



APPENDIX C:  
**Progress Report**

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# **City of Alexandria**

## **Pedestrian and Bicycle Master Plan Update**

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### **Progress Report / Existing Conditions**

*December 2015*



## Overview

The City of Alexandria has made significant investments in its pedestrian and bicycle network since the adoption of the 2008 Comprehensive Transportation Master Plan and 2008 Pedestrian and Bicycle Mobility Plan (Mobility Plan). The Mobility Plan includes goals and performance measures, and more than 5,000 recommendations for specific infrastructure improvements to enhance pedestrian and bicycle connectivity and mobility around the City. These recommendations covered a wide range of physical improvements including rebuilding existing sidewalks, intersection crossing improvements, constructing new bicycle lanes, and building new shared use paths.

This document is designed to provide an update on progress made regarding pedestrian and bicycle issues since 2008 and also to summarize current conditions related to walking and bicycling in Alexandria.

### I. Progress on the 2008 Mobility Plan Goals and Performance Measures

The City's 2008 Mobility Plan primarily focused on infrastructure recommendations, but included a series of Pedestrian and Bicycle Concept Goals from the Comprehensive Transportation Master Plan. The Concept Goals are presented below, with a summary of the status as of 2014:

#### **Pedestrian Concept Goals**

- *Concept Goal #1. Engineering: The City will provide a continuous, connected and accessible network that enables pedestrians—particularly children and those with mobility impairments—to move safely and comfortably between places and destinations.*

**Status:** The City has sidewalks on at least one side of the majority of streets and on both sides of many streets. Approximately 27% of the recommended new sidewalks from the 2008 Mobility Plan have been implemented and more than 80 new crosswalks have been installed in the last six years.

- *Concept Goal #2. Encouragement: The City will encourage mobility for all pedestrians by removing barriers to accessibility and promoting walking as a means of improving health and active lifestyles.*

**Status:** The City routinely removes barriers to walking. Whenever feasible, the City addresses pedestrian issues identified by the public through *Call.Click.Connect*, where people can ask questions or register comments/complaints about specific intersections or street conditions. The City encourages walking through its Local Motion program, which includes providing walking information to residents, visitors and workers and reaches approximately 135,000 individuals annually. The City is an active participant in Car Free day and Try Transit Week every September. Since 2011, the City's Local Motion program has led a Commuter Challenge every April to have large employers encourage employee commuting by means other than the single occupant vehicle.



- *Concept Goal #3. Education: The City will develop Safe Routes to School Programs and awareness initiatives that address pedestrian safety, rights and responsibilities.*

**Status:** Fourteen out of sixteen Alexandria schools participate in the Safe Routes to School program. In 2014, ten schools participated in International Walk to School Day.<sup>1</sup> Other pedestrian safety awareness initiatives are offered by Local Motion, the City's Transportation Demand Management program. Alexandria also participates in and promotes the Metropolitan Washington Council of Governments (MWCOG) StreetSmart Campaign which focuses on pedestrian safety, and provides training for DASH bus drivers on pedestrian safety.

- *Concept Goal #4. Enforcement and Safety: The City will create a safe pedestrian environment through effective law enforcement, detailed crash analysis and implementation of safety countermeasures.*

**Status:** Alexandria City Police use citizen input received through the City's *Call.Click.Connect* program to identify locations for targeted enforcement of pedestrian-related traffic laws. The City incorporates crash analyses into its transportation planning projects and uses this data to prioritize projects and determine appropriate street improvements. The City has begun using new pedestrian technology to improve safety at intersections and uncontrolled crossings. Two High Intensity Activated Crosswalk (HAWK) signals have been installed and rapid flashing beacons at seven locations.

### **Bicycle Concept Goals**

- *Concept Goal #1. Engineering: The City will complete a connected system of primary and secondary bikeways with ample bicycle parking to serve all bicyclists' needs.*

**Status:** Since the 2008 Mobility Plan, the City has built over 22 miles of bicycle lanes and shared-lane markings, over 6 miles of shared-use paths and installed over 200 bicycle parking spaces on City streets, including three bike corrals.

