, a suburb of Buffalo, in 1964 as the site for its new campus. As planned, the new campus will accommodate by 1975 nearly 50,000 students, faculty and administrative personnel. The impact of this state-initiated development on the Buffalo metropolitan area will be enormous.

The construction of the new campus is expected to generate over one-quarter of the entire Buffalo region's population increase through 1985. Large-scale private investment in new housing, commercial, industrial and other facilities will be strongly stimulated. At the same time, many new roads, transit lines, utilities, and other public facilities will have to be built.

12. OFFICE OF PLANNING COORDINATION, *The Buffalo-Amherst Corridor Technical Report* (1969).

The resulting wave of urbanization and economic growth will spill across many jurisdictions in the Buffalo metropolitan area and place unparalleled strains on the capacities of local governments. If a massive state investment of over \$600 million in the new campus is to raise rather than lower the quality of the region's future environment, the current planning and development process in the metropolitan area, particularly in the primary impact area, will have to be substantially improved. The Buffalo-Amherst Corridor, as defined, includes this primary impact area extending some thirteen miles from Buffalo's central business district, through the deteriorating inner city (which contains Buffalo's model city area where recent rioting has occurred) outward to suburban Amherst and beyond.

Although the corridor is expected to gain an estimated 126,000 persons by 1985, the Buffalo portion is forecast to lose 22,000 while the suburban portion grows by 148,000. Under existing circumstances unfettered population and economic growth is likely only to intensify current problems by widening the disparity between the stagnant inner city and the burgeoning suburbs and producing a pattern of development that reduces individual choice in life-styles and living accommodations.

CORRIDOR STRATEGY AND PROGRAM

The State of New York through its Office of Planning Coordination initiated the Buffalo-Amherst Corridor Study as a prototype to demonstrate ways for dealing directly with the problems of political fragmentation, disorderly growth, and inadequate local financial and administrative resources. Meeting the growth needs of the University alone is beyond the capacity of existing local governments, individually or combined.

The basic strategy proposed by the Buffalo-Amherst study is to gradually reshape the development process in the metropolitan corridor. This process would seek to guide physical development, especially the construction of transportation facilities, so as to achieve economic growth objectives that serve vital social needs.

Expressways, arterial streets, and rapid transit are to be planned, under the strategy, as part of an integrated transportation network to serve the University, suburbanites and disadvantaged minorities. A rapid transit system is proposed along the axis of the corridor to link the new campus to the University's old Buffalo campus and to downtown Buffalo. (Federal funds have already been made available to

initiate transit planning.) Low-income residents relying on public transportation would have access to jobs and educational opportunities along the entire length of the Corridor, particularly outside Buffalo where more and more jobs are to be found.

Though transit depends on a high density development corridor, it also stimulates it. New development would be concentrated in 11 action areas encompassing some 5,000 acres located along the Corridor's axis. The action areas, through urban renewal and other public programs, would provide sites for new schools, employment centers, and housing at all price ranges to help solve the problems of the University's impact and expand opportunities for both low-income blacks and whites. Underused and vacant land would be utilized to minimize community disruption and displacement. Future growth would thereby be "imploded" along the length of the corridor through policy choice rather than "exploded" into suburbia through inadvertance.

Both the central city and the suburbs would directly benefit. The character of the suburban communities would be protected from excessive development while Buffalo's lagging renewal efforts would be enhanced.

Early stage development would begin with the construction of the rapid transit system and change-in-mode centers. These change-in-mode centers would include rapid transit and feeder bus stations and would be designed to accommodate fringe parking, retail and office uses, and, in certain locations, apartments, schools, and community facilities.

To provide housing choice throughout the corridor for the full range of income groups, nearly 42,000 dwelling units are targeted under the strategy for construction by 1985 in action areas in the suburbs and the city. The study proposes compact, coordinated development of both University and non-University activities. New growth generated by the University would be encouraged in action areas near the Amherst campus and along the corridor's axis. Unified development is intended to promote interaction between the University and the community, preventing artificial town and gown barriers from arising.

