

MANAGING SUBURBIA

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INTRODUCTION

Urbanization has resulted in growth of size of cities, causing spillover of urban landscape beyond their periphery. American landscape has been shaped by numerous policies. At the federal level, Eisenhower's interstate system proposed in 1956 indirectly fueled suburban developments by easing access to city centers. Environmental Protection Agency's (EPA) creation of Smart Growth Network in 1996 to better share the practices of smart growth was a major initiative at the central level to address urban sprawl (1). At a regional level, both Portland and the State of Oregon are notable for successfully pioneering smart growth through restriction of development outside designated urban areas.

Today, global warming has promoted the importance of compact development that would reduce sub-urban sprawl. Sprawl is considered to be a catalyst of climate change since it increases greenhouse gas emission. In actuality, solving sprawl through compact development would be more beneficial than developing vehicles that run on alternate fuels. Traffic congestion would be exacerbated by the advent of electric cars, whereas curbing sprawl would reduce both emissions and congestion. Researchers at the Urban Land Institute predict that by shifting 60% of new development to compact development, 85 million metric tons of carbon dioxide emissions would be reduced (2).

History dictates that the power of policy is immense. Oregon's passage of urban growth boundary in 1973 has resulted in its cities becoming bicycle friendly (3). Policy is influenced by the vision of leaders and consequent effective implementation at the

local level. It controls funding – the backbone of infrastructure development. The need of today is leadership with a vision that aims to make cities sustainable and energy efficient. Practices that policy makers could implement to better the current scenario are proposed in the ensuing sections.

SOLUTIONS

From the perspective of policy setting, the following proposals are recommended that would promote smart growth in urban regions with the aim of reducing sprawl. Although these policy measures need application in tandem, they have been classified as either planning, financial, or transportation & policy based solutions.

Planning-Oriented Solutions

Historically, planning in America has favored segregation of residential, industrial and commercial zones, and the practice prevails even now in many cities. Local governments are slowly adopting the concept of “new urbanism” that promotes mixed use development (4). This transition should be quicker, and city governments should seek to fund more mixed use projects. This will be achieved not only by allowing residential and commercial zones to merge, but by adopting smart growth design criteria that require buildings to be built closer to streets, parking located preferably under or behind built-up area, and residential area allocated above the building (5).

The presence of a metropolitan region plan that incorporates elements of sustainable transportation, and farmland protection is necessary. Overall, such plans should support enhancement of public transit around and between city centers. These plans

should prioritize transportation infrastructure development projects, but implementation should involve participation of local agencies (cities) and public (residents). Every city presents a unique scenario, but the regional planning agency should effectively promulgate a vision for future development (6). Planning for inclusion of transit should become a norm. Eminent domain could be used as a tool by local governments to achieve the goal, with the option of provision of monetary compensation higher than the assessed value of land if necessary. Checks and balances could be designed to ensure responsible use of this power by public agencies.

A good example of “outside the box” thinking is illustrated by the case of Boulder City, NV – a suburb of Las Vegas. The city purchased 163 square miles of vacant land in 1995 and became the largest city in Nevada spreading 200 square miles, with only 8 square miles of developed land, comfortably distanced from the sprawl of Las Vegas (7).

Financial Solutions

Funds should be proportionally allocated to serve areas where people reside, rather than in developing localities to house “spillover” populace. Between 1990 and 2004, Chicago, home to 38 percent of the metropolitan region's population, received 15% of \$1.2 billion state subsidies to the region. Bulk of the remaining 85 percent was invested in Chicago's sprawling suburbs in projects like road extensions, fueling sprawl (8). Spending that favors expansion should be reduced to fund enhancement of urban regions.

An integral part of successful leadership would be to abstain from granting privileges to corporations to build in non-urban regions. 80 percent of corporate relocations in Minnesota between 1999 and 2003 were outside the Minneapolis-St Paul urban area,

and amounted to \$90 million in state subsidies – an example of flawed policy, and corporate influence that increased sprawl. Such developments should be discouraged through economic disincentives (8). Impact fees of new construction outside designated urban areas should be increased.

Location-efficient mortgage is another tool for policymakers that will spur residential development near public transit. Taxing mechanism can further be used as a financial measure to stop outgrowth, and higher density development should be allowed rebates (9).

Transportation & Policy Measures

The concept of transit oriented development (TOD) implies that development should happen if adequately supported by public transit infrastructure. In simple terms, TOD is development along transit corridors, which most metropolitan areas strive to achieve. In reality, the practice is similar to applying band-aid to deep wounds. Development has already occurred, and transit infrastructure is being built to support it. As a result, solutions need to be more innovative that complement TOD practices.

