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MUNICIPAL IMPLEMENTATION TOOL #6:
PARKING MANAGEMENT STRATEGIES

Delaware Valley Regional
Planning Commission

MAY 2004

This brochure is the sixth in a series of "implementation tools" brochures based on the recommendations in *Horizons 2025*, the region's long-range plan, prepared and adopted by the Delaware Valley Regional Planning Commission (DVRPC). An introductory brochure, *Horizons 2025 Implementation: Municipal Tools and Techniques* is also available and describes numerous planning tools that municipalities can use to better plan their futures. This brochure covers basic strategies to balance the supply and demand for parking. Although parking is often dealt with separately from transportation and development issues, it can be an important part of planning for growth within a community and region.

Why Balancing Parking Supply and Demand Matters

As any frustrated customer who has just spent fifteen minutes looking for a parking space will tell you, providing an adequate supply of parking is extremely important. However, in an effort to do so, many cities and towns enact regulations which result in much more parking than is needed. And just as a lack of parking can cause frustration, oversupply can hurt a community's competitiveness by driving up development costs and encouraging auto usage.

Many communities attempt to ensure adequate parking supply through minimum parking requirements, which often mandate more parking than is needed. This forces developers to devote land to parking which could be more profitably used in other ways, decreases density, and encourages them to seek greenfield sites with plenty of cheap land for parking. These effects in turn create and encourage an automobile-oriented environment, where walking and transit use are impractical and unpleasant.

Many cities and towns do not address parking beyond the implementation of minimum parking requirements. However, there are a number of other ways to **accommodate and manage parking demand**. This brochure outlines two types of parking strategies. The first type is strategies which can be used to accommodate existing and future parking demand more effectively. The second type is strategies that can be used to **reduce parking demand**, thus freeing up land for other uses.

Parking demand varies from place to place, based on a number of factors. These include: the price of parking (people use parking more when it is free or cheap); the provision of alternate modes of transportation; the amount and quality of pedestrian networks; and demographics (poorer households tend to own fewer cars). Certain uses may also require more parking than others.

Many municipalities base their parking requirements on guidelines from the Urban Land Institute (ULI) and the Institute of Transportation Engineers (ITE), or the ordinances of neighboring communities. These guidelines and general standards can be useful tools, but should not be the sole basis for parking requirements in a municipality. Instead, each community should determine its individual need for parking and tailor standards to specific uses and areas. The most common way to do this is through surveys, including counting cars. If car counting is impractical, municipalities can also use employee mode-share surveys to determine the average level of demand in a certain area and for a certain use.

Determining parking demand is not an exact science. Because of this, many communities opt for supplying too much parking over supplying too little. Another option, however, is to manage the existing parking supply more efficiently, or to adopt strategies aimed at reducing parking demand. In this way, cities and towns can preserve the special qualities of their communities rather than requiring acres of asphalt to accommodate cars.

Where alternatives exist, reducing the supply of parking can encourage the use of other modes of transportation and better utilization of current parking facilities. Reduced supply also makes it easier to price parking and thus reduce demand. The following are some steps municipalities can include in their zoning ordinances to help reduce parking demand.

1. Set Maximum Parking Requirements

Maximum parking requirements can apply to individual developments or as a cap for an entire district. The use of such requirements must be carefully thought out, and just as with minimum requirements, municipalities should be careful not to simply copy other communities' regulations or national standards (unfortunately, lenders can be wary of financing projects with less parking than usual, regardless of local standards or planners' goals).

Maximum parking requirements can be an effective tool to reduce parking demand, but they should be used in conjunction with other transportation demand management (TDM) strategies. Maximum parking requirements will work best in areas where transportation alternatives, such as transit and pedestrian facilities, are well-provided.

2. Price Parking

Variable pricing, which increases during peak hours and in places with higher demand, encourages longer-term parkers to choose lower priced and more remote facilities, leaving higher priced central facilities available for high-turnover traffic. These strategies cause drivers to switch to other modes and to use parking facilities more efficiently.

3. Unbundle Parking

The concept of unbundling parking generally applies to residential developments, where the price of a unit often includes the cost of parking. Separating the two allows residents to decide whether or not they need a parking space. In areas with good transit and pedestrian facilities, this can encourage households to reduce the number of cars they own or to choose not to own a car at all. This reduces the cost of housing for families that may not own a car. Unbundling parking has multiple benefits: reducing automobile usage, increasing transit use, and allowing more land to be used for development or open space, thus increasing the amenities in a community.

