

Merge Lanes Ahead

Conserving energy through land use and transportation planning.

Managing Congestion: Community Case Studies

Growing communities often blame developers for traffic congestion. Sometimes local elected officials want to show voters that government can solve congestion problems (by building roads) while passing the cost along to developers and newcomers. Unfortunately, building more roads seldom satisfies the demand, and alternatives to road construction – such as public transit – may not work because densities are too low and trip patterns too diffuse. But there are innovative alternatives to traffic congestion. The case studies in this fact sheet explore five of them:

two transit management strategies used by Phoenix, AZ and Norfolk, VA; transportation management associations; a trip reduction ordinance used by Pleasanton, CA; and a rideshare-parking management program in Montgomery County, MD.



This fact sheet is one of a series examining the relationships between transportation, land use and energy.

Other topics include:

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For more information, or to order additional copies of this fact sheet or any other fact sheet in the series, please contact: Julia "Alex" Magee, 1000 Friends of Florida, Post Office Box 5948, Tallahassee FL 32314-5948, or call (904)222-6277. Check out our home page at www.1000fof.org for additional information.

Innovative Transit Solutions

Public transportation systems are threatened by falling population and employment densities, low gasoline prices, widespread free parking, and cuts in federal, state and local subsidies. The result of these threats is often the "empty bus" syndrome. In an effort to economize, transit agencies eliminate routes and/or reduce hours and frequency of service. While these measures may increase the energy efficiency of the transit system in the short term, they ultimately result in long-term shifts from transit trips to energy-intensive auto trips.



Phoenix, Arizona and Norfolk, Virginia have avoided cutting transit service and saved



energy at the same time by using several innovative programs. Phoenix has a long-standing commitment to provide 24-hour a day, low-cost transit to central city neighborhoods. But late at night, the city found itself using 45-passenger buses to transport only a handful of people.

Changing to mini-buses would have been a good idea, but would have required expensive changes to the city's maintenance shop. Instead, Phoenix decided to put its under-used bus routes out to bid to taxi companies. Taxi companies put together a shared-ride service which used the subsidy payments formerly allocated to mostly-empty bus routes. The taxi cabs then offered reduced fares. Transit patrons found they could make the same trips for no more cost, and the city was able to improve the overall performance of its bus system.

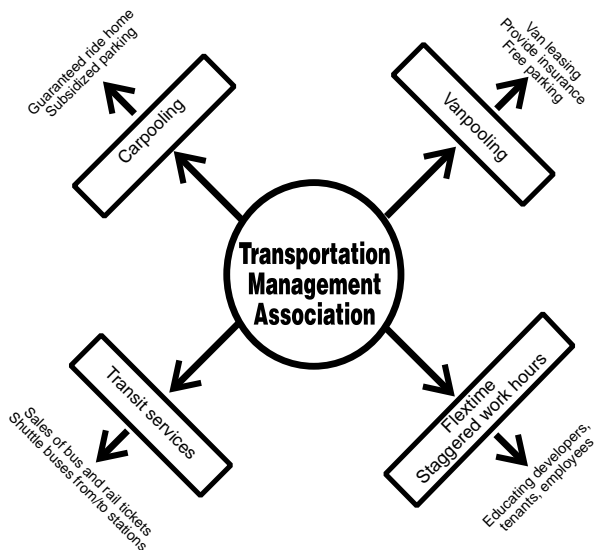
In Norfolk, Virginia, the Tidewater Regional Transit Authority (TRT) found that many of its sprawling suburban areas were not densely populated enough to justify traditional, fixed route transit service. Since the city was committed to serving a variety of areas, it instituted a "brokerage" concept which resulted in flexible use of a variety of services and vehicle types. Standard 40-passenger transit coaches are generally reserved for heavy peak-period routes. Two routes serving low-density parts of the city are contracted out to a taxi service which uses 12-passenger mini-vans. The result has been savings in both dollars (more than \$1 per passenger trip) and energy.

Transportation Management Associations (TMA's)

Another innovative approach to traffic congestion that goes beyond road building is the Traffic Management Association, or TMA. TMAs are partnerships between private businesses, institutions, government and commuters acting to prevent congestion from eroding the accessibility and market appeal that allowed their communities to prosper. More than thirty TMAs have been organized in the high-growth "edge cities" around Dallas, Los Angeles, New York, San Francisco, Washington, DC, Miami, Tampa and Orlando.

Each TMA is individually crafted around an area's most pressing concerns about the impacts of traffic on businesses, such as the ability to lease retail space, customer access and quality of life. While TMAs typically are given technical assistance by local government, their decisions are made solely by the private interests involved. These usually include developers, real estate agents, landowners, merchants, corporate employers and building tenants. In some cases, TMAs are formed by large institutions such as universities or hospitals which have large employment and/or client bases and high traffic profiles.

Anatomy of a TMA



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Since they aren't hampered by bureaucratic constraints, TMAs can do many things government can't. Because they bring together private businesses with similar agendas, TMAs can forge potent partnerships that can be transportation advocates within a community.