- *Concept Goal #2. Encouragement: The City will seek to increase bicycle usage and bicycle-transit connections through targeted outreach and encouragement.*

**Status:** The City encourages biking through its Local Motion program, which includes providing bicycle and bicycle-transit connectivity information (including bicycle maps) to residents, visitors and workers through brochures and the Local Motion website. The City is an active participant in Car Free day and Try Transit Week every September. Since 2011, the City's Local Motion program has led a Commuter Challenge every April to have large employers encourage employee commuting by means other than the single occupant vehicle.

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<sup>1</sup> Based on the number of schools registering their event on the WalkBiketoSchool.org website. (<http://walkbiketoschool.org/go/who-walked/2014/VA/Alexandria>)



- *Concept Goal #3. Education:* The City will develop and implement targeted Safe Routes to School Programs as well as additional programs for adult cyclists and motorists.

**Status:** As stated above, fourteen out of sixteen Alexandria schools participate in the Safe Routes to School program and, in 2014, ten schools participated in International Bike to School Day.<sup>2</sup> The City participates in Bike to Work Day, which has grown from one pit stop in 2008 to four pit stops in 2014, with over 1,000 registered participants. Alexandria also participates in other bicycle safety awareness initiatives are offered by Local Motion and the MWCOG StreetSmarts Campaign, and provides training for DASH bus drivers on bicycle safety. In 2014, the Washington Area Bicycling Association (WABA) held fifteen adult bicycling courses in Alexandria, in comparison to the five classes held in 2008.

- *Concept Goal #4. Enforcement and Safety:* The City will create a safe bicycling environment through effective law enforcement and implementation of bicycle safety enhancements.

**Status:** The City incorporates crash analyses into its transportation planning projects and uses this data to prioritize projects and determine appropriate street improvements. Alexandria City Police use citizen input received through the City's *Call.Click.Connect* program to identify locations for targeted enforcement of bicycle-related traffic laws. The City also introduced the first bicycle signal in Virginia on the Mount Vernon Trail in 2010 (At S. Washington Street) and installed a bicycle box to improve safety at the intersection of Commonwealth Avenue and Mount Vernon Avenue in 2013. Every October, the City promotes and holds a *Lights for Bikes* event, where staff, volunteers and local bike shops stationed on trails or at Metrorail stations distribute bicycle lights to bicyclists that need them.

In addition to the activities that specifically respond to the Transportation Master Plan Concept Goals, the City has undertaken numerous other initiatives since 2008 that improve conditions for walking and bicycling. Highlights include:

- Adopted a Complete Streets policy, which stated that the City will make Complete Streets practices a routine part of everyday operations and that every street project will, to the extent possible, incorporate Complete Streets infrastructure.
- Hired a full-time Complete Streets Coordinator.
- Launched eight Capital BikeShare stations in 2012 and added another eight in 2014.
- Revised the bicycle section of the City Code to support improved bicycle safety and to ensure consistency with the Virginia State Code.
- Currently implementing a pedestrian wayfinding system in Old Town.
- Installed approximately 1,200 pedestrian countdown signals.

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<sup>2</sup> Based on the number of schools registering their event on the WalkBiketoSchool.org website. (<http://walkbiketoschool.org/go/who-walked/2014/VA/Alexandria>)



The 2008 Mobility Plan included several performance measures for improvements related to walking and bicycling. The following section documents progress on these performance measures.

### Pedestrian Performance Measures

- *The proportion of people walking to work in Alexandria shall increase from 3% to 5% by 2011.*

**Status:** According to the U.S. Census, 3.8 percent of Alexandria commuters walked to work in 2013.

- *Working with the Alexandria City Public Schools, the City will establish a system for counting the number of children who walk to school, and the number shall increase 5% every year by 2011.*

**Status:** According to 2014 figures from the self-reported student travel tally data from the National Center for Safe Routes to Schools, 30% of students at participating Alexandria schools walked to school.<sup>3</sup>

- *The number and percentage of people who walk to access Alexandria's four Metrorail stops will increase.*

**Status:** The table below shows the percent of passengers who walked to access Alexandria's rail stations in 2005 and 2012.