4. Offer Commuter Benefits From Area Employers

Commuter benefits such as parking cash-out, travel allowances, and transit vouchers allow employees to use money that would otherwise be spent on parking to be spent on alternate means of transportation. Parking cash-out and travel allowances are both based on pricing parking. With parking cash-out, employees are given the cash equivalent of the price of their parking space if they agree to give it up. With travel allowances, all spaces are priced and employees are given a payment to cover commuting costs. They can use the money to pay for a parking space or for another mode.

Transit fare vouchers can encourage employees to drive less. In the Delaware Valley region, DVRPC administers the TransitChek program, which can be provided to employees either as an employer-paid benefit (in which case it is tax-deductible as a business expense) or as a pre-tax payroll deduction, which is exempt from federal taxes. Employees receive vouchers of up to $100 per month, which can be used to purchase transit tickets, tokens, and passes. This program can also encourage transit usage aside from commuting, since transit passes purchased with TransitCheks are valid at all times.

5. Improve Pedestrian, Transit, and Bicycle Facilities

The improvement of pedestrian, transit, and bicycle facilities can encourage people to use these transportation modes rather than driving. Facilities can include bicycle lanes and bike parking; pedestrian amenities; and frequent and reliable transit service near or in major activity centers. These improvements make the use of these modes more attractive and create a lively streetscape which draws more people to an area.

The following pages explain various strategies communities can implement to accommodate parking demand.

1. Set Minimum Parking Requirements

The main appeal of minimum parking requirements is that they ensure an adequate supply. Many communities require construction of all spaces at the beginning of a development, since additional parking at a later date can be expensive to supply and the developer may no longer be involved in the project. However, minimum parking requirements often set supply far above demand. In order to avoid this, it is helpful to combine limited minimum requirements with other strategies, or in some cases to do away with minimum requirements altogether in favor of other approaches.

2. Provide On-Street Parking

On-street parking appeals to motorists because it is visible and convenient. It serves multiple destinations, uses less space than off-street parking, serves as a buffer between pedestrians and moving cars, and slows down traffic, creating a more pedestrian-friendly environment. However, there is limited space for on-street parking and it competes with other uses of street space, such as traffic lanes, bike lanes, and sidewalks. Although on-street parking on its own is unlikely to provide enough parking for a commercial center or most residential neighborhoods, it can be used successfully in conjunction with other strategies.

3. Provide Parking Information to Users

The provision of information on the availability, location, and price of parking aids users in finding parking, and spreads parking demand among multiple facilities. This information can be provided through signs, brochures, and websites, and can be incorporated into general marketing material. Another solution is to provide real-time information on the location of available parking spaces. This is often done through the use of digital signs located along main thoroughfares that direct motorists to nearby parking facilities and display the number of available spaces.

4. Regulate Parking

Parking regulations can aid in the efficient use of street space and parking resources. Some aspects of parking that can be regulated include time, users, types of vehicles, and on-street parking. Regulation of time and users encourages the efficient use of facilities, reserving high-demand spaces for shorter term, high-turnover users, while promoting the use of more remote spaces by longer-term parkers. Regulation of types of vehicles and on-street parking improves traffic flow, by limiting the on-street parking of large vehicles and prohibiting on-street parking on major roads during peak travel times in order to provide extra traffic lanes.

5. Share Parking

Parking requirements can be reduced by as much as 30% to 50% through the accommodation of parking in shared garages or lots. Shared parking, including on-street parking, is especially useful in "park once" environments, where customers park their car in one place and then walk between destinations. It works well when the hours of operation for various uses are complementary, the peak hours of use do not overlap, and when parking facilities are located within a reasonable distance of destinations. Often, facilities are built and managed by the city or municipality, but are funded by in-lieu fees paid by developers opting not to build as much on-site parking. Written agreements between businesses can minimize the potential for conflict and ensure that parking is available for all businesses and customers.

6. Establish Remote Parking

Located at the fringes of a commercial, mixed-use, or office district, remote parking sites are used both by long-term daily parkers and to accommodate spillover during periods of unusually high peak demand (such as the holiday shopping season). The use of remote parking facilities is encouraged by the provision of information on parking availability, such as signs, maps, and brochures. Through appropriate pricing policies, parking facilities on the fringe are made cheaper than centrally located facilities. In some cases, regulations requiring the use of remote parking may be applied. Users of remote facilities should be provided with a pleasant, safe and efficient way to get from their cars to their destinations through the provision of shuttle services, free transit zones, or improved pedestrian connections.

