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Introduction

Just as the Eiffel Tower is the symbol of Paris, and the Statue of Liberty is the symbol of New York, it can be said that the freeway is an internationally recognized symbol of California. The California transportation system was not too long ago the envy of the world, yet there is today a serious question as to whether or not our state is in a leadership position with respect to the provision of mobility to its citizens.

Forty years ago, Governor Pat Brown and most members of the state legislature believed that transportation infrastructure investments were fundamental to economic growth and that large commitments of public funds for the construction of a transportation network would pay ample dividends over many decades in the form of growth in population, commerce, tourism, and tax revenues. These views enjoyed broad public support. The aggressiveness with which leaders in the fifties built a state highway system can today be criticized by environmentalists and preservationists, but it was monumental and their projections of growth and change have over time been proven to have been largely correct. The shared sense of direction and commitment that characterized our state during the freeway building days, and the partnership between federal and state governments that funded our highway system is long since gone. In place of unity and commitment transportation policy making is today characterized by timidity and indecision. With our state highway program stalled, California's public transit program is also falling far short of what is needed to provide mobility to a growing number of inner-city transit dependent people. As we look forward to a new century, we must question whether our transportation program is sufficient to serve the population growth we expect or to sustain the economic growth that we hope for.

A State Crisis in Gasoline Tax Revenues for Highways

State and federal gasoline taxes are the principal instruments by which funds are raised for the construction and maintenance of the state's highway system, and there are serious policy questions regarding the ability of this tax to continue to serve its historic purposes. The gasoline tax is unlike most other taxes administered by national, state, and local governments. Since its inception it has been conceived of as a "user fee," rather than as a standard tax. Drivers of vehicles impose costs on the transportation system, and to a certain extent the costs that they impose are proportional to the extent to their use of the system. Federal and state gasoline taxes, largely levied as a charge per gallon of gasoline purchased, were conceived of as the functional equivalent of a toll, though the gas tax is easier to administer than a system of tolls. Drivers who pay a tax per gallon of gasoline consumed are paying roughly in proportion to their use of the system: those who drive more pay more. The funds they pay in gasoline taxes are not placed in the state's general fund, but are isolated in a transportation trust fund to be used only for specifically designated transportation purposes. Gasoline taxes have made it possible over many years for most transportation facilities to be built from current funds on a "pay as you go basis,"

rather than by borrowing large amounts of money and making substantial payments in the form of interest.

After forty years of proposals for a national highway system, Congress enacted the Federal Highway Act of 1956, which created the federal highway trust fund, increased the national gasoline tax, and created a commitment by the United States government to construct over 40,000 miles of Interstate Highways, for which the federal government paid 90% of the costs if the states committed themselves to covering the other ten percent and to maintaining and operating the roads. In response to the Federal initiative, the California legislature in 1957 instructed the state Division of Highways (later to be renamed Caltrans) to prepare a comprehensive plan "...for the ultimate freeway and expressway system of the entire State." In 1958 the Division of Highways completed an ambitious and unprecedented plan for 12,241 miles of roadway simply called *The California Freeway System*, which was widely understood to be needed to accommodate the coming growth of population and economic activity. The implementation of that plan was instrumental to the provision of mobility to Californians.

The national commitment to road building was reflected in a 72 percent increase in the motor fuel tax rate per gallon between 1947 and 1959; in California, the most highway-oriented of all the states, the state gasoline tax rate per gallon rose by 133 percent during the same years. Between 1947 and 1963 the state gasoline tax was increased six times and the federal gasoline tax was increased three times. And, since people were driving more miles every year, fuel consumption grew by more than 5% per year during this period and the increase in revenues was much greater than the rate of taxation. While the country as a whole experienced an increase in revenues for highways of 381 percent between 1947 and 1959, in California the increase was 495 percent. The pace of highway construction accelerated, and in 1964 more miles of freeway were under construction than in any year before or since.¹

Our collective commitment to expanding and maintaining the transportation system seemed to weaken considerably starting in the mid-sixties, and we slowly relinquished national leadership until today we face a serious crisis in transportation finance. After 1963, neither the federal nor state gasoline tax was changed for almost twenty years until the federal tax was raised by a nickel and the state tax by two cents per gallon in 1982. Since 1970, the California gasoline tax has fallen well below the national average gasoline tax, and that lag accelerated in the eighties. In 1990 the state gasoline tax in California was only 56 percent of the average gasoline tax among the fifty states. And, while California voters approved in 1990 a proposition that raised the gas tax by a nickel in that year and by one cent more in each of the four following years, the gasoline tax in California today remains about twenty percent below the national average.²

