4 Transportation, Circulation, and Parking

Old Town Alexandria – and the Waterfront Small Area Plan (Plan) planning area in particular – is predominantly mixed-use and pedestrian-oriented, having been used by city residents, businesses and visitors for more than 400 years. In addition to walking, visitors and residents to the waterfront use all forms of travel ranging from personal vehicles to water taxis, motorcoaches, trolleys, buses and bicycles, giving the waterfront a true multi-modal transportation system.

Testing the Plan's proposed changes with the area's multi-modal transportation and parking systems has been an essential element of the waterfront planning process; the City will only support a future vision for the waterfront that has adequate transportation and parking systems to support it. It has therefore been imperative in planning for the City's waterfront that any increase in private or public activity not overwhelm the existing multi-modal transportation and parking systems by increasing vehicular or pedestrian congestion or parking impacts for residents, businesses or visitors beyond which this area can support.

Recent studies on pedestrian and vehicular traffic, motorcoach travel and parking allow a better understanding of existing and future conditions, opportunities and constraints and help ensure that the proposed Plan will coexist in Old Town's sensitively calibrated transportation and parking systems. To support a more active waterfront, the transportation and circulation strategies in this Plan strengthen the existing multi-modal system and strengthen the range of mobility options for employees, residents and visitors. They also address parking needs for the future, with approaches that involve monitoring waterfront resident and visitor habits over time. The goal is for Old Town residents and businesses, living with a residential, commercial and civic mix of uses as neighbors, to be assured a balanced, livable environment into the future.

Vehicular Traffic

Alexandria's location within the region makes it highly accessible to other parts of Virginia and to Maryland and Washington, DC due to an adjoining interstate transportation network and to north-south principal arterials. Washington Street and Patrick/Henry Streets, which are just blocks from the planning area's western boundary, connect Old Town to the George Washington Memorial Parkway and to Route 1, respectively. These regionally important roadways provide critical north-south connections for drivers travelling not only to and from Alexandria but also through Alexandria and to and from areas beyond it. The upper end of King Street includes the passenger heavy rail service of Metrorail, VRE commuter rail and Amtrak. As shown in Figure 36, within the waterfront planning area, there is a network of roads that run in an east/west direction. At both the southern and northern end of the area development or natural areas create a terminus to eastbound traffic, blocking travel to the waterfront.

Figure 36: Road Network

The Alexandria Waterfront Traffic Impact Study was performed as part of the waterfront planning effort to analyze future conditions in the transportation network that attends Old Town and the waterfront. The study identified six key intersections for analysis of traffic and pedestrian volumes as well as operations and capacity limitations at the intersections. The intersections were selected because they are major access points from Washington Street to the east-west streets that carry vehicular traffic to and from the east part of Old Town and the waterfront. These six key intersections were studied during peak weekday morning and evening hours and the mid-day peak hours on Saturday:

- First Street/ Washington Street
- Cameron Street/Washington Street
- King Street/ Washington Street
- Prince Street/ Washington Street
- Duke Street/ Washington Street
- Franklin Street/Washington Street

The traffic study concluded that traffic will continue to increase on Washington Street through 2030 with a corresponding deterioration in the level of service at intersections. However, the increased congestion is not a result of the planned new development along the waterfront but primarily due to growth in regional background traffic, including through traffic coming in from or going to Fairfax County to the south. Significantly, the study found that the traffic generated by the additional waterfront development would not be perceptible to persons driving through the six intersections that were studied. The most impacted intersections under current conditions are Duke Street and Washington Street during the AM peak hour and Cameron Street and Washington Street during the PM peak hour. The most congested intersections under projected conditions in 2030 are Franklin Street and Washington Street during the AM peak hour and Cameron Street and Washington Street in the PM peak hour.

The City does not plan to add or widen streets within the existing street grid. Signal timing adjustments and exploring the addition of protected left turn movements, will not only help manage through traffic but can also optimize the distribution of waterfront-bound traffic. As to waterfront-specific traffic, the City's strategy is to remove the vehicles from the street as soon as possible by proactively directing drivers to parking garages. The City is currently implementing a Wayfinding Program, which is a toolbox of signage and information resources to efficiently guide and disperse all modes of transportation – pedestrian, vehicular, bicycle, transit and motorcoaches -- to and through the waterfront and relieve congestion on heavily traveled routes, such as King Street. The Plan recommends a parking approach for the waterfront that builds on the work of the recent Old Town Area Parking Study and the Old Town Area Parking Study Work Group to identify parking locations and intercept vehicles before they reach the waterfront and the residential neighborhoods near the Potomac River in order to reduce vehicular congestion in those areas.

Recommendations:

4.1: Complete implementation of the City's Wayfinding Program to facilitate access to and throughout the planning area, to provide pedestrian and bicycle way-finding, and to direct motorists to parking garages.
4.2: Enhance the current carpool and bus ridership campaign.
4.3: Explore signal timing adjustments and the addition of protected left turn movements on Washington Street.

Pedestrian Movement

With its historic buildings, parks, small blocks, narrow roadways and alleys in a traditional grid, Old Town accommodates pedestrians better than any other mode of travel. Pedestrian travel is the most basic and essential means of mobility along the waterfront, with opportunities ranging from the boardwalks near the Marina and Torpedo Factory to the popular sidewalks along King Street where the eclectic, pedestrian-scaled character of the area encourages residents and visitors alike to explore by foot. The Plan therefore includes recommendations to improve pedestrian connectivity and safety and to reduce pedestrian congestion.

The most significant pedestrian recommendation in the Plan envisions that a pedestrian walkway will extend along the entire Alexandria riverfront to include the eastern frontage of Daingerfield Island on the north. Implementation of this key Plan feature will create connectivity from one end of the waterfront to the other and give pedestrians wider public access to the Potomac River in the future.

The path along the river is not fully accessible today because of both visual and physical barriers that interrupt the connectivity. Examples of physical barriers include the private future redevelopment sites at both Robinson Terminal North and South, as well as the ODBC facility and parking lot. Visually, pedestrian wayfinding is confused by such barriers, and by visual and physical impediments associated with the two Robinson Terminal sites. With the implementation of the Plan, the Robinson Terminal sites will include public access along the water, part of which will be incorporated as an extension of the public walkway. The Plan also recommends removal of the ODBC parking lot, which will expand open space at the foot of King Street and aid in the connections between King Street and the southern portions of the waterfront.