	2007 Metrorail passenger survey	2012 Metrorail passenger survey
<b>Eisenhower Ave</b>	44%	61%
<b>King Street</b>	49%	54%
<b>Braddock Road</b>	69%	62%
<b>Van Dorn</b>	15%	9%

Table 1: WMATA Passenger Station Access Mode - Walk

- *The number of pedestrian-motor vehicle crashes (66 in 2004, 87 in 2005, and 36 through Oct. 1, 2006) will hold constant or decrease through 2011.*

**Status:** According to the Alexandria City Police Department, Alexandria has had an average of 64 crashes per year for the past ten years, and had 61 pedestrian crashes in 2014.

- *The proposed sidewalk and shared-use path network will be 50% complete by 2011.*

<sup>3</sup> Participating schools included: Charles Barrett ES, Cora Kelly ES, Francis Hammond MS, George Mason ES, George Washington MS, James K. Polk ES, Jefferson-Houston ES, John Adams ES, Patrick Henry ES, and William Ramsay ES.



**Status:** The 2008 Mobility Plan included a recommended 18 miles of new sidewalks. The City has implemented 27% of the recommended new sidewalk mileage from the 2008 Plan, and has also added other new sidewalks as part of redevelopment projects (see Figure 1 on Page 9).

- *Improved maintenance will result in a decrease in requests by 50% in 2011.*

**Status:** Since 2008, the City has initiated its Call.Click.Connect program, which is an online customer service system. Because this system makes it easier for citizens to make requests, thereby possibly resulting in an increase in requests, this performance measure is no longer applicable.

- *Bi-annual special events in spring and fall will encourage active living and promote walking as a means of transportation and recreation.*

**Status:** The City is an active participant in Car Free Day and Try Transit Week every September. Since 2011, the City's Local Motion program has led a Commuter Challenge every April to have large employers encourage employee commuting by means other than the single occupant vehicle.

- *More than 50% of elementary school children will receive pedestrian safety education by 2010.*

**Status:** ACPS students currently do not receive pedestrian safety education; however, in the 2015-2016 school year ACPS will begin using Virginia's revised physical education curriculum which includes pedestrian and bicycle safety education.

## **Bicycle Performance Measures**

- *The proportion of people bicycling to work in Alexandria shall increase from 0.5% to 3% percent by 2011.*

**Status:** According to the U.S. Census, one percent of Alexandria commuters biked to work in 2013. The City continues to install bicycle parking near transit facilities, and installed 30 new bike parking spaces in 2014 along the new Route 1 MetroWay.

- *Alexandria City Public Schools will begin counting the number of children bicycling to school, and this number shall increase 5% annually through 2011.*

**Status:** According to 2014 figures from the self-reported student travel tally data from the National Center for Safe Routes to Schools, 1% of Alexandria students at participating public schools biked to school.<sup>4</sup>

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<sup>4</sup> Participating schools included: Charles Barrett ES, Cora Kelly ES, Francis Hammond MS, George Mason ES, George Washington MS, James K. Polk ES, Jefferson-Houston ES, John Adams ES, Patrick Henry ES, and William Ramsay ES.



- *The number of bicycle-motor vehicle crashes (13 in 2004, 17 in 2005 and 12 through Oct. 1, 2006) will hold constant or decrease through 2011.*

**Status:** According to the Alexandria City Police Department, Alexandria has averaged 19 bicycle crashes per year over the past ten years, and had 16 crashes in 2014 (the last full year of data available).