Most taxes, such as sales, property, and income taxes, produce increasing revenues over time as a natural consequence of inflation. Gasoline taxes, however, are levied on a per gallon basis, and not as a percentage of the total sales price. Unlike other taxes, they produce revenues that do not increase in response to inflation. To keep pace with rising costs, therefore, the gasoline tax must be raised at regular

intervals. It takes a specific act of the legislature and approval by the governor to raise the gasoline tax, and in recent years it has proven increasingly difficult to achieve the political consensus to accomplish this. The only increases we have been able to enact in the nineties resulted from legislators putting propositions on the statewide ballot for approval by the voters. Apparently, they didn't have the courage to exercise the authority granted to them by the state constitution to raise gasoline taxes.³

Declining rates of increase in gasoline taxes are not the only reason that revenues for transportation systems are failing to keep pace with past trends. In part as a result of requirements dictated by federal energy policy, overall new car fuel economy has improved from 14.2 miles per gallon in 1974 to 28.3 miles per gallon in 1995.⁴ This means that newer automobiles can drive approximately twice as many miles per gallon of fuel sold as did cars fifteen or twenty years ago, and thus they produce only half as much revenue per mile of travel. Looking farther ahead, plans to promote conversion of the automobile fleet to electric power further threaten these revenues. Electric vehicles use roadways to the same extent as gasoline-powered vehicles without producing *any* gas tax revenues!

While revenues from gasoline taxes decreased dramatically, substantial cost increases in many areas of our highway program caused the buying power of that revenue to shrink even more rapidly. Rising costs of land for highway rights-of-way, labor and materials for highway construction, and costs to comply with increasing environmental cleanup and environmental review requirements all combined to make transportation ever more expensive. State highway construction costs rose from an average of \$4.1 million per mile in 1970 to \$16.7 million per mile in 1980; an average increase of 12.1%, half again as great as the rate of increase in the general rate of inflation which rose by 8.7%. After correcting for inflation, freeway construction costs rose by a factor of six in the seventies and a factor of eight in the eighties. In part this reflects the fact that we built the easier-to-build and less costly projects first, and delayed the most expensive and controversial projects until later. For whatever reason, each year we build fewer and fewer miles of new highways, using ever decreasing revenues, while traffic volumes continue to rise.⁵

Some may argue that there is little need or desire to build additional new highways, that our highway system is to a certain extent "built out," and that for environmental and social reasons we should shift our transportation priorities to public transit. If there is a widespread social consensus that this is true, perhaps the relative decline in highway funds is not in the end all that critical, and it may simply reflect a shift in priorities to other kinds of transportation investments. While I agree that public transit and environmental concerns are critically important, I cannot accept the conclusion that declining highway resources are acceptable. There are two reasons for this conclusion.

First, reductions in resources available for highway programs are not only affecting construction programs, but in more critical ways they are impacting maintenance and operations programs. The construction of an extensive modern highway system in California over the last forty to fifty years was a capital

investment in a physical plant that met very high design standards, was constructed to the highest standards of workmanship, and employed high quality materials. All public infrastructure requires maintenance and upkeep, however, and we cannot expect this excellent highway system to serve us efficiently if we fail to maintain, upgrade, restore and renew it. Current reductions in highway funding correspond with the aging cycle of highways built forty years ago and cause a general lessening of the quality of our highway system. Current funding shortages are causing us to defer increasingly needed repaving of existing highways, seismic upgrading of existing bridges and overpasses, and routine maintenance of our highway plant. Thus, the condition of the existing network is worsening, and safety hazards associated with this deterioration are increasing. Deferred maintenance can be extremely costly, since putting off routine maintenance often increases the cost of repairs when they are finally undertaken in response to emergencies.⁶

Secondly, while it is possible to argue that some new highways are not needed, and perhaps we will never build another freeway from scratch in the highly developed central portion of Los Angeles, San Francisco, or San Diego, we certainly will require new highways in outlying areas that are growing rapidly in terms of population, economic activity, and travel volumes. Congestion is growing most rapidly in suburban communities, and bottlenecks in suburban areas will need to be addressed. In fact, it is in the long run less costly to society to develop highways in suburban areas before spurts of growth cause land costs to rise dramatically and increase the social and economic disruption caused by fitting new highways into fully developed communities.