Table 7: Pedestrian Volumes

Intersection	AM Peak Hour	PM Peak Hour	Saturday Peak Hour
1. First Street/ Washington Street	9	41	28
2. Cameron Street/ Washington Street	48	103	163
3. King Street/ Washington Street	203	603	1569
4. Prince Street/ Washington Street	42	96	292
5. Duke Street/ Washington Street	33	60	136
6. Franklin Street/ Washington Street	42	65	124

There are also locations that are not fully wheelchair accessible, presenting additional challenges for persons with disabilities. For the disabled, accessibility should mean ensuring that there is multi-sensory access to public art and historic interpretation and multi-sensory and physical access to and within public spaces. It also means accessibility to and along an expanded marina and to commercial and private water-related vessels. The Plan recommends that the City's Commission on Persons with Disabilities be involved to ensure that persons who are vision, hearing, and mobility impaired have full access to the waterfront and its many resources and activities.

The Alexandria Waterfront Traffic Impact Study, which focused on access from the main north-south arterial, Washington Street, to the waterfront, found that pedestrian volumes are the greatest at the King and Washington Streets intersection, with 1,569 pedestrians crossing at the peak hour on Saturdays. The second most popular intersection for pedestrians on Washington Street is at Prince Street, with 292 pedestrians crossing at peak times on Saturdays. As a general rule, volumes of pedestrians are highest along King Street, and in addition to the Washington Street intersection, particularly between Lee Street and the waterfront.

Data from pedestrian counters at the entrances of the Torpedo Factory show a 471,271 count in 2008 and 514,414 in 2009. Additionally, Recreation Parks and Cultural Activities (RPCA) maintains a counter on the flagpole near the Potomac Riverboat Company ticket booth at the marina. It helps measure increases and decreases in pedestrian trends by tracking weekly volumes for certain times of day within 15 feet of the device eye. For the week of July 4, 2010, the weekly count was 18,462; the count for the week of Labor Day (September 6, 2010) was 20,519; and the count for the week prior to Labor Day was 12,065.

Pedestrian Congestion Recommendations:

4.4: Enlarging the pedestrian hub at King and Union Streets, by closing the unit block to most vehicular traffic, maintaining police, fire, EMS, and delivery, trolley and motorcoach access as necessary, and creating Fitzgerald Square to give pedestrians more room to congregate, but also allowing them a sense of where they are in relation to other points of interest along the waterfront;

4.5: Placing key destinations along the waterfront will help disperse pedestrians and vehicles both north and south of King Street;

4.6: Implementing the Art Walk concept, as just an example, provides visual interest all along the riverside path, which will be physically continuous. It will give people more reason to move from King Street at Union Street and start their waterfront experience somewhere other than King and Union Streets.

4.7: Implementing the adopted Wayfinding Program will guide pedestrians to key destinations; and

4.8: Using pedestrian counters at strategic locations along the waterfront and frequent monitoring and tracking of the counts to enable adjustments when necessary to strategies designed to address pedestrian congestion.

4.9: To improve pedestrian safety in general and, in particular, between

pedestrians and bicyclists and pedestrians and vehicles, the City regularly improves sidewalks, signs and markings, and installs ADA accessible ramps and encourages the use of City-designated bicycle routes by cyclists. Further, the Plan recommends pedestrian safety improvements at high-conflict intersections, with specific locations identified in Figure 37: Crash Map. In terms of pedestrian and vehicular conflicts, crash analysis shows that injuries tend to be minor because of the slow speeds occurring at the conflict intersections reflected in Figure 37.

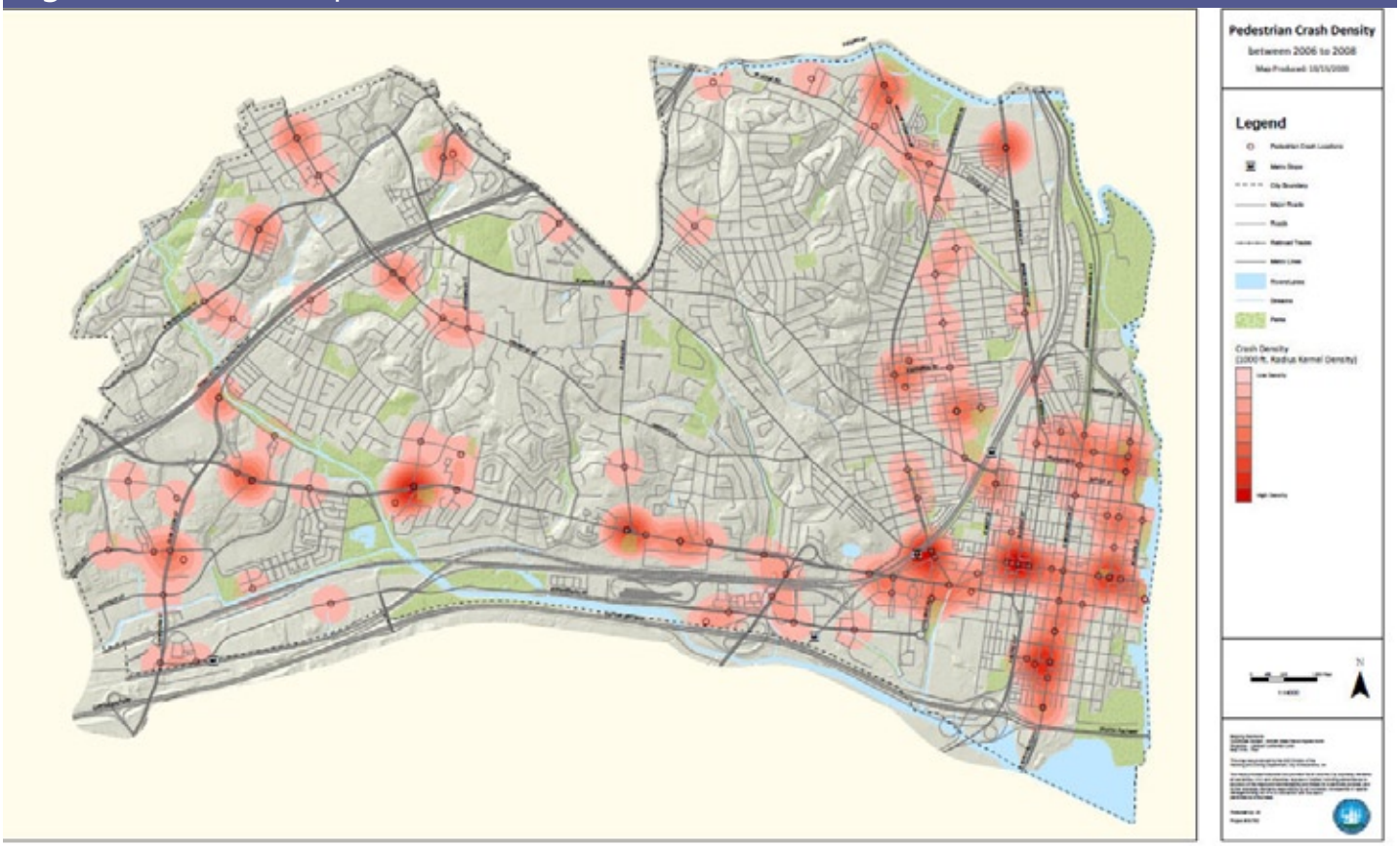
Pedestrian Safety Recommendations:

4.10: Add pedestrian facilities including pedestrian signals where appropriate and accessible curb-ramps where missing.

4.11: Implement pedestrian safety improvements at high-conflict intersections, with specific locations depicted in Figure 37: Crash Map.

4.12: Accessible pedestrian infrastructure should be incorporated into new pedestrian facilities and the current practice of inclusion of the Commission on Persons with Disabilities at 30% design should be continued in the design of public infrastructure, public art and historic interpretation to make sure that persons who are vision, hearing and mobility impaired have full access to interior and exterior public resources, including the marina. Such access plans need to be coordinated with federal boat standards.

Figure 37: Crash Map



Bicycle Travel

The Alexandria waterfront has excellent bicycle access. While the on-street bicycle network has relatively few bicycle lanes, the slow design speed and pedestrian orientation of most streets on the waterfront encourage bicycles to 'take the lane' when traveling on Old Town streets. Significant off-street facilities include the 18-mile long Mount Vernon Trail (north-south) and the 3-mile long Woodrow Wilson Bridge Trail (east-west). Bicycle sales, rentals, repair facilities, as well as bicycle parking and restrooms are available along the waterfront.

The Mount Vernon Trail runs between George Washington's Mount Vernon Estate and the Key Bridge in Rosslyn. In Alexandria, the Mount Vernon Trail begins and ends as a shared-use paved path, but through Old Town cyclists must use local streets, including a signed, on-road bikeway along Union Street between Pendleton and Jefferson Streets. This Plan is not recommending changing that arrangement. While Union Street is considered the "spine" of the Mount Vernon Trail in Alexandria and is often used as the slow route through Old Town, many cyclists also use an alternate, parallel route on Royal Street because it offers a faster and more direct connection between the Woodrow Wilson Bridge and Daingerfield Island with fewer potential pedestrian conflicts.

At a regional level, the Mount Vernon Trail also provides connections to the 45-mile long W&OD Regional Park and the 184-mile C&O Canal.

Since 2009, the Mount Vernon Trail has also provided a connection to Prince George's County, Maryland via the three-mile long Woodrow Wilson Bridge Trail. A junction on South Washington Street near Jones Point Park also provides a non-motorized connection to Huntington Avenue in Fairfax County and allows bicyclists to navigate around the formidable Route 1 corridor from Huntington to Old Town.

The east-west bikeways that connect to the waterfront range from shared use paths at Four Mile Run and the Woodrow Wilson Bridge to on-street bikeways in Old Town. Pendleton Street is a key route to the Braddock Road Metrorail station which has been designated with shared-lane markings for bicyclists. Two one-way couplets, Cameron Street and Prince Street (partially one-way), offer wide lanes and typically slow-moving traffic to facilitate on-road bicycle travel. The City is also making safety improvements along Wilkes Street between Route 1 and the Wilkes Street Tunnel to encourage better bicycle connections to the Eisenhower Valley.

A critical planned enhancement along the Mount Vernon Trail for pedestrians and bicyclists is funded through the Northern Virginia Regional Commission. Safety improvements on East Abingdon Drive west of the GenOn Energy, Inc plant will improve safety and connectivity to the waterfront for southbound cyclists on this section of trail. Additional enhancements for cyclists will include better connections to Jones Point after completion of the park renovation, safety improvements along Wilkes Street, and a variety of other improvements to bicycle trails serving the area that are currently underway by the City or U.S. National Park Service.

Improved bicycle services, including parking, is an important element of the Plan. The Plan creates an opportunity to expand upon current successful bicyclist services, such as the recently included bike racks on DASH buses. Because cyclists are understandably reluctant to visit an area without support services available, this Plan proposes to add those services at key locations along the waterfront. Specifically, the Plan envisions a bicycle parking station at or near the foot of King Street, with additional parking facilities in Oronoco Bay Park. In addition, facilities for refreshments as well as bicycle repair are envisioned as part of the non-vehicular waterfront experience.

Bicycle Recommendations:

4.13: Provide improved signage for bicyclists to help delineate the urban section of the Mount Vernon Trail.
4.14: Implement a bike sharing station to connect the waterfront to a larger regional system that will extend the reach of transit and the parking system as part of a City-wide program.
4.15: Rehabilitate and make surface improvements to the Mount Vernon Trail.
4.16: Reconnect waterfront bicycle routes to Jones Point Park as part of the renovation efforts for that park.
4.17: Apply and enforce on and off road bicycle laws to help improve bicycle safety and minimize pedestrian and bicycle conflicts and vehicular and bicycle conflicts as recommended in the 2008 Pedestrian and Bicycle Mobility Plan.
4.18: Provide additional bicycle parking on the waterfront in Oronoco Bay Park and near at the foot of King Street with more racks and/or covered bicycle shelters.
4.19: Explore improved bicycle facilities on North Union Street and North Royal Street, as recommended in the 2008 Pedestrian and Bicycle Mobility Plan.