7. Don't Build Spaces All At Once (Reserve Parking)

Municipalities can allow developers to build less than the minimum amount of parking at the outset, provided open space is reserved which, if needed, can be converted to parking at a later date. Upper Merion Township, Montgomery County, allows developers to construct 75% of the minimum number of spaces, with the understanding that the remaining 25% will be added if the Township's building official determines the existing parking to be inadequate. This strategy has the advantage of restricting the supply of parking, lessening the amount of impervious surface created by a development, and adding to the greenspace within the development.

Transit-oriented development (TOD) refers to commercial or residential development located within easy walking distance of a transit stop and designed to maximize access to and from transit. Parking strategies for TOD should enhance the pedestrian- and transit-friendly nature of the area.

TOD as a Parking Demand Reduction Strategy

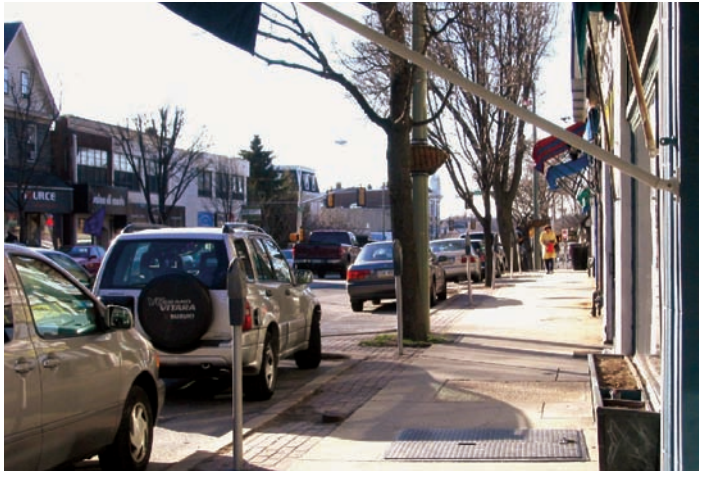
The mixed-use environment of TODs facilitates trip-chaining, which reduces parking demand. Shopping districts with high-density residential areas nearby can also attract a significant amount of pedestrian traffic from these neighborhoods, enabling the area to accommodate more shoppers with fewer parking spaces.

Reducing Parking Supply to Support TOD

Key to creating transit-*oriented* development rather than simply transit-*adjacent* development is the provision of a pedestrian-friendly environment - ensuring a safe and pleasant walk from the transit station to a person's destination. In order to facilitate this, parking should be confined to a small area and too much low cost parking should be avoided, as it encourages people to drive rather than to walk, cycle, or take transit.

Parking Regulations and TOD

Parking regulations should support the aim of reducing parking supply in TOD-designated areas, and should mitigate spillover impacts in adjacent neighborhoods. Spillover impacts can be reduced through the use of residential parking permits on neighborhood streets. The two case studies that follow describe creative strategies communities have used to manage parking demand (Lower Merion) and supply (Paoli).



Case Study:
Lower Merion Township Parking Study

Contact: Sgt. Christopher J. Polo,
Lower Merion Police
Phone: 610-645-6219
E-mail: cpolo@lowermerion.org

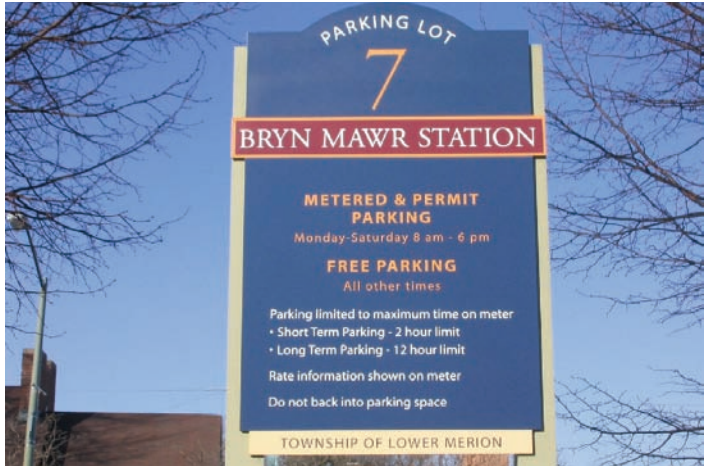
In 2001, Lower Merion Township, Montgomery County, released a parking study which made a number of recommendations aimed at managing the parking supply in the township more effectively. The measures outlined below focus on improving pricing strategies and regulations in order to maximize shared parking.

Parking Meters

The township has implemented a 2-hour limit for short-term meters and a 12-hour limit for long-term meters. Short-term meters are located both on-street and in municipal lots, and long-term meters are located primarily in the municipal lots. This system promotes turnover of high-demand on-street spaces. Employees of area businesses are encouraged to park in municipal lots. Color-coding is used to aid users: short-term meters have white or silver poles, and long-term meters have red poles.