In early 1969, \$6.5 million in state funds were authorized for planning the development of 10,000 housing units in Amherst, as a first stage in implementing the recommendations of the study. This housing, designed for all income groups, will form part of a new town with public-oriented University facilities integrated into a college-based

community, well-served by rapid transit and expressways. Unusual opportunities will become available for comprehensive urban design to furnish a three-dimensional demonstration of the advantages of planned growth.

Social development in the Buffalo-Amherst Corridor has been designated as the overriding policy objective. Schools and new community service centers for concentrated employment, health, and welfare services are proposed under the strategy to meet long-standing human needs. The study also recommends considering the construction of new education parks at key locations along the rapid transit and expressway systems.

By drawing students from many neighborhoods covering a large area, education parks would permit bringing together students of different racial, social, and ethnic backgrounds. With large numbers of students at each grade level, flexible scheduling, large and small group instruction, and special programs for individual students on the basis of ability and interest would be possible. More economical use could be made of such expensive facilities as gymnasiums, libraries, cafeterias, and auditoriums, but easy access by highways and rapid transit becomes essential to making the concept work.

Carrying out the recommendations of the Buffalo-Amherst Study would cost about \$1.8 billion in public and private investment over the next 20 years. Almost all of this cost would be expended in any case through the normal development process. The private sector would spend over \$1.4 billion on research, office and residential construction. The chief items requiring direct public initiative would be the rapid transit system and low-cost housing.

A local subsidiary of the New York State Urban Development Corporation would be the prime means for coordinating and implementing the corridor development program. A Buffalo-Amherst Development Corporation would be created to: 1) undertake residential, industrial, civic, and community improvement projects, 2) prepare short-range plans and programs that would incorporate actions of all public and private agencies (including the State Department of Transportation) affecting corridor development, and 3) coordinate program implementation by local and state agencies. The corporation would allow the state to expand greatly its constructive role in metropolitan affairs. At the same time, as a locally-based agency, it would recognize local needs for participation and self-determination.

NEEDED LEGISLATION AND POLICY CHANGES

An effective metropolitan corridor approach along the lines illustrated in the Buffalo-Amherst example would require three major changes in the administration of current highway and urban mass transit programs: 1) establishing corridor development corporations or equivalent mechanisms to coordinate planning and development along designated interjurisdictional corridors,¹³ 2) creating a new Urban Transportation Trust Fund to finance mass transit, all types of parking, and other transportation elements not allowable for funding from the Highway Trust Fund, and 3) using federal highway funds to develop relocation housing for families displaced by federally-aided transportation projects.

Corridor Development Corporations—In the Buffalo-Amherst model, the State Urban Development Corporation would act as a support to locally-based corridor development corporations, providing them with financial and technical assistance and helping them organize and carry out their development programs, taking full advantage of the state corporation's capabilities in information and computer technology. The combination of interlocked state-wide and local development corporations would create a capacity for undertaking a diverse range of large-scale projects throughout the metropolitan area, at the same time meeting local desires for control of local development.

The corporation device creates an organizational form that can undertake public action with the flexibility and initiative of private business. Badly needed innovation could be encouraged within a metropolitan perspective, with a concern and capacity for short-range, tangible accomplishment. Through feedback, effective approaches could be identified, ineffective ones rejected, and the whole rate of adaption to social and technological change dramatically accelerated.

13. Metropolitan corridor planning, like current planning for joint development, would take place within the framework of metropolitan planning for highways and land use. Under the 1966 Demonstration Cities and Metropolitan Development Act, applications for federal assistance in highway projects "shall be submitted for review to an agency which is designated to perform metropolitan or regional planning . . . and which is, to the greatest extent practicable, composed of or responsible to local elected officials." 42 U.S.C. § 3334 (1966).

Coordination between corridor and metropolitan planning is especially important in areas subject to heavy pressures for development by regionally significant activities (major shopping centers at expressway interchanges, industrial parks on arterial highways, etc.). See generally, Doggett, *The Development Sector Approach in Regional Planning*, 35 J. AM. INST. PLANNERS 169 (1969).

