4. Parking Management Tool Box

Over time, the parking system in Old Town will be subject to ever-evolving parking demands; it will be influenced by new policies; new technologies will help to resolve existing issues; and users will have new concerns. The development of strategies and the implementation of specific measures will help to ensure that the parking system continues to be able to accommodate the changing demands of its users. **Table 4-1** contains a starter tool box of parking management measures for consideration that can be used as a reference when considering the ways in which to address future parking concerns and issues, maximize the parking system, and increase/maintain its ease of use.

Table 4-1: Parking Management Toolbox

Measure	Description	Applicability
Parking Wayfinding	Parking wayfinding or signage systems provide information on the location and type of parking in an area to travelers. Typically, parking wayfinding is combined with other destination-oriented signage in an area in a standardized format. Wayfinding signage should clearly communicate the location of parking, the name and type of the facility, whether it is public or private, its hours of operation, and its fee structure and methods of payment. Wayfinding should be located on key ingress routes in an area. Typically, the level of information provided increases as proximity to a parking facility decreases. For example, in the outskirts of an area, wayfinding may only provide directional guidance to public parking, whereas in the immediate vicinity of a facility, the name (ex. City Center Parking Garage), use (Public), and rate (daily, hourly, free, etc.) may also be provided. Parking wayfinding is typically used in conjunction with parking facility branding and can be combined with elements of a parking guidance system.	• Reduces extraneous traffic circulation • Informs unfamiliar visitors of parking locations
Parking Facility Branding	Parking facility branding is used to standardize the way in which a facility's use and availability is communicated to the public. In most parking systems, the nearly universally recognized "P" is used to communicate a facility's status as entirely or partially publicly accessible. Parking branding is often used in conjunction with parking wayfinding and guidance systems; however, parking branding can be successful without the presence of a comprehensive wayfinding system.	• Encourages and reinforces use of off-street public parking • Identifies publicly available parking
Facility Signage	Parking facilities should have signage that clearly indicates use, hours of operation, and whether parking is free or if a fee is charged. Ideally, signage for facilities of similar use (i.e. Public or Private) should be similar. Parking facility signage is an essential element of parking wayfinding systems and is a key part of parking facility branding.	

Table 4-1: Parking Management Toolbox (Continued)

Measure	Description	Applicability
Parking Guidance System	Parking guidance systems are used to provide travelers information on the availability of parking within a system and within individual facilities. These systems are typically composed of dynamic information delivery devices that convey information about the system and individual parking facilities and standard static signage. Traditionally, guidance systems have been designed to deliver information through dynamic message signs and highway advisory radio and similar broadcast technologies. More recently, information is being delivered through 511 and similar telephone-based systems and through the internet via handheld mobile devices. When implemented comprehensively, parking guidance systems can maximize utilization and increase overall system occupancy by 5- to 10-percent. Parking guidance systems are typically used to supplement wayfinding and branding.	• Reduces extraneous traffic circulation on streets • Informs people of available parking • Optimizes parking system • Event management • Parking system monitoring
Real-time Parking Facility Information	Modern parking revenue control systems in parking facilities can provide information to users as to the number and location of parking spaces within individual facilities. They can let users know how many and where spaces are available, or that a facility is full. Data from revenue control systems configured to provide real-time information is an essential element of parking guidance systems.	
Multi Space Meters (Pay-and-Display)	Multi space meters are a relatively recent advance in parking technology. Instead of a single parking meter for each space, one machine can be used to control six to ten parking spaces. The machines are generally solar powered, using an internal battery, and they accept credit cards, coins, and bills. Where parking rates are higher, many transactions have been found to be with credit cards, which improves the security of cash management. Multi space meters have the ability to offer different rates at different times of the day and on different days of the week. Multi space meters can be used to simplify enforcement and can be used with mobile phone technology to allow a person to check on the status of their parking limit and add additional time if needed. Multi space meters can help to clean-up pedestrian spaces by allowing for the removal of the multitude of single-space meters. One unintended drawback to the installation of multi space meters has been the loss of meters that were used to lock bikes.	• Increases on-street parking supply • Simplifies enforcement • Improves cash management security • Provides flexibility in on-street parking management

Table 4-1: Parking Management Toolbox (Continued)