Figure 1 shows the beauty of public transit. In addition to providing better mobility, public transit modes like buses would free up space on arterials and in parking lots. Public policy to reduce suburban sprawl should therefore be based upon space conservation outside urban areas, and density increase within.

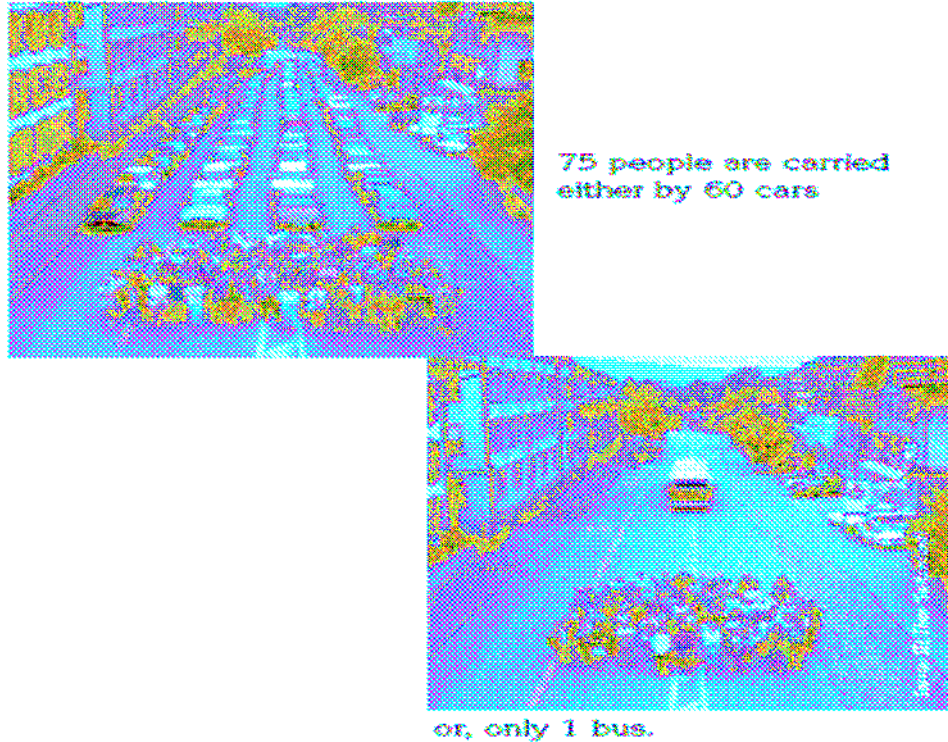


Figure 1: Efficiency of Public Transit (10)

San Francisco Bay Area's transportation is coordinated and planned by the Metropolitan Transportation Commission (MTC). More importantly, MTC has the authority to prioritize regional projects, and is a channel through which federal funding is distributed to each county's congestion management agency (CMA) and cities. According to the director of San Francisco Planning and Urban Research (SPUR), to solve transportation issues, we have to look beyond the nine-county Bay Area. Northern California should be considered as a mega-region that encompasses Sacramento along with Oakland, San Jose and San Francisco as major cities (11). Only then could growth be streamlined to city centers and greenbelt be preserved in what seem suburbs-to-be.

Prior to the recent slump in the housing market, 26 acres/day were reduced from San Joaquin county farmland for two years between 2002 and 2004, due to the economic incentive of farmers in selling land to developers (12). Stockton's general plan expects to double the city's population in 30 years by increasing population density. A study concludes that smart growth measures are laid out as guidelines, but seldom implemented (13). Smaller cities even lack land use measures that support TOD, and their expansion has been unsustainable. In counties that exist beyond MTC's periphery, the state should make an effort to advise local city and county governments to concentrate development near city centers.

From the perspective of transportation, there is potential to generate revenue from the existing infrastructure, not only to maintain it, but to fund new infrastructure. The current gas and sales tax support development of infrastructure, but are insufficient. Due to inflation and the recent international developments, gas tax revenues in California have been unable to match the consistent rise in vehicle miles traveled (VMT) (14). Figure 2 shows the discrepancy that existed prior to the passage of propositions 1A and 1B in November 2006.