Transit

The waterfront planning area is well served by the King Street Trolley and a network of bus routes, primarily operated by the DASH system.

The King Street Trolley has conveyed 1.2 million passengers between the Potomac River and the waterfront since the service began in April 2009. It runs seven days a week and, through June 2011, it operated every 20 minutes, between 11:30 a.m. and 10:00 p.m. conveying people between the Torpedo Factory at the waterfront and the King Street Metrorail station. In response to its success, trolley headways were decreased in July 2011 to run every 15 minutes, rather than every 20 minutes. Periodic count samples show that approximately 68% of east bound ridership begins at the King Street Metro and 42% of west bound ridership begins at Union and King Streets. It is free to users, supported by an increase in the transient lodging tax rate. A survey of riders found :

- 98% view the trolley as making Alexandria a more desirable place to visit;
- 76% of nonresidents said it increased the number of restaurants and businesses used; and
- 24% said they would not have made the trip to Old Town but for the trolley. Of the 76% who would have come anyway, 33% would have used a personal car or taxi amounting to approximately 300,000 people who would have added to the vehicular congestion in Old Town without the trolley.

A series of recommendations for enhancing King Street Trolley service are included in the 2009 King Street Retail Study. This Plan supports those important transit recommendations, most notably:

- Expanding the trolley hours to 9:00 am to 11:00 p.m., or later on Friday and Saturday nights, to better accommodate a range of users, including employees, students, visitors;
- Maintaining the trolley turn-around location at the foot of King Street.

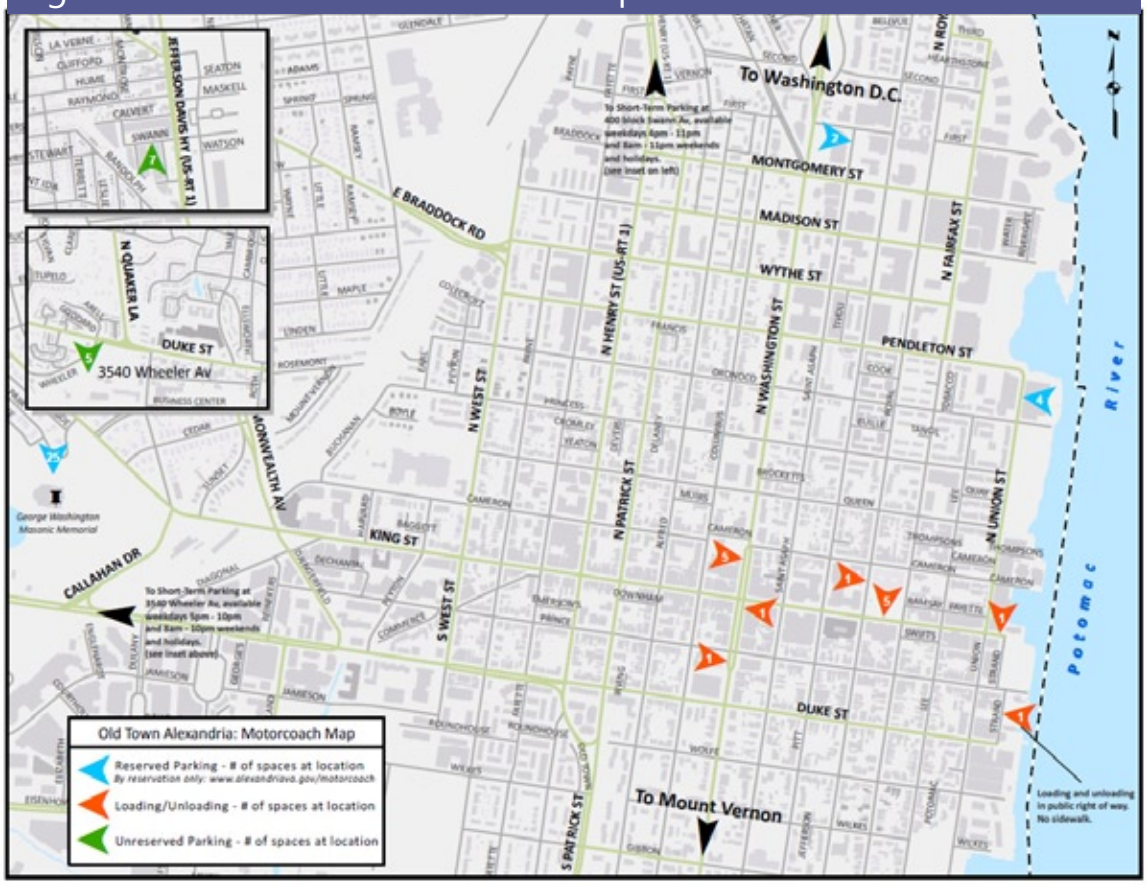
With a new one added in July 2011, there are now six dedicated trolleys used for the King Street Trolley service, four of the six are used everyday to provide

the service. The other two are spares. All five of the trolleys have a lift for persons with mobility disabilities. In cases of major emergencies or vehicle breakdown, other trolleys may be put into service which are non accessible; however, this is a rare and infrequent occurrence.

There are six Alexandria DASH bus routes that provide regular and reliable east-west and north-south service through the waterfront planning area and including stops at the Braddock and/or King Street Metro Stations. Moreover, WMATA provides regional bus services to the greater Alexandria, Fairfax and Arlington county areas as well as to the District of Columbia, supplementing the Metro which also provides service to those areas. The City's Department of Transportation and Environmental Services reports that all DASH buses are accessible as defined by the Americans with Disabilities Act, meaning they are all wheelchair accessible with room for wheelchair seating.

During development of the Plan, residents and stakeholders expressed a desire to supplement the King Street Trolley route with a north-south route that originates in The Strand area to connect to activity centers located north of Founders Park. Future parking needs may also support the need for an easy connection to existing parking garages in the north Old Town area along the Potomac River. Shuttles or an expansion of the trolley service can be explored if and when development and tourism supports its operation, and may be part of a route for connecting the waterfront to the Braddock Road Metro station, the future Potomac Yard development and/or Del Ray, provided it can be done without harm to existing neighborhoods. Until that time, existing bus transit service appears adequate to serve the north-south routes near the waterfront and can be enhanced during special events to garages outside the core Plan area.