It is perhaps ironic that inner city highways, bridges, and transit systems are in need of renewal, rehabilitation and upgrading while the demand for their use is leveling off, and at the same time a demand is growing steadily for new infrastructure in outlying communities where the condition of existing infrastructure is better. This results in competition for the transportation dollars that are becoming increasingly scarce between maintenance needs in the inner cities and new construction needs in the outer suburbs.

An efficient, well-maintained transportation network is essential to the future of the state. It is widely acknowledged that traffic congestion is worsening and that transportation expenditures are declining substantially over time, and declining even more dramatically in relation to the increase in automobile and truck traffic. Yet, there appears to be little support for increasing the gasoline tax. The recent rise in gasoline prices at the pump resulted in instant political support for a *reduction* in both state and federal gasoline taxes. The Reason Foundation, a Libertarian think tank, also recently urged an end to what it called the "double taxation" on gasoline, presumably referring to the tax per gallon and the sales tax levied on gasoline.

Many studies have also shown that the gasoline and diesel fuel taxes result in undercharging heavy trucks in relation to the costs they impose on the highway system while overcharging automobile users who impose less damage and wear and tear on the roads. Yet, the trucking industry is a significant player in the economy of California, and it has proven difficult or impossible in the political arena to increase

tax revenues through higher truck weight fees. In a few instances in other states increases in truck weight fees have been achieved only by allowing heavier trucks on the highways or by allowing triple trailer trucks, which are widely considered a serious safety hazard. Any comprehensive solution to the highway finance problem will certainly require attention to incorporating a new system of charges for trucks as well as light duty vehicles.⁷

It is difficult to argue at present that federal gasoline taxes should be raised, given recent federal highway spending patterns. Most of the federal gasoline tax and additional highway user fees in the form of other excise taxes flow into the "highway trust fund," which is largely used to fund highway projects in the fifty states plus the District of Columbia, Puerto Rico, and Guam. Two exceptions are that some of the funds are "diverted" from the highway trust fund to support the federal public transit program, and that 4.3 cents per gallon of the federal gasoline tax is used for general deficit reduction purposes rather than for transportation, and this portion of the gasoline tax is not deposited in the trust fund.

Congress has, over the past several years attempted to demonstrate to the public that it is committed to deficit reduction, and has refused to allow all of the funds collected by the highway trust fund to be spent on highway construction or maintenance. Instead, it has allowed the balance in the trust fund to grow, and has taken credit for the excess of collections over payouts from the highway trust fund when calculating the national budget deficit. This is in effect a subterfuge of grand proportions, since the funds may not legally be used for any purposes other than highway projects. Most observers do not believe that the trust fund balance will be allowed to grow indefinitely beyond the range of about twenty billion dollars, the approximate current balance. Some proponents of increased highway spending are advocating that the highway trust fund be taken "off budget" in order to discourage the current practice of banking highway tax revenues in the trust fund.

In the short run, it is difficult to argue that increases in the federal gasoline tax are needed. Rather, the trust fund balance should be appropriated for highway improvements. At the state level, however, the situation is different and new revenues may well be required in order to provide for the maintenance and upkeep of the highway system.

Alternatives to the Gasoline Tax

Given the decreasing productivity of the gasoline tax, widespread reluctance to consider substantial gasoline tax increases, and the continuing need for highway investments in both inner cities and outlying suburbs, it is appropriate to consider alternatives to the gasoline tax as sources of financial support for new roads and freeways. While the state's highway system was financed almost exclusively on a pay-as-you-go basis, one possibility would be to increasingly finance highway construction and maintenance through bonded indebtedness. We are familiar with bond measures to increase the stock of state correctional facilities, to upgrade state university buildings, and to improve water treatment and sewage facilities, and

similar measures could be used in the realm of highways. The problem with this approach is that there are pressing needs for state funding in all of these other areas that cannot in the end rely on user fees to the same extent as highway programs. It would undoubtedly be unwise to raise the state's bonded indebtedness and induce deficit spending for interest on this debt for the construction and maintenance of highways since underpriced highways induce ever more travel and that in turn leads to greater congestion and air pollution. Highway finance through user fees is superior because they don't impinge upon other critical state needs and because the fees themselves play a role in regulating the use of the roads. This tends to promote more efficient use of the highways that we build.