Permit Parking in Municipal Lots

The parking study found high demand in lots with permit parking, while metered spaces in other municipal lots were underutilized. There are now 10 permit lots in the township, some with a mix of meter and permit spaces. The Township also raised the permit parking fee from $90 to $180 every six months. This rate is below the fee charged by private garages, as well as being less than the cost of all-day metered parking.



Case Study:
Special Paoli Development District

Contact: Mimi Gleason,
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Phone: 610-408-3602
E-mail: mgleason@tredyffrin.org

Tredyffrin Township, Chester County, has created a special overlay zone aimed at encouraging compact development and protecting the special character of Paoli's central business district. Developers may submit a parking study demonstrating less need than the required minimum number of spaces, and request a reduction of up to 50% of the requirement. The Board of Supervisors may authorize the reduction provided one or more of the following conditions are met:

- A study of the shopping habits of customers at similar establishments shows that at least 50% of the customers of the proposed development will patronize one or more surrounding establishments, parking once and walking between destinations.
- Within 800 feet of the entrance there are public off-street spaces equal in number to the requested parking reduction. These spaces must be available during peak hours. Private spaces can be included with evidence of a written agreement with the owner.
- Due to the special character or hours of operation of the proposed development, the use does not need the required number of spaces.
- The developer pays to construct public parking spaces at an alternate site.

The American Planning Association

www.planning.org

APA is the leading organization for planners across the country, and is dedicated to advancing the art and science of planning to meet the needs of people and society. APA publishes journals, periodicals, and books containing information about best practices and trends in the planning field. They have published several Planner's Advisory Service reports and memos on parking, as well as articles in *Planning* magazine and the *Journal of the American Planning Association*. For more information, call 312.431.9100.

Victoria Transport Policy Institute

www.vtpi.org

The Victoria Transport Policy Institute is a research organization which provides information on innovative and practical tools for solving transportation problems. Their *Online Transportation Demand Management Encyclopedia* includes detailed information on parking management strategies.
For more information, call 250.360.1560.

Urban Land Institute

www.uli.org

ULI is a non-profit research and education organization, dedicated to providing responsible leadership in the use of land and enhancing the built environment. ULI publishes several books on parking strategies, including *Shared Parking*, *Parking Standards*, and *Dimensions of Parking*. They also publish case studies and a quarterly journal, *Urban Land*. For more information, call 202.624.7140.

Institute of Transportation Engineers

www.ite.org

ITE is a scientific and educational organization, focused on providing information to transportation professionals (engineers, planners, and others) about innovations, best practices, and current research on the provision of safe and efficient transportation systems. The *ITE Journal* details the results of research on transportation. ITE also publishes a number of books on parking, including *The Parking Handbook for Small Communities, Parking Perspectives: A Sourcebook for the Development of Parking Policy*, and *Shared Parking Guidelines*. For more information, call 202.289.0222.

SOURCES

Livable Places. *Rethinking Parking*. Reducing Barriers to Building Livable Communities Fact Sheet. www.livableplaces.org

Millard-Bell, Adam. "Putting on their Parking Caps." *Planning*. April 2002.

Morris, Marya. American Planning Association. *Creating Transit-Supportive Land-Use Regulations*. Planning Advisory Service Report No. 468. December, 1996.

Shoup, Donald C. "An Opportunity to Reduce Minimum Parking Requirements." *Journal of the American Planning Association*. 61:1 (1995): 14-28.

Shoup, Donald C. "The Trouble with Minimum Parking Requirements." *Transportation Research Part A*. 33 (1999): 549-574.

Victoria Transport Policy Institute. "Shared Parking: Sharing Parking Facilities Among Multiple Users." *TDM Encyclopedia*. 2003. www.vtpi.org/tdm/tdm89.htm.

Victoria Transport Policy Institute. "Parking Solutions: A Comprehensive Menu of Solutions to Parking Problems." *TDM Encyclopedia*. 2003. www.vtpi.org/tdm/tdm72.htm.

Created in 1965, the **Delaware Valley Regional Planning Commission (DVRPC)** is an interstate, intercounty and intercity agency that provides continuing, comprehensive and coordinated planning to shape a vision for the future growth of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties, as well as the City of Philadelphia, in Pennsylvania; and Burlington, Camden, Gloucester and Mercer counties in New Jersey. DVRPC provides technical assistance and services; conducts high priority studies that respond to the requests and demands of member state and local governments; fosters cooperation among various constituents to forge a consensus on diverse regional issues; determines and meets the needs of the private sector; and practices public outreach efforts to promote two-way communication and public awareness of regional issues and the Commission.

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