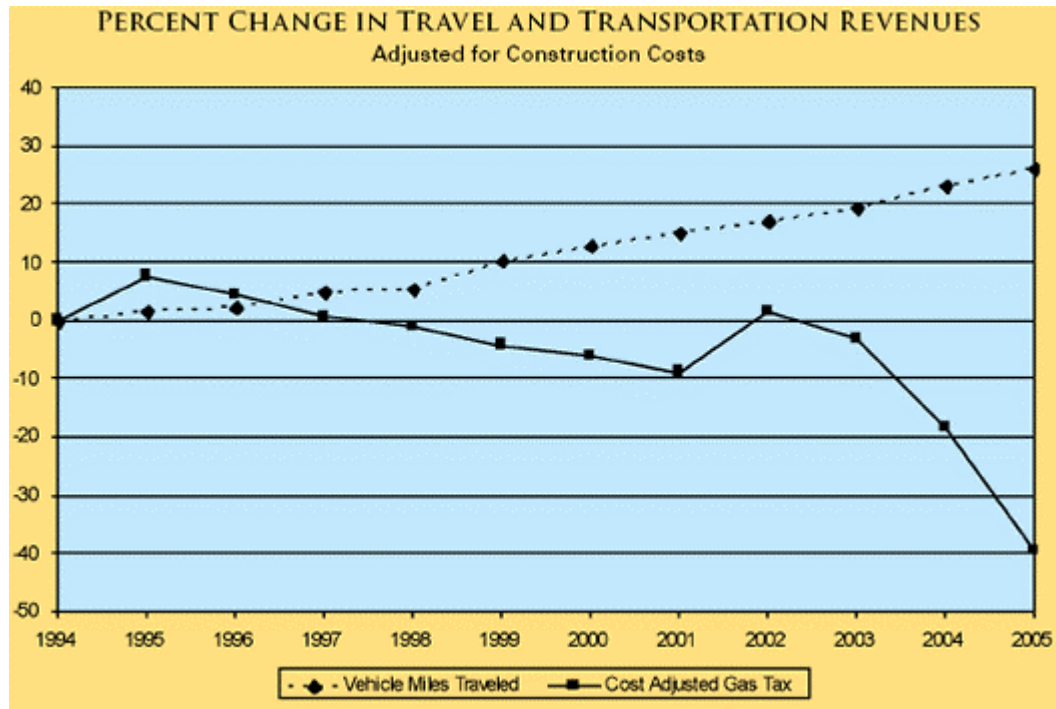


Figure 2: Percent Change in Travel and Transportation Revenues – 1994-2005 (14)

Recently, new funding sources have boosted transportation projects statewide, with a focus on congestion relief. Innovative concepts, like High Occupancy Toll (HOT) lanes, that have capability to generate revenue from existing infrastructure should be promoted. The HOT Lanes concept is a tool to maximize throughput on freeway corridors by utilizing the excess capacity of High Occupancy Vehicle (HOV) lanes, and generate revenue – a win-win situation. Above all, it is essential that the funding generated by toll revenue could be used to fund public transit and TOD.

Combination of technologies to harness the existing infrastructure is vital. Bus Rapid Transit (BRT) technology, for instance, uses a dedicated lane for buses with enhanced traffic signal timing controls to give priority to buses, thereby creating more throughput by using less arterial capacity. BRT has successfully been implemented in many American cities. Requiring lower initial investment option and offering higher flexibility

than light rail, BRT networks should be built to support existing public transit infrastructure (15).

Public transit systems do not compete, but complement each other. As more investment is poured into public infrastructure, benefits to citizens would increase. Projects like BART extension would not be successful unless cities build equally efficient bus networks to feed commuters into the BART network. Cities beyond Bay Area's metropolitan region should seek to improve connections of key points linking their city centers to BART stations through buses using transit signal priority (TSP) and dedicated HOV/bus lanes on freeways. For example, a project to build a HOV lane between Dublin/Pleasanton BART station and downtown Tracy improves travel-time reliability and promotes the use of public transit.

New technology should not only be used to build transit networks, but provide transit information to travelers. Google Transit is a free service that facilitates route planning. "Mayors must now be CEOs," quotes a regional director for the World Bank (16). If a company could provide such services for the public good for free, the potential to generate public goods with minimal investment is immense.

CONCLUSION

There is no single solution to curb the sprawling metropolitan regions, but an array of solutions combining policy and technology is today's need. Given Bay Area's technological prowess and history of innovation, no practical goal is beyond reach given a clear vision that is supplemented by implementation at the regional, county and city levels. Sustainability is crucial in maintaining an energy efficient society, and the sacrifice of people to dwell in regions of higher density is a small cost to pay.

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