If we wish to rely on user fees but are reluctant to raise gasoline taxes, the most obvious choice for policy makers is tolls. Major roads and bridges have been financed by tolls in many parts of the world over several centuries. Money can be borrowed to cover the capital costs of new facilities and of the rehabilitation of older roads, and the payment of user fees or tolls can over many years of use repay the principal and interest. We have recently expanded the use of toll roads in California, especially in Orange County, and have even ventured into the private construction of toll roads. Tolls are today a very promising option for highway finance for several reasons.

First, as I said earlier, highways are viewed as different from schools, police and fire services, parks or libraries in that there is a long-standing consensus that they should be largely paid for through user fees. In fact, the gasoline tax is itself like a toll, only it is far less costly and administratively simpler to collect the gasoline tax than to set up toll booths on major highways. The cost of collecting fees as gasoline taxes is on the order of two percent of the money collected, while traditional turnpike toll collection incurs costs that are between fifteen and twenty percent of the proceeds of the toll. And, toll plazas on older turnpikes and bridges are locations of many traffic accidents, are the source of much delay in travel, and are the source of a great deal of air pollution. New electronic toll collection devices, however, change this picture substantially. A vehicle having a small transponder on the dashboard can be driven through a modern toll collection facility at full speed, and an automated system can debit the driver's account for the cost of the trip, or add a charge to a standard credit card. This system is highly reliable and is increasingly being adopted on toll bridges and turnpikes. Tolls will not likely be extended to local roads and arterial streets, but they are a promising approach to raising needed money for the construction of new freeways and bridges.

There is also growing interest in expanding the use of tolls for purposes beyond simply meeting the financial requirements of highway construction and maintenance. Transportation economists and planners have since the 1930's recognized that we bear enormous social costs to provide highway capacity that is used only at the rush hours, and that our highway system has ample unused capacity during many hours of the day. Since it costs so much to produce highway capacity that is fully utilized only at periods of peak demand, many have advocated a system of "congestion pricing," in which the toll for the use of a facility is higher in the rush hour than it is at "off peak" times. This not only charges users more precisely in relation to the costs of serving their trips, but it also encourages more efficient

utilization of the road system by encouraging travelers who have choices to defer their trips to off-peak hours, to join together by forming car pools or van pools, or to use public transit in order to save money at peak hours. Congestion pricing is regarded by transportation economists and planners as an essential element of transportation policy: we have discovered over the past fifty years that we can never “solve” the congestion problem by building more and more capacity. Rather, we must use pricing to manage the use of the capacity we have already created and new capacity that is yet to be created.⁸

Despite widespread agreement among technical experts that the charge for using congested roads should vary with the level of congestion, there is little social consensus in support of congestion pricing. Local elected officials, the media, and lay citizens are familiar with a system of charges that do not vary in this way, and they generally oppose congestion pricing. They believe that they have already paid for the roads through gasoline taxes, and that adding congestion tolls would constitute charging them twice for the use of their roads. Many raise questions about the potential impacts of congestion pricing on the poor, and on particular groups of citizens, like working mothers, who probably *must* travel at the peak because of household and child care obligations.⁹

The various arguments for and against congestion pricing are being tested in a few exciting projects within California. On State Route 91 a private company holding a franchise from Caltrans has added two new traffic lanes in each direction over a stretch of about ten miles linking Orange and Riverside Counties. A charge for the use of those lanes is levied using electronic transponders and automated toll collection and that charge ranges from 25 cents at the least congested periods to \$2.50 at the most congested hours of the day. The project was financed using private capital that is being repaid over several decades from the proceeds of the toll. High occupancy vehicles carrying three or more passengers are allowed to use the toll lanes free of charge in order to promote ridesharing. The project is beneficial to travelers in at least three ways. First, it gives those who choose to pay for use of the toll lanes a faster ride through a congested corridor. Second, by attracting some travelers to the fast lane, the project also reduces congestion and delay for those choosing to remain on the pre-existing free road. And third, the road functions like other High Occupancy Vehicle (HOV) lanes by providing special incentives for car pools and van pools. The project, if successful, will also be beneficial to the taxpayers of California in that it adds new highway capacity in a congested corridor without calling upon limited public funds.