- *The proposed bikeway network will be 50% complete by 2011.*

**Status:** An estimated 33% of the recommended bikeway network from the 2008 Mobility Plan has been implemented (see Figure 2 on page 10).<sup>5</sup>

- *The City will begin a log of maintenance requests related to its bikeways network, post the log online for public viewing, and seek to reduce its maintenance backlog by a number to be determined.*

**Status:** The City collects maintenance requests via the *Call.Click.Connect* program and the public can view previously submitted requests. The bicycle requests can be made for Complete Streets, bicycle racks, Capital Bikeshare, trails and on-street bicycle facilities. The City has not developed a tracking system for maintenance requests, but is proposing to include a tracking system as part of the Pedestrian and Bicycle Master Plan Update.

- *The City will add at least 500 new bicycle parking racks by 2009. In all new development bicycle parking will be introduced at a rate of 1:10 (at least one bicycle parking space will exist for every 10 vehicular spaces).*

**Status:** The City has provided over 200 new bicycle parking spaces on City streets and has adopted bicycle parking standards for all new development, which have resulted in over 500 parking spaces since 2008. The updated standards exceed the above goal by requiring more bicycle parking.

- *Bi-annual special events in spring and fall will encourage bicycle use.*

**Status:** The City participates in Bike to Work day each spring and does a Bike Light giveaway and bike maintenance event each October. The City is also an active participant in Car Free day every September. Since 2011, the City's Local Motion program has led a Commuter Challenge every April to have large employers encourage employee commuting by means other than the single occupant vehicle.

- *All City-sponsored special events and public recreational facilities will supply plentiful bicycle parking.*

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<sup>5</sup> This estimate is based on the percent of the proposed bicycle network where a bicycle facility exists as of 2014. An estimated 27% of the proposed bicycle network features the exact facility type (e.g. bike lane, shared lane marking, etc.) that was recommended in the 2008 plan. Also, some of the 2008 recommendations were for the widening of existing trails (e.g. Eisenhower Trail and Holmes Run Trail). Although several places along these trails have been repaved or had other improvements, those recommendations are not shown on Figure 2 as "complete" because the trails were not widened along their entire length, as recommended.



