Responses to Suburban Highway Congestion: An Overview

Catherine Ross

SYMPOSIUM 2

Abstract

The dramatic increase in the growth of suburban-to-suburban travel as a result of the suburbanization of both jobs and people has ushered in another crisis. The congestion level in suburbs of American cities is the foremost topic of discussion and everywhere there is concern that we develop solutions that are both immediate and effective. Unfortunately, or perhaps fortunately, this need arises at a time when local areas are financially stressed and the federal government is reducing funding for transportation services.

It is obvious that in addition to the identification of nontraditional funding sources there is need for careful consideration of the fundamental policies that underlay service provision. These papers present approaches that focus on coordinated land use planning and ridesharing that challenge conventional methods.

Catherine Ross is an Associate Professor of City Planning and Director of the Doctoral Program in the College of Architecture at Georgia Institute of Technology in Atlanta, Georgia. Her research and teaching interests include transportation planning and policy, planning theory, disaster planning and mitigation, infrastructure planning, urban redevelopment, impact analysis, micro-computer applications in transportation planning and research methods.

■ Introduction

The papers presented here outline two primary responses to suburban congestion, land use planning and ridesharing. The papers, however, do more than merely offer solutions to this problem. Through an examination of the critical issues in transportation they begin to structure tomorrow's reality and go beyond the mere identification of solutions to suburban congestion. Such solutions must challenge conventional wisdom through creativity and pragmatism in the face of constantly shrinking financial support at the federal level. Reduced support requires that we rethink the fundamentals of service provision in the future. This is the substantive issue addressed.

■ The Transportation Dilemma: A National View

Congestion is increasing in both the urban and suburban centers of large metropolitan areas while the general state of the infrastructure is deteriorating. This is particularly true for transit systems and expressways (Ross 1988). One estimate of the cost of resurfacing pavement and shoulders of the functional classes of roadway once every twenty years is $28 billion a year in 1985 dollars. This estimate does not include bridges, completion of the interstate system, improvement to the system, or any reconstruction. Even this minimal effort requires more money than indicated by Federal Highway Administration's needs assessment for resurfacing roads on the Federal Aid System alone (Lee 1988).

We are confronted with major problems in the transportation service sector: traffic engineering and operations, airport access, the condition of rural roads, environmental degradation, intermodal transfer facilities, rail passenger service, suburban congestion, limited specialized services, and decreasing funding. Funding under the program to construct interstates is scheduled to end

in 1991, terminating what will be a more than $111 billion investment. Unfortunately, there is still not an adequate response to the question of where we go from here.

■ Suburban Congestion

We are besieged everywhere by the growing realization that there is an insufficient supply of transportation services in our ever burgeoning suburbs. The rapid development experienced by the suburbs has primarily occurred during the last two decades with approximately 86 percent of the population growth since 1950 occurring there (Prevedouros and Schofer 1988). Paralleling this suburban growth, there has occurred a tremendous increase in the number of workers, unmatched even where there has not been increases in population. This is largely attributable to the large number of women entering the labor market. In 1950 women constituted 28 percent of the labor market; currently they comprise 42 percent. This expansion of the labor force has meant increased commuting particularly when coupled with the fact that approximately 70 percent of all job increases from 1960 to 1980 occurred in suburban areas (Pisarsky 1987).

Population growth, suburbanization of jobs, limited use of public transportation, a lack of adequate roadway infrastructure, changes in commuting patterns and increased commuting, expansion of the labor force, increased reliance on the auto for the work trip, and expansion of telecommunication capabilities have led to immobility and severe congestion in and around suburban areas.

The boom town atmosphere that pervades suburbia is attributable in part to the existence of real estate markets and service industries that characterize suburban living. Unfortunately, these same factors have precluded the availability of affordable housing in close proximity for workers employed in these industries. As a result, the low wage earners needed to staff positions in the service industry cannot live where they work. They also do not have access to inexpensive means of transportation and frequently have no alternative to the automobile.

These trends have rendered the suburb-to-central city commute the third largest pattern, although historically, it was preeminent. The predominant commuter pattern is now the suburb-to-suburb trip followed by the central city-to-central city trip. This growth in suburb-to-suburb travel has resulted in a conflict between commuting needs and the commerce and through traffic functions of the interstate (Pisarsky 1987). With the absence of local roads to accommodate commuting needs, the interstate has been used for this purpose, leading to unparalled levels of congestion. In fact, growth is occurring in areas that are the least prepared to accommodate it. Suburban areas have little or no public transportation, poor or inadequate local roads and a roadway configuration adapted to serve the line-haul movement from central city to suburbs.

The significant growth of suburban areas has primarily occurred in large metropolitan regions while smaller geographic areas are more oriented to central cities. The primary mode of travel is the auto and all evidence suggests this will increase. The auto was used for approximately 70 percent of work trips in 1960 and it is currently used for more than 85 percent of work trips. The automobile is expanding its dominance over alternative modes of travel and there has been a substantial increase in the number of households owning three or more automobiles.

■ The Challenge

One solution for mitigating the impacts of suburban congestion is to increase the level of activity occurring in urban areas through reurbanization. Reurbanization requires increasing the activity and intensity of events in urban areas rather than constantly expanding into peripheral regions. Included in this are increases in jobs and population within cities, resulting in their economic revitalization. This requires greater utilization of existing infrastructure (Newman and Kenworthy 1989) and construction of more central city housing. Reurbanization holds promise as a mechanism that supports economic redevelopment, furtherance of social objectives, and enhancement of the quality of life. The quality of life issue has been largely ignored in devising transportation services and in many instances has been sacrificed or greatly diminished.

Reurbanization supports the more efficient use of the urban infrastructure, particularly transportation. Creation of employment and housing opportunities in conjunction with the enhancement or creation of transportation opportunities makes it possible to redirect the pattern of land development (Edner and Arrington 1985). In this context, increasing the quality and availability of transit services while emphasizing pedestrian activity through use of concepts like the "woonerf" facilitates urban rejuvenation. While the "woonerf" provides for complete car access to residential areas, through use of parking, landscaping, and variance of street size it also enhances pedestrian and nonmotorized movement (vanVliet 1983).

■ Mitigating Suburban Congestion

The two papers discussed here have broad applicability and take a forward looking view of critical issues confronting transport in American society. Many of their proposals are appropriate not only for mitigating congestion in suburban areas but also in urban, exurban, and rural areas. They begin to delineate a framework and approach that is radically different from the traditional

facility oriented perspective that characterizes urban transport policy.

Cervero concedes that congestion pricing holds the greatest theoretical potential for decongesting highways but supports the use of coordinated land use planning as a way to reduce congestion and enhance mobility. He outlines four land use initiatives including densification, mixed-use development, jobs-housing balancing, and pedestrian-friendly site designs that potentially enhance regional mobility. He contends that rejuvenation of joint transportation and land use planning is one of the most fundamental and effective tools for assuring mobility. It is also appropriately under the jurisdiction of planners.

Ferguson is extremely aggressive in his examination of ridesharing, firm size, and urban scale. The lack of a substantive link between firm size and the propensity to carpool at the regional level clearly illustrates the need for more definitive study of this transportation management strategy. Increased understanding of this phenomenon is critical to the implementation of successful ridesharing programs. Most important, however, is the regional perspective he brings to an analysis of ridesharing and firm size. Ferguson appropriately argues that this perspective is all too often lacking in transport policy. □

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