Approximately one year has passed since the SR91 project was opened to traffic, and the toll road company that is operating the project reports that over 50,000 electronic toll transponders have been sold. This is an auspicious beginning that leads to optimism about the potential of this approach to congestion management. A second road project of a similar sort opened this month along the I-15 corridor near San Diego. Here, an underutilized High Occupancy Vehicle (HOV) lane has been opened to single occupant automobile drivers willing to pay for the opportunity to use the HOV lane. Some 40,000 permits to use the HOV lane were placed on sale and all were purchased within a few days. Given widespread skepticism about and

political opposition to the general applicability of congestion pricing in California, these “demonstration” projects are extremely important. If successful, they will create public trust and good will toward the concept of congestion pricing, and demonstrate to the public that this is a viable approach to transportation finance. Congestion pricing will never be applied to all the roads and streets of California, but it is an important part of the transportation finance picture that could be applied in other corridors of heavy congestion, like the San Francisco Bay Bridge. Political opposition to congestion pricing is substantial, and the concept will be applied to additional roads only if the demonstration projects are financially successful and popular among the users for whom they provide additional travel choices.

A Crisis in Public Transit Finance

Highways are an important part of public infrastructure throughout the state, but we must not overlook the significance of public transit in urban and suburban areas. While transit has only a small role to play in rural parts of the state, in urban areas most of the new capital investment in transportation over the past decade has been in public transit, and it is difficult to conceive of thriving downtown areas without substantial reliance on transit. New rail services in the Los Angeles area, extensions to BART in the Bay Area, and expansions of the San Diego light rail system are examples of transit investments that are familiar to most of us. Perhaps less familiar but equally impressive is the expansion of bus transit services into many suburban communities within our metropolitan areas. And, while we know that politicians are reluctant to commit public funds to highway construction and maintenance, there is greater support for commitments to transit among politicians and lay citizens alike. The *San Francisco Chronicle* poll by UC-Irvine Professor Mark Baldassare which showed little public support for higher gasoline taxes or tolls, did, for example, show strong public support for increased expenditures on rail transit.¹⁰ Unfortunately, even a cursory look at recent data on the performance of transit systems in California reveals that transit is facing a fiscal crisis as challenging as that facing highway transportation.

Despite the widespread public perception of substantial recent capital investments in transit in Los Angeles, a recent UCLA study by Professor Brian Taylor showed that the Los Angeles Metropolitan Transportation Authority experienced a *decrease* in transit patronage between 1989 and 1993 of 5.4% (from over 411 million boardings in 1989 to under 390 million in 1993). This occurred despite the fact that the MTA offered a modest increase in service between 1989 and 1993 of 0.3% (as measured in vehicle service hours). During the same time period the San Francisco Municipal Railway (MUNI) lost 2.5% of its ridership (from over 236 million boardings in 1989 to 230 million in 1993), in response to a decrease in service of 3%. How does it happen that we have the widespread perception of dramatic new transit investments while service is actually decreasing or increasing only slightly, ridership is declining, and transit deficits are growing? This is an interesting and complex phenomenon.¹¹

The “bread and butter” of transit service is inner-city local bus service in lower income communities where people are relatively transit dependent. The elderly, students, the carless, the poor, and recent immigrants are the major users of public transit in California, and they most heavily patronize inner city local bus services to the extent that during rush hours many buses are overcrowded and pass up passengers waiting at the bus stops. In large part because of their heavy patronage, inner city bus services require the lowest subsidies per boarding. And, because inner city riders make shorter trips, they require even lower subsidies per passenger mile than suburban bus users or rail travelers whose trips are usually longer. The new initiatives in transit, which have incurred substantial capital expenses, have largely been *replacing* relatively cost-efficient inner city local bus services with other types of service that are less cost-effective and more costly, and thus require higher subsidies. Urban rail systems, suburban commuter rail services, and suburban bus operations are the sources of most of the recent increases in transit service, and these are more lightly patronized and more expensive to build and operate than traditional inner city local bus services. With federal subsidies to transit being steadily reduced, to fulfill their commitments for rail construction and suburban bus transit expansions, transit agencies are cutting back on cost-effective inner-city transit routes in order to use their resources to expand services that require higher subsidies and carry fewer riders than the services they are eliminating. For example, Taylor’s study shows that between 1989 and 1993, while San Francisco Muni was reducing service and losing ridership, twelve other transit operators in the Bay Area increased their service by 6.6% and their ridership rose by 14.8%. Because they were all smaller operators, however, their increases in ridership were smaller than Muni’s decrease, and there was a net decline in transit use in the Bay Area.