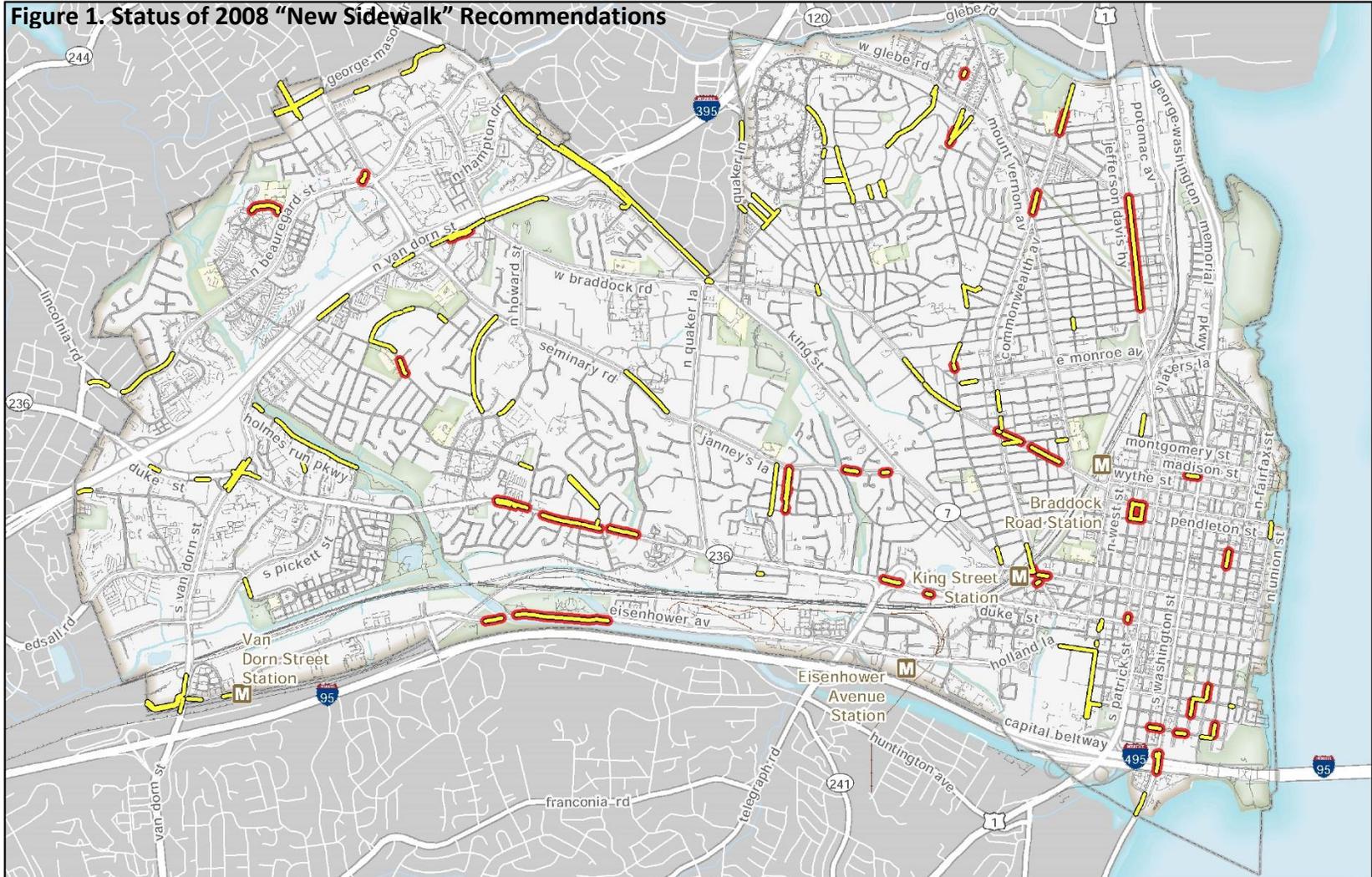
**Status:** Most City events occur in locations where existing bicycle parking is located. The City works with ACPS and The Parks Department to identify bicycle parking needs and has install over 35 bicycle parking spaces at Parks and Schools in 2014 alone.

- *More than 50% of elementary aged school children will receive bicycle safety education by 2010.*

Status: Currently, bicycle safety education is not being provided as a standard part of curriculum; however, students at nine ACSP schools received bicycle safety education in 2014 as part of a grant-sponsored bicycle rodeo. Also, in the 2015-2016 school year ACPS will begin using Virginia's revised physical education curriculum which includes pedestrian and bicycle safety education.