Measure	Description	Applicability
Pay-on-Foot	This method of parking revenue collection (payment) is integrated with a parking revenue control system for lots and garages. Pay-on-foot involves a parker driving into a parking facility and receiving a ticket at a gate, parking and taking the ticket with them, and then paying at a machine at the exit, in the lot, or in the garage (typically in an elevator lobby or stairwell on a landing) for the parking based on time spent in the facility. Pay-on-foot machines operate similar to pay-and-display machines in that they accept coins, bills, and credit transactions. Pay-on-foot machines also can operate time-of-way and day-of-week programs to offer a range of parking rates to suit localized conditions. When used in parking lots or garages, pay-on-foot technology allows facilities to be operated and suitably enforced without an attendant. Typically, entrance and exit transactions are monitored through the use of CCTV cameras.	• Reduces need for parking attendants • Provides for alternative payment methods • Allows for flexible facility operations
Single-Space Meters	Typically coin or park card operated, single-space meters are simple to install and relatively easy to manage. They offer a place to securely lock a bicycle, even though this is not their intended purpose. Some localities are experimenting with the use of single-space meters to control parking and offer electricity to plug-in vehicles.	• Simple way to collect parking cost • Easily understood by public
Credit Card Payment Acceptance	Offering credit card transactions at parking facilities can improve an area's ability to raise parking rates without shifting parkers to other facilities. As parking rates increase, cash payment becomes less and less attractive and is problematic from a collection, management, and security perspective.	• Improves cash management • Supportive of higher parking rate structure
Free Parking	Free parking is typically not provided in core areas of urban places since it tends to increase parking demand. It is more frequently provided in remote facilities.	• Encourages parking
Remote Parking	In instances where sufficient parking cannot be provided within a high demand area, remote parking can be a viable option. Simply providing adequate parking at the periphery of an area is not typically enough to attract parkers. It is often necessary to offer remote parking at a reduced rate (as compared to more convenient parking) and with accompanying transit services (typically free) to connect with the local area.	• Adds parking supply to an area where land is expensive or difficult to provide • Shifts parking demand

Table 4-1: Parking Management Toolbox (Continued)

Measure	Description	Applicability
Mechanical/Automated Parking Solutions	Mechanical parking solutions include the wide range of mechanical and automated stacked parking systems. These systems are effective in space-constrained situations and where traditional parking solutions would be inefficient.	• Increases parking supply on constrained sites
Shared Parking	Shared parking involves making all or a designated number of spaces within a parking facility available for use by a designated group of parkers (employees, residents, shoppers, visitors, etc.). Sharing parking increase a facility's overall utilization during more periods of the day, thereby maximizing the parking system and reducing the number of new spaces that would otherwise be constructed for a single use.	• Maximizes parking system
High Fixed Hourly Rate Parking	Whether provided on-street or in a parking garage, the intention of high fixed hourly rate parking is to encourage turn-over and discourage long-term parking. High hourly rate parking is typically located along prime sections of retail streets and is typically the most convenient parking to a destination. The rate for this type of parking should be noticeably higher than other parking facilities. High hourly rate parking discourages parking by employees in areas where high turnover is important.	• Encourages turnover and discourages long-term parking
High First Hour Rate Parking	This type of parking is typically located in off-street lots and garages. Parking with a relatively high first hour or half hour charge and then significantly lower rate for subsequent hours encourages people to park once and rewards them for this behavior by offering value for a long stay. Typically, this type of parking is somewhat less convenient to a destination than high fixed hourly rate parking.	• Encourages people to park once and walk to various destinations • Encourages long-term/daily parking
Low First Hour Rate Parking	This type of parking is typically located in off-street lots and garages. Parking with a relatively low first or two hour rate and increasing hourly rates thereafter encourages shorter term parking and ensures that parking is available throughout the day by creating turnover. This type of parking can be used as an alternative to high fixed hourly rate parking.	• Encourages short- to mid-term parking duration

Table 4-1: Parking Management Toolbox (Continued)