When confronted with rising deficits transit operators have often responded by raising fares, and in recent years large urban transit operators have lost more poor riders due to rising fares than they have gained middle class riders due to increasing suburban bus and rail services. In Los Angeles, the steady loss of service in inner city neighborhoods coupled with a proposal for a significant fare increase led to a high profile law suit on behalf of poor and minority riders. The case was settled out of court in October of 1996 when the MTA agreed to substantially increase inner city services and to limit fare increases over the coming several years. If they adhere to this commitment while continuing to build the rail system and continuing to increase suburban service, they clearly face a worsening fiscal situation.

Why do transit authorities continue to decrease their more cost-effective inner city bus services and increase less efficient rail and suburban bus services? The answer to this troubling question is to be found largely in the manner in which transit is financed. With federal subsidies to transit steadily declining since 1980, and state subsidies providing a small, though important, part of the money needed to operate transit systems, we have become increasingly dependent on local — mostly county — monies as the source of transit support. In nineteen California counties, for example, often informally called the “self help counties,” voters have approved sales taxes that provide much of the support for local transit operations, and in some cases for highway improvements as well. Sales tax revenues, of course, are produced to a

greater extent by middle and upper income citizens who have greater disposable incomes than poorer people. The tax base producing the revenue is largely suburban, and the transit authorities and boards include elected representatives of the areas producing the sales taxes. Naturally, those elected officials seek to extend service to their constituents who, in the end, do produce the largest share of the sales tax revenues that build and operate the transit systems. It now appears that a steady shift to sales taxes as the base of financial support for transit is compounding the problems of poorer, inner city residents. First, because sales taxes are regressive, central city minority poor people spend a higher proportion of their lower incomes paying for transit than do richer suburban residents. Secondly, because of the political demands of richer suburban constituencies, inner city neighborhoods are receiving an ever decreasing share of transit service. This is especially problematic because the services being added are less efficient and the services being deleted are more cost-effective.

While transit operators in California's largest metropolitan areas have become increasingly dependent on sales taxes for the support of transit services, a recent court decision has raised questions about the future of those taxes. All but one of the county taxes (the exception is Los Angeles County) approved by the voters have "sunset dates," meaning that they expire and that their extension in time will depend upon additional votes of the populace. In the case that has come to be known as the "Guardino" case, the court ruled that Santa Clara County was required to achieve a two-thirds majority in order to enact such a sales tax. All of the sales taxes approved to date were enacted with majorities that fell short of two-thirds. Thus, the future of sales tax support for public transit is precarious, and it is clear that we may be facing even greater fiscal challenges in the maintenance of transit service in the near future.

Conclusion: A Time for Critical Decisions in California Transportation

Postmodern society is often described in terms of major "restructurings" that change the rules of the game under which society has operated for a long time. Those restructurings are filled with indecision, and events are as likely to take unpredictable turns as they are to follow precedents. Right now, transportation policy, like so many other areas of public policy and private enterprise, seems poised on the verge of major restructuring, and yet it is difficult to predict where everything will end up. Disagreements over the directions that transportation policy should take are enormous, and competing positions are held with great passion.

The federal government is about to debate the reauthorization of the Intermodal Surface Transportation Efficiency Act (ISTEA) and while many advocate a continuation of policies enacted in this 1991 law, others suggest major shifts in direction. The elected leadership of California, including the Governor, are urging "devolution," by which they mean a reduction in Federal transportation taxes and federal transportation funding programs, with the states having the option to take over Federal revenue-production programs for use as they see fit. It is argued that this will enable transportation programs to be more closely tailored to the needs of individual states which have needs that differ greatly from one another. And it is

argued that the purpose of having a major national transportation program — the construction of a national highway system — has been accomplished and so it is appropriate and timely to return leadership responsibility and resources to the individual states. The Republican leadership is also urging greater reliance on private sector initiatives in transit and highways. This includes more competitively bid transit services and more privately financed road projects. But liberals fear devolution will lead to less attention to environmental priorities and social needs in transportation, and will lead to lower priorities for research, development and innovation.

Air quality considerations also have an important role to play in transportation policy in California, and in this area there are also large differences of opinion regarding the near term future. Some argue that the path to cleaner air is through reducing reliance on private automobiles and increasing the use of public transit, walking, cycling, and alternative fuels such as electricity. Others, however, point out that air quality has improved dramatically over the past decade without major shifts in travel habits, because automobile technology has steadily resulted in much cleaner cars. They predict that cleaner air will be attained by incremental changes in the automobile that will continue to be the dominant transportation technology for the foreseeable future.