**Figure 1. Status of 2008 “New Sidewalk” Recommendations**



**2008 Mobility Plan Recommendations**

— Construct New Sidewalk

— Existing Facilities

— Sidewalks

**2015 Implementation Status**

— Complete

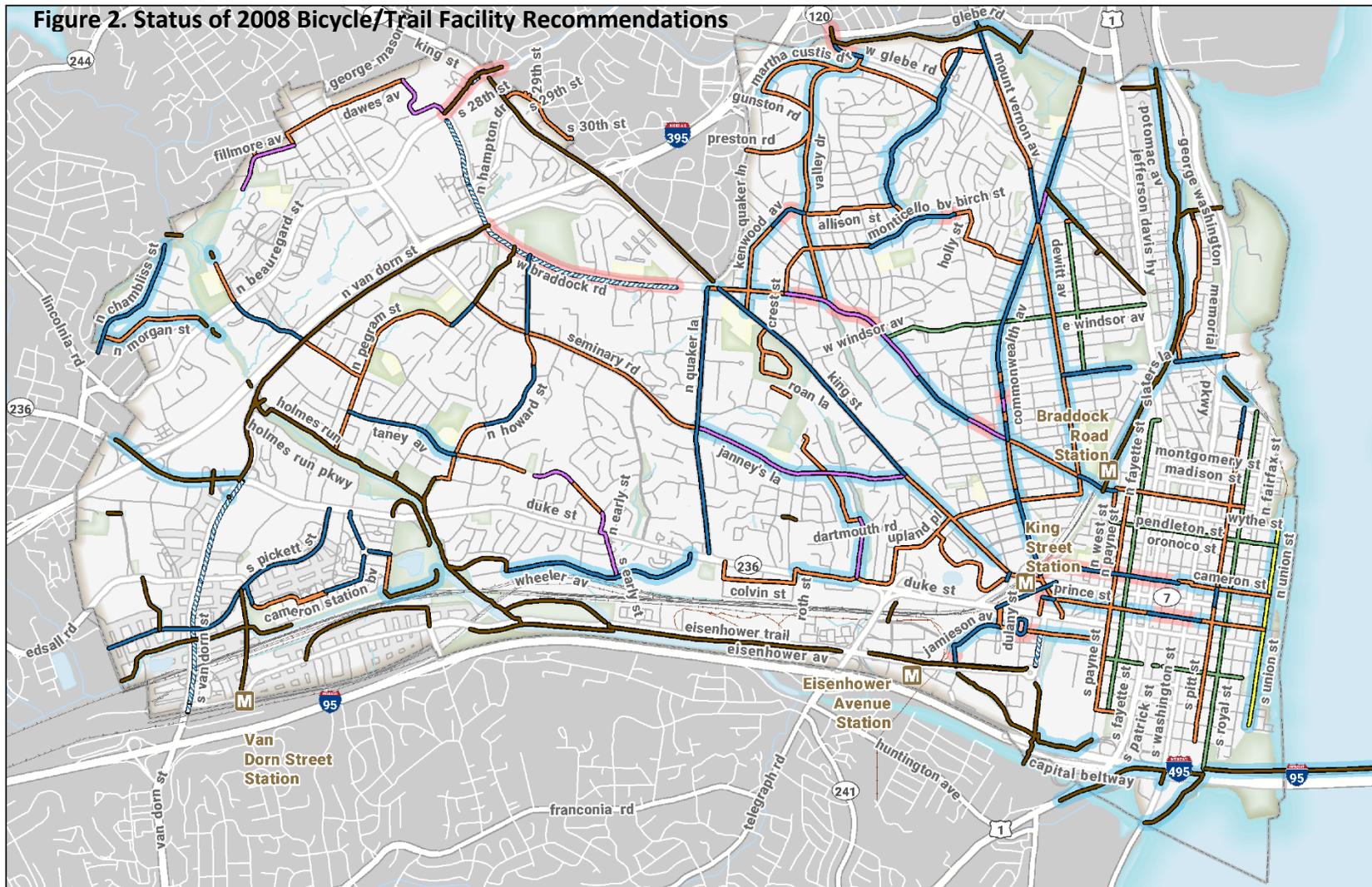
**M Metro Station**

0 0.25 0.5 1 Miles

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Figure 2. Status of 2008 Bicycle/Trail Facility Recommendations



**2008 Mobility Plan Recommendations**

- Shared Use Path
- Bike Lane
- Climbing Lane

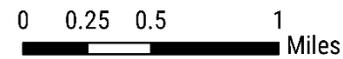
**2015 Implementation Status**

- Sharrow
- Bike Boulevard
- Wide Outside Lanes
- Bike/Ped Priority Street

**2015 Implementation Status**

- Built Recommended or Better
- Built Sharrows

**M** Metro Station



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Date: 1/11/2016



## II. Existing Conditions

The population within the City of Alexandria has increased by 14 percent since the year 2000 and is projected to keep growing – from 146,294<sup>6</sup> today to over 190,000 by 2040.<sup>7</sup> Anticipating this growth, City leaders are working to expand and diversify the transportation network in ways that help sustain the exceptional quality of life that exists in Alexandria.

This section presents the existing conditions related to transportation in Alexandria, with a particular focus on the pedestrian and bicycle environment. This information will provide a foundation for the Pedestrian and Bicycle Master Plan and the Complete Streets Design Guide.