A TMA's planning process frequently begins with a "traffic audit" of current commuting patterns, a parking inventory, and a review of company policies. Next, the TMA sets goals for reducing traffic congestion or parking problems and establishes programs such as ridesharing, vanpooling, shuttle buses, staggered work-hour scheduling, preferential parking, parking fees, and marketing programs to cut trips and solve parking problems. TMAs often create "transportation stores" which collect and dispense useful information to area employees about transit and ridesharing services. Some offer rideshare matching services, vanpool subscriptions, and discounted transit passes. TMAs often organize campaigns to encourage local government to provide more public investment in traffic improvements and additional transit services and amenities. In some cases, they raise funds to leverage increased public investment. In a few cases, these goals have led TMAs to collect hefty fees from their members based on square footage or number of employees.

Pleasanton (CA) Trip Reduction Ordinance

Another innovative approach to congestion is the trip reduction ordinance developed by Pleasanton, California in 1985. While the city had ordinances limiting development to levels that could be served by local highway capacity, they weren't enough. Facing development moratoria, a task force formed and came up with a local trip reduction ordinance.

The ordinance deals with traffic problems by not only managing the new traffic from future development, but also by reducing traffic generated by existing establishments. It places

the responsibility of managing traffic problems not just on developers and newcomers, but on all owners, leasers, and tenants of private office and retail buildings. Newcomers and existing employers work together to devise their own strategies to cut the demand for travel. The city offers technical assistance.

Pleasanton's trip reduction ordinance requires that property owners, developers and businesses with more than 50 employees cut peak hour trips by 45 percent over four years. Because performance is measured against the benchmark of 100 percent single-occupant auto commuters, employers who already have started ridesharing or other "demand management" techniques receive credit towards reaching the community's goal.

The ordinance requires annual travel surveys of commuters, and designated "workplace coordinators" to encourage measures like ridesharing, public transportation, and staggered work hours. It also encourages employers to provide incentives to cut the number of single occupancy cars during peak hours. The city doesn't enforce the ordinance. Instead, a task force drawn from large employers and complexes and the downtown merchant's association handles monitoring and enforcement. There are fines for businesses that don't provide enough information to measure their performance. Two years after its implementation, the ordinance had reduced trips by 36 percent, which exceeded its short term goal of 25 percent reduction.

Combining Ridesharing with Parking Management

Ridesharing is one of the simplest energy-saving alternatives to driving alone. It is cheap, flexible and personal and is most successful when parking is limited or expensive, roads are congested, and/or employers provide computer

matching assistance and incentives like reserved preferential parking spaces close to the door.

There are two popular forms of ridesharing – vanpools of seven to 15 passengers, and carpools of two to six passengers. Carpooling is most successful for moderate-length work trips of eight to 15 miles. Vanpools are more successful for longer trips of 15 to 30 miles. A vanpool carries more passengers than a carpool, and therefore is more energy-efficient. However, a study conducted by the Institute of Transportation Engineers found that carpools are more prevalent because they are easier to form and sustain.

Montgomery County, Maryland has linked ridesharing assistance with parking management to reduce both energy use and parking needs. The county’s zoning ordinance allows developers to reduce the minimum number of off-street parking places by fifteen percent when an employer agrees to enroll employees in a county-sponsored

rideshare program or provides other incentives such as shuttle busses or transit pass discounts. Since the cost of constructing a single parking space averages about \$2,500 for surface lots and \$8,000 for multi-level garages, the developer has a very strong incentive to take advantage of the rideshare program.

Programs like this can save energy while reducing costs for both developers and drivers. Without ridesharing incentives, suburban commuting trips average about 1.1 persons per car. A typical 100,000-square-foot office building houses about 400 employees. Parking for these employees would require 325 spaces

on an average day. If twenty percent of the employees form carpools with four persons per car, parking requirements would drop by 45 spaces, to 280. Construction cost savings to the developer would range from \$112,500 to \$360,000, depending upon whether the spaces were in a surface lot or a multi-level deck. In a surface lot, there would also be a savings of about half an acre of land. Maintenance cost savings would be approximately \$20,000 per year for 45 spaces. From the employee’s standpoint, each four-person carpool would save approximately \$1,000 per year in auto expenses. Energy savings would be almost 1 billion BTU’s annually (more than 8,500 gallons of gasoline)!

These are just a few of the many innovative programs which communities in the U.S. have been using for years. They offer enormous potential to re-invent our transportation and land use planning practices, save tax money, save energy, and – most importantly – to create a sustainable future for Florida.

References/Resources

- Ferguson, Erik and Diane Davidson. 1995. Transportation Management Associations: An Update. *Transportation Quarterly* 49, No. 1.
- Ferguson, Erik. 1992. *Transportation Management Associations in the U. S.* Washington, DC: U. S. Department of Transportation.
- U.S. Congress. 1995. *Employer Trip Reduction Programs.* Washington, DC: U. S. Government Printing Office.

To find out more about innovative transportation strategies being used in communities around the country, check these addresses on the World Wide Web:

- www.caltrans.com
- transit.metrokc.gov
- www.libertnot.org
- biggulp.callamer.com
- flmat.cob.fus.edu
- www.smart-traveler.com
- www.quiknet.com/roseville



Carpooling vs. Vanpooling

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| <ul style="list-style-type: none"> • 2 to 6 people • moderate work trips, 8 to 15 miles • easier to form and sustain | <ul style="list-style-type: none"> • 7 to 15 people • longer trips, 15 to 30 miles • more energy-efficient |
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