Measure	Description	Applicability
Low Daily Rate Parking	This type of parking is typically provided in less convenient locations and larger facilities than higher rate parking. This type of parking is intended to serve longer term parkers (employees and visitors).	• Adds parking supply for long term parkers (such as visitors or employees) • Decreases demand for on-street parking spaces
Parking Rates by Time-of-Day/Day-of-Week	In areas with different weekday and weekend day and evening characteristics, it is often beneficial to establish parking rates/time limits by day of the week and time of the day. For example, in an area with few daytime retailers, it may be beneficial to allow longer duration street parking at a relatively low rate during business hours and then to increase the parking rate and reduce the duration during evening hours to ensure that employees vacate parking that is most valuable for customers. Conversely, in areas with a significant retail presence, it may be advisable to establish short duration (30 minutes to one hour maximum), high rate curb parking during normal business hours and then somewhat longer duration (one to two hour maximum) high rate curb parking during a portion of the evening hours.	• Manage parking demand at different times of day and days of the week
Valet Service	Valet service involves the parking of vehicles by an attendant (valet) in a parking lot or garage. This service is typically offered for a premium fee (above the cost of self-parking at a facility). Vehicles parked in valet-designated areas are often double (or more) parked, which can allow a normally self-parked facility to accommodate a much higher number of vehicles in the same space.	• Provides the convenience of "front door" parking but uses less attractive off-street parking spaces
Area Permit Parking	This type of parking offers permit holders a specific set of privileges over non-permit holders. Privileges for permit holders typically include unrestricted parking by time and location. Non-permit holders parking in the same area are often duration and time-of-day restricted. Most often permit parking is used in neighborhoods adjoining retail and employment areas to prevent on-street parking spaces from being consumed by visitors. Time limits of one to four hours are typical of permit zones. In many permit zones, parking is not allowed by non-permit holders during evening and early morning hours.	• Shares use of parking spaces • Protects residents' parking

Table 4-1: Parking Management Toolbox (Continued)

Measure	Description	Applicability
Transit Service	When provided at an appropriate frequency (short enough headway), transit can extend the reach of parking facilities. Appropriate headways for services need to be determined on an area-specific basis; however, headways of less than 15 minutes are generally desirable. Transit services operating within a specific district are often subsidized by businesses within the area in order to reduce the burden on the locality, offer a low fare (or no fare), and increase service frequency. Some residential parking permits prohibit non-permit parking entirely.	• Reduces parking demand • Extends the reach of parking facilities
Free or Reduced Price Transit Passes	This measure can be used to reduce parking demand. By offering employees and/or visitors reduced transit fares or free rides, often, longer-term parking demand can be reduced at a primary destination.	• Reduces parking demand • Increases transit attractiveness
Bicycle Parking	Bicycle parking is most effective when it is provided convenient to destinations in a secure location. Short-term parking should be located where it is convenient to the front door of a facility whereas longer term parking can be located in conjunction with parking structures or lots in secure off-street locations.	• Reduces vehicle parking demand
Head-in Angle Parking	This type of parking involves a vehicle pulling forward into a curb space and parking at a set angle, typically 30, 45, or 60 degrees. In this arrangement, vehicles reverse into intersecting traffic. Reversing out of a parking space can be problematic due to sight distance limitations and the speed and volume of intersecting traffic. This type of parking can double the number of on-street spaces in the same distance as parallel on-street parking, but requires approximately 20 feet of street width.	• Provides more parking spaces than parallel parking
Reverse-in (Back-in) Angle Parking	This type of parking involves a vehicle driving past and then reversing into a curb space at a set angle, typically 30, 45, or 60 degrees. Studies have shown that this type of parking is easier for vehicles to enter into and depart from than parallel parking. When leaving a parking space, vehicles pull forward into intersecting traffic. Compared to the reverse movement needed to depart from head-in angle parking, the movement out of a reverse-in angle parking space is safe and easy. This type of parking can double the number of on-street spaces in the same distance as parallel on-street parking, but requires approximately 20 feet of street width.	• Provides more parking spaces than parallel parking • Safer than head-in angle parking

Table 4-1: Parking Management Toolbox (Continued)

Measure	Description	Applicability
Street Reconfiguration	Where parking is at a premium and there is the ability to reallocate space between curbs on a street, the reduction in the number of travel lanes has the ability to create space for new or reconfigured on-street parking. Where sufficient width is available, parallel parking could be converted to head-in or reverse-in angle parking.	• Reallocates street space • May reduce street width for vehicle travel lanes
Structured Parking	Parking structures vary in size, configuration, and construction method. They generally include ramped vertical circulations systems for vehicles and elevators and stairs for pedestrians. Parking structures can be free-standing or can be incorporated into buildings above or below ground.	• Increases parking supply