Corridor development corporations would probably be organized as "not-for-profit" but profit-making entities, funneling earnings into new projects and into subsidies of various kinds, similar to the use of supplemental funds in the Model Cities program, except here they would be internally generated. Profits from new town development, for instance, could be used to finance unprofitable ghetto rebuilding projects.¹⁴

Not all metropolitan areas would necessarily find the corridor development corporation concept to be appropriate. In Nashville, Jacksonville, and Miami, for instance, a single government has jurisdiction throughout the metropolitan area. Other concepts should be considered, but all alternatives should meet clear performance tests: Any administrative device should be capable of carrying out comprehensive corridor programs and empowered to resolve conflicting objectives among the participating agencies concerned, with full participation of local citizens and officials in planning and decision-making.

State highway departments, like other involved public agencies, would be represented on the corporation's board of directors and would retain responsibility for constructing and administering highways within the metropolitan corridor. The corridor corporation would, however, coordinate the planning and programming of transportation and other public facilities.

Urban Transportation Funding—Allocation of federal funds for urban transportation purposes now serves to promote the development of particular classes of facilities (interstate, primary and secondary systems, etc.) instead of integrating various forms of transportation into area-based programs to solve local problems. The emphasis should be shifted from federal program categories to local area needs. In many metropolitan corridors, mass transit funds are far more wanted by localities than highway funds, but, because federal funding is disproportionately available for highways, highways get built—frequently over strong local objection. One obvious result is the intense controversy now engulfing the highway program.

"To encourage and promote the development of transportation systems, embracing various modes of transport in a manner that will serve the States and local communities efficiently and effectively," repeating the words of the 1962 Highway Act, requires making funds

14. See R. ROSENTHAL AND R. MORRIS, *SOCIAL INNOVATION IN THE CITIES* (1969).

available so that localities have a meaningful choice among all forms of urban transportation. Otherwise, the planning process becomes distorted and local viewpoints are suppressed. Block grants represent a long-range solution, but an immediate step would be to provide federal-aid for transit, parking, and other urban transportation facilities in scale with existing assistance for highways.

An administration-backed bill has been proposed in Congress to establish an Urban Mass Transportation Trust Fund. Other bills have been proposed to permit the use of Highway Trust Fund revenues for urban mass transportation purposes. Most of these, including the administration's bill, focus on mass transit rather than extending federal aid to all forms of urban transportation not already covered by the Highway Trust Fund. The test for evaluating the adequacy of these legislative measures should be the extent to which they permit flexibility and choice at the local level and assure continuity in federal participation at a scale comparable to the highway program.

Relocation Housing Construction—Relocation assistance provisions of the 1968 Highway Act set a new standard for public programs, but they still fall short of assuring decent replacement housing for families and individuals displaced through government action. Relocation payments, however adequate, cannot insure that housing will actually be available for those forced to move.

The U. S. Department of Housing and Urban Development has identified the existing inadequate supply of low-cost dwellings as the nation's number one housing problem. With current urban housing programs lagging, affirmative action is needed to add at least one new unit of low and moderate-income housing for every unit demolished for highway purposes. The problem unfortunately is too critical in most communities to be shunted to already overburdened and underfunded urban renewal and public housing agencies. Unless highway funds are made available to solve housing problems created by the highway program itself, pressures will mount in urban areas to discontinue all major highway construction projects as has already occurred in San Francisco, Washington, and other cities.

In conclusion, the present dilemma to which the proposed metropolitan corridor approach is addressed has been well summed up by Kenneth Clark: "Is it possible to redefine the problems of our cities in terms that minimize race and emphasize the economic, political, and social imperatives for change? Is it possible to devise plans for eliminating or opening up the ghetto that will appear not only advantageous

to ghetto residents but also advantageous—and non-threatening—to middle-class whites? Only if affirmative answers to these questions are found will it be possible to get the commitment to change essential to solving the problems of our cities.” Urban transportation has a special role to play as a catalyst of constructive change, but only if we broaden our viewpoint to see the problem whole.¹⁵

15. Legislation has been introduced in California to enable the State Department of Public Works to acquire sites outside a freeway right-of-way and contract with public and private agencies for development of replacement housing on these sites.

The state is already acquiring many single-family houses for freeway construction in the Los Angeles area. Under one plan being considered, sound houses so acquired will be moved to large vacant tracts to provide a portion of the replacement housing needed for those displaced in Watts.