Figure 38: Motorcoach Locations Map



Motorcoach routes and loading and unloading are difficult issues requiring careful balancing of the needs of visitors, businesses and residents. The question relates to the transportation system however and it is important that coaches not overwhelm the capacity limitations of the transportation network. A City stakeholder task force met over the last few years to assess the issue and develop solutions. Figure 38 is a map of the approved motorcoach circulation in Old Town providing access to loading, unloading and parking facilities.

Motorcoaches may currently load and unload passengers in convenient proximity to the waterfront activity centers in designated locations shown in Figure 38, which were recommended by the City Motorcoach Task Force. Figure 38 also shows on-street reserved parking spaces available in Old Town as well as long-term parking spaces available at the George Washington Masonic Temple and Wheeler Avenue near Duke Street. Users may reserve the spaces through an online permitting system or by contacting the City by phone. Information about Motorcoach parking and loading in the City and in Old Town is found on the City website (http://alexandriava.gov/Motorcoach). Any changes in locations to current loading or parking areas as part of the implementation of this Plan shall not result in a loss of motorcoach parking spaces and parking areas and will be made in coordination with the recommendations of the City Motorcoach Task Force.

Transit Recommendations:

4.20: Continually assess existing transit service to determine where enhancements are needed.
4.21: Consider transportation linkages between the waterfront, Braddock Road Metro, Potomac Yard and Del Ray as a long term goal.
4.22: Increase King Street trolley service between the King Street Metrorail station and the waterfront by decreasing headways and reinstating longer hours of operation.
4.23: In the short and mid-term explore use of shuttle and other short-distance transportation services for those utilizing remote parking facilities and Metro Stations during special events
4.24: Maintain turn-around area for trolleys at the foot of King Street.
4.25: As Plan implementation affects motorcoach parking needs and locations impacts, study and relocate locations as necessary.

Water Taxi and Water Transportation

Among transportation modes, the most relevant and historically important to the waterfront are those that provide travel by water. Water transportation was once the lifeblood of the City; Alexandria was created because of its port potential. Today, communities in the Washington D.C. region are rediscovering and replanning their waterfronts and recognizing the efficiency and desirability of water transportation. With density centers located along the Potomac River, water vehicles have become one of the main opportunities for people to enjoy the water. The Potomac River is the last major untapped north-south transportation corridor in the D.C. region.

The Potomac Riverboat Company, which operates from its offices on The Strand, offers water taxi service between Alexandria's City Marina and National Harbor in Prince George's County, Maryland, ferrying an estimated 100,000 visitors per year. The service – a 20-minute one-way trip – runs daily in the spring, summer and fall and on an abbreviated evening schedule during the winter months, with plans for expansion. The Potomac Riverboat Company also offers boat service from Alexandria to Washington, DC with service to the Nationals Stadium during baseball season and to Georgetown. In addition to offering water taxi service, the company offers cruises to Mount Vernon and private charters. The Potomac Riverboat Company has a total fleet of 8 vessels, a current license to dock vessels at the City Marina, and anticipates expanding its services.

Two other commercial vessel companies also have current licenses to dock at the City Marina, thereby attracting residents and visitors to the waterfront. Potomac Party Cruises offers lunch and dinner cruises daily along the Potomac River on two vessels: the 98 foot Dandy and Nina's Dandy, which is 138 feet long. In addition, the Potomac Belle, a 59 foot long vessel, accommodates approximately 25-35 passengers and offers charters along the Potomac to Georgetown and Mount Vernon during the spring and summer season.

Alexandria is periodically a stop for cruise ships and visiting historic ships such as the Godspeed, which bring visitors to the waterfront. The City also recognizes the possibility of a high speed water commuter service emanating from Prince William County to Washington, D.C, with the potential for a stop in Alexandria. Water taxi service to National Airport may also be feasible.

This Plan recommends that as part of the marina expansion, more emphasis be placed on docking for commercial vessels to help improve the financial viability and sustainability of the marina and the local economy, and to reduce vehicular traffic and parking demand.

Water Taxi and Water Transportation Recommendations:

4.26: Commercial and pleasure boat activity should be segregated as much as possible to enhance each operation: commercial boating should be combined together in the vicinity of King Street; pleasure boat marina should be moved to the south;

4.27: Water taxi stops should be added at the King Street pier in order to reinforce Fitzgerald Square as the "hub" of the waterfront and make the commercial boat operations, especially the water taxi, more visually and physically accessible to the public;

4.28: The Plan recommends locating lower-frequency commercial boat operations, such as regular lunch and dinner cruises and charters, at the wharf near the Chart House and on an expanded Cameron Street wharf. If needed, a third commercial pier is recommended between Thompsons Alley and Founders Park.

4.29: All public locations in the commercial and pleasure boat marinas should be accessible, including facilities for boarding vessels. The Plan recommends that a parking station for airport-style golf carts be provided in the Food Court parking garage so that carts can be employed by the private sector to shuttle mobility-impaired passengers to commercial boats.

4.30: Deep-water docking should be retained at the Robinson Terminal North location;

4.31: The Plan recommends that a new pleasure boat marina be located offshore of Robinson Terminal South. Tie-ups should be available in front of Waterfront Park and The Strand for daytrippers visiting by boat.

4.32: Ensure all ancillary facilities needed to operate the marina in an efficient manner are provided and that appropriate amenities are provided for boaters and commercial passengers visiting the waterfront .

4.33: Commuter service with a stop in Alexandria via marine vessel should be encouraged with Potomac River speed limitations along Alexandria lifted for such vessels as long as low-wake boats are used.

Parking

When the waterfront had many industrial and warehouse uses, parking was a waterfront land use as well as an amenity for visitors to Old Town and the waterfront. As time has passed, the area's multi-modal connectivity has improved. However, as well as the waterfront area may be served by pedestrian, bicycle, transit, and water transportation, motor vehicles will continue to bring people to Old Town to enjoy the waterfront, especially when the enhanced features of this Plan are implemented. Therefore, the Plan includes strategies, analysis and recommendations for the parking needs that attend the future changes the Plan envisions.

