October, 2002

Dear Transportation Professional or Advocate,

Worldwide, many high-density places are growing. However, medium/lower density development is growing faster and now dominates most of the developed world's metropolitan areas. Moreover, in most cases, the medium/lower density areas now contain most of the people, business activities, and jobs. Unfortunately, they also suffer the worst traffic congestion, because their public transit services are critically unresponsive to the needs of their residents.

These facts of metropolitan area development are now better understood. However, while the increasingly wide diffusion of human settlement is seen as environmentally damaging by a growing number of concerned people, even strict zoning to curb sprawl and encourage higher densities (if such zoning were politically acceptable and successful) would not significantly alter the character of more than a few corridors or places in the vast and spreading metropolitan areas in the next 20 years. Transportation planning must recognize that the huge, increasingly traffic-congested medium/lower density areas are going to remain, and the traffic congestion their residents face will continue to grow unless they can be provided transit service that would be effective in meeting their needs.

Grossly Neglected Transportation Needs

Today, most travel in the medium/lower density areas is by auto. This is so because the high capital and operating costs of heavy rail, light rail, and large vehicle, automated mass transit systems make them too expensive to provide the many widely diffused points of entry and exit these areas must have. Even in high-density corridors, the high costs of these modes typically require substantial subsidies. While buses have relatively low capital costs, they tend to have high operations/maintenance costs and require subsidies. Also, buses either must compete with autos on crowded roads or need special lanes or expensive guideways. Consequently, current transit modes tend to serve only a few corridors in whole metropolitan areas, leaving huge zones with little or no effective public transit service. Yet, despite growing passenger loads on some transit systems, they still carry a persistently low proportion of total daily metropolitan area trips.

The automobile made the widely diffused metropolitan area feasible. Today, the privacy and freedom of movement that the automobile offers have overwhelmingly triumphed over mass transit alternatives, but at the cost of all-day congestion on more and more metropolitan area roads. Business and political leaders recognize that such congestion could well threaten the future economic and social viability of metropolitan areas. However, road building to keep up with growing traffic is not only more expensive, but its environmental damage, air quality impacts, and insatiable land requirements have become more troublesome political problems for policymakers. Also, while great sums are being invested in schemes to reduce auto use (such as telecommuting) and to speed traffic movement on congested roads, the traffic reduction values of these measures will be cancelled by the huge increases in auto usage projected for the next 15-20 years.

At the same time that auto use is growing worldwide, the number of people who cannot make effective use of this mode also is growing. This includes most youth up to age 16, many people with disabilities, and in the western nations and Japan, many people in the mushrooming population over age 75. With respect to youth, a considerable portion of daily peak hour road trips involve parents taking children to or from day care, sports activities, and lessons of one kind or another. With respect to the older population, many cannot drive or prefer not to drive after dark or during peak hour traffic. Without effective public transit available to them, they are often needlessly marooned and isolated, lacking convenient access to many services and amenities. Too often, inadequate public transportation also directly contributes to their unnecessary and premature dependency on others.

Remarkable Policy and Planning Gap

While public and private policymakers are certainly aware of these growing problems of widely diffused metropolitan areas***, they have yet to fashion an effective public transit response.*** Indeed, a most worrisome fact is that nearly all metropolitan area transit planning and projected transit investment, ***for 15 to 20 years out****,* is still focused on projects to expand current modes whose cost or inherent service limitations prevent them from being diffused widely. Unable to provide substantially more people with a cost- and service-effective alternative to auto use for gaining easy access to jobs, public and other services, educational programs, shopping centers, and places of recreation, these costly modes ***will not*** be effective in reducing crippling metropolitan area congestion. Spending additional billions to expand them would not overcome their deficiencies.

Strangely, remarkably little metropolitan area public transit planning, or ***even thinking***, has focused on promoting and encouraging the demonstration in day-to-day service of new transit modes that could be spread much more widely to give many more metropolitan area residents an effective way to meet their travel needs with less reliance on auto use. It is hardly surprising then that neither public nor private investment has focused on finding effective ways to meet these needs.

Essential Components of Needed Transit Systems

Policymakers need to focus new investment through public private partnerships on transit modes that have the following cost and service characteristics:

1. Capital and operations/maintenance costs low enough to permit entry/exit stations to be diffused widely throughout metropolitan areas. (Station spacing objective: ¼ mile apart)

2. Non-stop origin to destination travel on the new mode and, where traveler must transfer to another mode, brief cross-platform walk or wheelchair movement. All stations located on sidings off but near main line so that stopping vehicles do not impede traffic behind those destined for other stations.

3. Whole system accessibility for persons with disabilities.

4. Travel can be alone or with small party traveling together by choice. No one has to ride with strangers.

5. Simplicity of system use for all age groups. Traveler only needs to know number of exit desired. Any vehicle in system boarded anywhere in system can travel to any other station in system. Short waits for service. In most cases, vehicle waits for passenger who can board promptly and leave immediately.

6. Vehicles move singly rather than in trains of vehicles. In most cases, they travel on guideways located above road traffic without interaction with such traffic. They reduce road traffic by allowing large numbers of people to move in an off-the-road manner. Guideways are narrow and shallow so as to be visually inconspicuous and are constructed to be usable in all weather conditions, without need for costly heating systems to melt ice and snow.

7. System fully automated to reduce labor costs and assure high reliability.

Transit systems that could meet these requirements are not only feasible, but their development is well under way, and they could be built with components that are already patented. Increasingly, crippling traffic congestion and the unmet needs of growing segments of the population require urgent planning attention and investment in programs that could establish the most effective of these new transit concepts for practical daily use in our metropolitan areas. This objective could be realized in less than five years.

To help facilitate decision-making on such an urgently needed initiative, the Advanced Transit Association has conducted and offers to public and private sector policymakers a fresh appraisal of the developmental status of personal rapid transit, a concept that already has had over forty years of analysis and developmental work. The Association's central conclusion is that this very low cost, off-the-road transit mode could be highly effective in helping to reduce traffic congestion and providing conveniently available travel possibilities for many people who do not have use of autos and are not effectively served by current transit modes in today's widely diffused metropolitan areas.

Please accept the enclosed report, "Personal Automated Transportation: Status and Potential of Personal Rapid Transit," which covers these issues in depth and evaluates the systems now under development.

Sincerely,

Jerry Kieffer

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