Environmentalists and advocates of urban redevelopment see public transit as an important catalyst for change, and urge us to invest further in rail transit while creating transit-oriented developments that concentrate mixes of land uses at higher densities near the station sites. Critics of these approaches see these efforts as likely to be fruitless and extremely costly, and they predict ever decreasing densities and increasing reliance on singly occupied automobiles.

Telecommunications capabilities are playing an increasing role in our society, and appear to have a special role to play with respect to transportation. The movement of information is taking the place of physical movement in many ways, and this is further decentralizing cities as people telecommute rather than travel. On the other hand, greater distances between origins and destinations result in longer trips when we do travel. Many believe that telecommunications capabilities are changing the spatial and temporal patterns of travel but will increase rather than decrease the total volume of travel and its economic and social significance. Others are using telecommunications to enhance the capabilities of highway and transit systems through, for example, the provision of “real time” information on transit schedules and congestion levels on highways, and soon through automated in-vehicle navigation systems. Ultimately, these technological developments are expected to lead to automated highways.

These longer term issues are of national scope and form a backdrop to the current policy dilemmas for transportation in California. They are critically important for the future of transportation policy, but concern for them should not immobilize us right now. Without losing sight of these longer term objectives California transportation policy makers must get their house in order. We must give very high and immediate priority to the financial stability of our statewide highway

maintenance and upgrading program and we must be attentive to the steady decline of the quality and financial stability of urban transit operations in this state. We can and should rely primarily on user fees to finance the highway system, and more courageous political leadership can convince the public that higher fees in the form of gasoline taxes and time varying user fees on congested facilities are in the public interest. Higher highway user fees, more closely aligned with the costs of providing service, will also lead to more efficient use of existing highway system capacity and may contribute in some areas to increased use of transit and ridesharing.

The efficiency and quality of public transit can be dramatically improved. This will require far greater attention to efficient management of existing services and a much more cautious attitude toward service expansions into marginal transit markets. It will also involve a gradual shift toward increased competition between private and public operators and greater use of fares that vary with time of day and length of trip because those types of fares reflect the differential costs of operating different types of transit services. These changes will result in far more effective transit operations in the inner cities, simultaneously providing better service to those who regularly rely on transit and lessening the burden on the taxpayers of ever increasing transit deficits.

Notes

¹ Brian D. Taylor, "Public Perceptions, Fiscal Realities, and Freeway Planning: The California Case," *Journal of the American Planning Association*, Vol. 61, No. 1 (Winter 1995), pp. 43-56.

² Brian D. Taylor, *ibid.*

³ An important exception to this pattern is the Transportation Development Act (TDA), passed by the state legislature in the early seventies. The TDA extended the state general sales tax to gasoline and allocated one-quarter of one percent of all state sales tax revenues to public transit improvements in the counties in which the funds were collected. Though generally intended to fund public transit, funds raised under the TDA program may be used for highway improvements in counties having no "unmet transit need."

⁴ American Automobile Manufacturers Association, *Motor Vehicle Facts and Figures*, 1995 Edition, p. 85.

⁵ Brian D. Taylor, *op. cit.*

⁶ California Department of Business, Transportation, and Housing, *Final Report of the Commission on Transportation Investment*, January 1996.

⁷ Trucking Research Institute, *Rationalization of Procedures for Highway Cost Allocation: Final Report*, Prepared by The Urban Institute, Sydec, Inc., KT Analytics, and Jack Faucett Associates, Inc., October 1990.

⁸ Committee for Study on Urban Transportation Congestion Pricing, *Curbing Gridlock: Peak Period Fees to Relieve Traffic Congestion, Volumes 1 and 2*, Special Report No. 242, The Transportation Research Board, Washington, D.C. 1994.

⁹ Martin Wachs, "Will Congestion Pricing Ever be Adopted," *Access*, 4 (Spring 1994), pp. 15- 19.

¹⁰ Baldassare, Mark, "Traffic Puts Bay Area in a Jam: Residents Perceptions, Policy Preferences, and Commuting Patterns," unpublished manuscript, October 16, 1996.

¹¹ Brian D. Taylor, William S. McCullough, and Douglas B. Legg, "An Examination of Recent Ridership Declines Among the Largest US Transit Systems," Working Paper, Institute of Transportation Studies, UCLA, September 1996.