Parking Strategy: Principles Guiding Waterfront Parking

The goal of the Plan's parking strategy is to support existing and desired land uses and to safeguard nearby neighborhoods, and is supported by the following principles:

- *The land adjacent to the water is for people, not cars*. The Plan proposes to eliminate the ODBC parking lot. In order to accomplish a change in the ODBC parking lot situation, negotiations in regard to land would need to occur. The Plan also proposes to eliminate the surface parking lot on The Strand between Chadwick's and the river and replace it with a park. The Plan also proposes to eliminate a few on-street parking spaces where King, Prince and Duke Streets meet the Potomac River and reorient that space for public use.
- *Do not build new public spaces; maximize use of existing spaces.* The Old Town Area Parking Study found that even at peak periods, such as Friday evening, there are some 700 available unused parking spaces in the waterfront core area The Plan's parking strategy is to continue actions to promote greater use of garage spaces by people who are now parking on the street, especially longer term parkers. These actions include the Wayfinding Program and installation of multi-space meters. These steps also encourage short-term use of on-street parking, resulting in more

rapid turn-over and a greater likelihood of spaces being available for short-term parkers. Over time, as parking demand increases, the Plan proposes that the City and the business community work with the owners of existing private garages to open them for public use.

- *Protect nearby neighborhoods from excessive parking impacts from waterfront visitors*. The City is implementing a series of recommendations of the Old Town Area Parking Study, including regular monitoring of parking in the adjacent nearby neighborhoods, and further discussion about permit parking, with the intent to implement protection strategies when or if they are needed.
- *Move some uses closer to existing parking*. When all of The Strand surface parking lot becomes a park, the Plan proposes to relocate the Dandy cruise boats to the Cameron Street wharf area, close to several parking garages.
- *Parking for certain waterfront uses – cultural, retail and restaurant locations – need not be located within or adjacent to the use*. People visiting the waterfront for fun will have multiple destinations, so they only need to park close to one of those destinations. The area immediately adjacent to the waterfront is a very pleasant walk and the walk from car to destination is part of the experience of Old Town.
- *Parking for new hotel, office and residential uses should be provided on site; new development projects in these categories should provide the parking on site that its users will demand.* Workers and residents are people who are going to the same destination every day and those who drive will expect to have parking very close by. The Plan proposes that new hotel, office, and residential development projects provide the parking their users will need. The parking ratios should be low, to reflect the multiple modes of travel available and the City's interest in encouraging arrival by modes other than single-occupant vehicle.

Table 8: Core Area Garage Spaces and Utilization

	Current Conditions			
	Spaces	Friday Evening Utilization	Spaces Available	Spaces Available
Waterfront Core Parking Area		(7-8 PM)	(Self - Park)	(Valet)
L9. The Strand Parking Lot	85	118%	0	0
L10. Altman's Lot*	87	11%	77	121
G1. Solo Garage	25	84%	4	17
G2. 115 S. Union Garage	68	51%	33	67
G3. Torpedo Plant Condo Garage	361	64%	130	310
G4. Thompson's Alley Garage	43	58%	18	40
G5. N. Union Street Garage	174	33%	117	204
G6. Market Square Garage	196	79%	41	139
G7. Tavern Square Garage	164	17%	136	218
G12. Altman's Garage*	62	24%	47	78
Total:	***1265***	***52%***	***604***	***1194***

Supply and demand

The Old Town Area Parking Study, completed in February 2010, analyzed parking utilization and occupancy in approximately 85 city blocks of Old Town between King Street Metro Station and the Potomac River and centering on King Street. The study identifies all parking spaces in the study area and highlights those locations where parking is currently under utilized and further capacity exists. Although parking in the Old Town area is often perceived to be limited with a demand beyond its capacity, the study concludes that issues with Old Town parking relate to proximity, rate, and availability and not to overall capacity. A significant finding of the study relates to the excess capacity in many garages in Old Town, even at peak times. Thus the study's parking management recommendations include serious suggestions for better utilization of garages as a key to improving parking availability now and in the future.

As to the waterfront, the study overlaps the waterfront planning area in part and provides critical information to guide the City's efforts and to assure that adequate parking exists for future planned waterfront uses. For example, within the waterfront core area, consisting of those blocks between Union and Pitt Streets, and between Duke and Princess Streets, there are currently a total of 2693 on street and garage parking spaces available to the public. Of those, a full 721 spaces were not being utilized on a Friday evening, thus providing ample existing capacity. When only the spaces in garages that are open to the public are considered, the study found a total of 1,265 spaces exist and a peak (Friday evening) utilization rate of 52%, leaving 604 spaces still available for parking.

Existing capacity in garages in the core area can be enhanced to increase utilization by:

- Existing space within garages open to the public should be made available at consistent times for consistent rates, and some garages should be enhanced to be perceived as attractive and safe for the public.
- The Wayfinding Program is being implemented: its first phase, including parking identification and directional signs, so that drivers can find existing garages, has been approved.
- Existing garage space can be used for attendant/valet parking, thus increasing significantly the number of cars that will fit in the garage.

An analysis of the proposed new uses in the Plan has been done, specifically focused on their estimated parking demand, based on standard parking generation rates, in order to assess that demand relative to existing and future supplies of parking. Beyond the new private development, which will be required to provide its own parking, the overall Plan should increase the off-site parking demand in a range between 197 and 390 spaces. Under the Plan, 171 spaces, both on and off street, will be lost, bringing the total demand to between 368 and 561 spaces as shown in Table 9.

This analysis shows that the demand – even at the high end of the range – can be met with the existing unused parking capacity in the waterfront core area, even if only garage space is considered.

Furthermore, there are several ways to increase the supply of parking both in and outside of the core area.

There are 385 private garage spaces in the waterfront core area that could be open to the public, at least at peak times. Contact with garage owners and operators confirms that they are willing to open their facilities if and when there is sufficient demand to make it financially feasible for them to do so. Monitoring the usage of the existing public parking facilities will help private facility owners recognize when demand reaches the economically feasible point for additional parking spaces to be made public. Typically, an 85% occupancy rate indicates that a garage is reaching practical full capacity. Once the existing publicly available spaces reach an approximate 85% occupancy rate, private garages will be encouraged to respond to the demand and open their facilities to the public at times that do not conflict with current uses.

When the garages in the waterfront core area are successfully occupied at peak times, additional garage space to the west of the core area along King Street and also to the north of the area in large commercial buildings along the River can be utilized. The study identifies some 5,000 parking spaces in those locations, including both public and private garages. Especially with enhanced trolley service on King Street and future transit to Old Town North, these parking garages provide opportunities to significantly expand parking supply in the short and long term, in particular for special events. It is recommended that staff continue to work with privately owned garages to open the facilities to include public parking during time periods of high demand. The city's monitoring program will alert it to approach additional garage owners when there is demand for their use.

Another option for increasing capacity in the existing garages is through the implementation of a public valet program. Valet parkers are able at times to double or triple the parking capacity in garages through maximization of the

Figure 39: Publicly Available Off-Street Parking Locations (Old Town Area Parking Study)

Table 9: Waterfront Demand Generators and Parking Space Analysis

New off-site parking demand generators	Low	High
Civic Building	25	35
New uses in historic warehouses	45	63
Strand restaurant and Beachcomber**	44	155
Additional outdoor dining seats near Food Court	7	25
Expanded Marina (Net Increase)	11	13
New commercial boating operations	65	100
Totals	***197***	***390***

Spaces to be lost to redevelopment	Low	High
Off-Street (Strand and Turner Lots)	148	148
On-Street (Waterfront Park and Duke St./Prince St.)	23	23
Totals	***171***	***171***

Private spaces to be replaced	Low	High
ODBC Parking Lot	53	53
Replacement spaces, if any, to be determined	(53)	(53)
	-	-

Total Off-Site Demand	368	561

Table 10: Core Parking Area* Supply Summary

Currently open to the public	Garages	On-Street	Total
Total Spaces (Self - Park)	1,265	1,428	2,693
Friday Evening Availability	604	117	721
Friday Evening Utilization	661	1,311	1,972
Total Spaces (Under Valet Garage Scenario)	1,898	1,428	3,326
Friday Evening Availability (Under Valet Garage Scenario)	1,237	117	1,354
Currently Private			
Total Spaces (Self - Park)	674	0	674
Friday Evening Availability	460	0	460
Total Spaces (Under Valet Garage Scenario)	1,011	0	1,011
Friday Evening Availability (Under Valet Garage Scenario)	797	0	797

** Defined as between Duke St. and Princess St. and between Pitt St. and the Potomac River*
*** Strand Restaurant has been removed from the Plan, so actual demand is less than what is reflected in the chart.*

existing parking area. Proper location of valet services helps unfamiliar visitors find parking easily, and reduces the demand for on-street parking, thus minimizing the impact of the loss of on-street spaces for valet loading and unloading. Additional advantage can be achieved by strategic location of valet loading spaces and garages for valet parking, thus intercepting vehicles prior to their reaching the most congested areas of Old Town near the waterfront. The City will explore valet parking for this area as well as for King Street generally in the future.

Many of the benefits of valet parking, especially the increase in parking garage capacity, can also be achieved through the use of parking attendants at garages. Attendant-parked garages can accommodate many more cars than self-park garages.

Based on a conservative 1.5 factor applied to all of the garage parking in the core area, as well as the area west and north of it, an astonishing total of over 8.000 parking spaces could be achieved by an aggressive parking program for Old Town and the waterfront.

In addition to the large, untapped supply of parking spaces available, the City and the Old Town business community will have to actively take steps to better utilize those spaces. In addition, before new restaurant uses that place significant new demand for parking are allowed through the SUP process, parking solutions to meet that new demand will need to be calculated, identified and detailed in the SUP report recommendations in order to ensure that sufficient parking is in place contemporaneously with the opening of a restaurant. Part of the parking solution will also need to be addressed through transportation demand management (TDM) programs which can incentivize restaurant employees and customers to use transit when traveling to and from Old Town. The expansion of

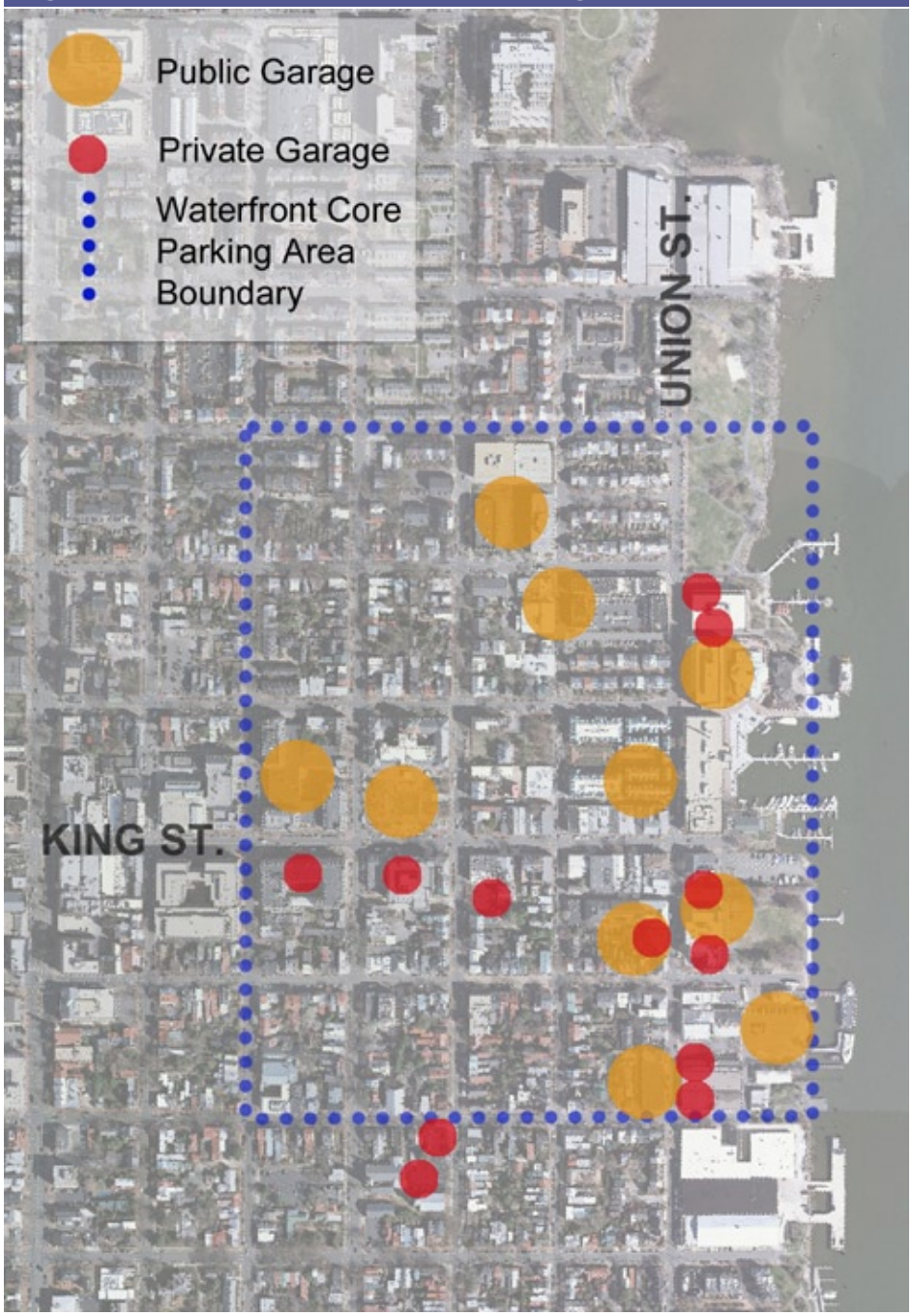
the King Street trolley hours and headways also will reduce parking demand.

Parking Management

There is some on-street parking in almost every block throughout the waterfront planning area, and includes spaces that are metered, restricted to short-term parking (less than two or three hours), and spaces that have no time limits or payment requirement. Other on-street spaces are reserved for disabled parking, loading and unloading, valet, taxicabs, tour buses, or the trolley. On-street spaces in the residential areas operate under a Residential Permit Parking program, which allows residents to buy a permit for their vehicle to exempt them from time restrictions for non-permit holders.

The Old Town Area Parking Study showed that on-street parking spaces in the core waterfront planning area are generally fully utilized for the majority of the study periods. There are a total of about 1,428 on-street parking spaces in this area, with an overall average utilization of 90% at peak times. Although approximately 10% of the spaces are open, the occupancy rate indicates that on-street spaces are effectively full. The study shows that some of these on-street spaces are possibly being used for long term parking, instead of the short term parking opportunity that they should be providing, resulting in the higher on-street occupancy, the lower off-street occupancy, and the perceived parking problem.

Figure 40: Public and Private Parking Locations Map



Subsequent to the study and as a result of it, the City has taken a series of steps to more effectively manage its on-street parking assets. Specifically, the City is seeking to maximizes available parking spaces for short term and long term parking needs through the use of meters and effective meter pricing. For example, it has begun to raise its parking rates from $1.00 to $1.75 an hour. This management step should be complete for all of King Street by June 2011. By raising the rate of on-street spaces, shorter turnover and more space availability will occur, and drivers will be economically encouraged to use parking garages. In addition, blocks near the waterfront that had not been metered, have recently been metered with convenient, multi-space meters. Similar meters will replace existing ones along the remainder of King Street in the near future, with pricing to support short term use. New parking technologies that use smart phone applications and other devices are likely to emerge in the near future to help drivers including those coming to Old Town be better able to quickly find open and available spaces. Continued monitoring and performance parking strategies can encourage use of off-street parking facilities for long term parking needs by adjusting meter pricing. Long term public parking in unmetered on-street spaces in the residential areas should be discouraged. Future examination of the Residential Permit Parking program will be necessary to ensure that parking on residential streets is properly managed and so that visitor parking does not conflict with residential parking. The new wayfinding initiative will also assist with this effort.

Parking Recommendations:

4.34: The Plan recommends that a Waterfront Parking Implementation Plan be created in order to articulate those actions that must proceed in the future to support the Plan and the events that are deemed appropriate triggers for such actions. It should include at least four specific categories of implementation measures both to create additional parking opportunities and to protect existing residential areas:

a. **Public garage capacity.** Monitoring utilization in existing public garages, setting triggers for the need for specific number of new parking spaces to be added to parking capacity at peak times. For example, assuming full utilization of on street parking, when the utilization of public garages in the waterfront core area reaches a level of 85% use, then additional parking spaces would be added to the parking capacity during peak times, through the use of garage attendants, valet parking programs, and the opening of now private garages (supported with appropriate wayfinding signage).
b. **Waterfront development**. Requiring additional parking capacity at the point that new parking demand generators are constructed on the waterfront.
c. **Valet parking.** Implementing a systematic valet parking program generally for Old Town and King Street, with specific emphasis on the waterfront core area.
d. **Protecting residential parking**. Testing and monitoring the effect of waterfront development on residential parking areas, with the understanding that additional protective measures should be taken to protect those residential parking areas.

The Parking Implementation Plan should be created immediately after the adoption of the Plan. It should be led by a multi-agency team and also be assisted by the advice of stakeholders affected by parking issues in the waterfront area.

4.35: Before new restaurant uses that place significant new demand for parking are allowed through the SUP process, parking solutions to meet that new demand will need to be calculated, identified and discussed in the SUP report recommendations in order to ensure that sufficient parking is in place contemporaneously with the opening of the restaurant.

4.36: Continue to implement the City's Wayfinding Program to facilitate access to public parking facilities throughout the waterfront planning area.

4.37: Continue to implement the recommendations of the February 2010 Old Town Alexandria Area Parking Study and the 2010 Old Town Alexandria Area Parking Work Group, including those strategies designed to encourage use of on-street spaces in shopping areas for short-term visits, to encourage the use of parking garages for longer-term parking, and to protect residential areas from excessive parking impacts.

4.38: Consider implementing new parking technologies such as smart phone applications that show locations, rates, and spaces available in parking garages.