### Travel Modes

According to the 2012 data from the U.S. Census Bureau and the Washington Council of Governments *State of the Commute* report, almost 60 percent of Alexandrians commute via single occupancy vehicle, close to 4 percent walk to work, and about 1 percent bicycle to work. The combined total portion of the population that commutes using sustainable transportation modes (bike, walk and transit) comprises over one third of all commuters. As shown in Figure 3, this average represents slightly more bike/walk/transit commuters than that reported for either the DC region or the Commonwealth of Virginia.<sup>8</sup>

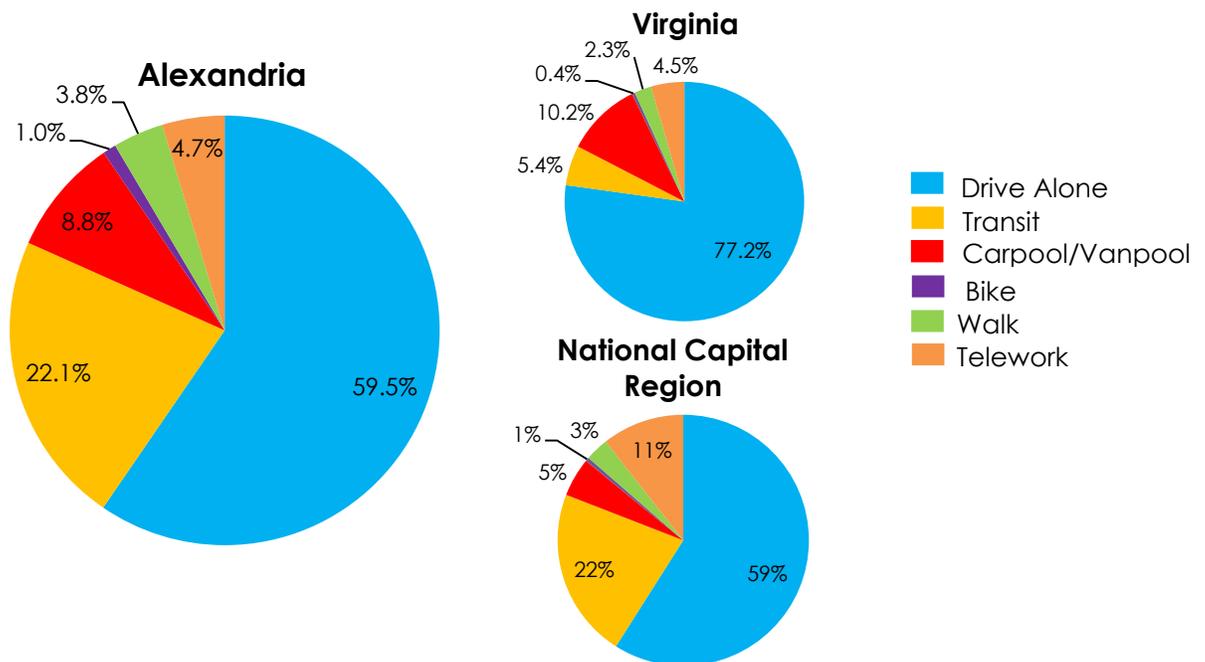


Figure 3 - Commute to Work (City of Alexandria, National Capital Region (DC Metro Area), Virginia)

<sup>6</sup> City of Alexandria. Comprehensive Annual Financial Report 2013. Obtained from [http://www.apa.virginia.gov/data/download/local\\_gov\\_caf/Alexandria%20CAFR%202013.pdf](http://www.apa.virginia.gov/data/download/local_gov_caf/Alexandria%20CAFR%202013.pdf) on June 20, 2014.

<sup>7</sup> MWCOG Cooperative Forecast, Summary of Intermediate Population Forecasts Round 8.2, 2013. Obtained at: <http://www.mwco.org/uploads/news-documents/AVhY20130213152355.pdf>

<sup>8</sup> 2008-2012 American Community Survey 5-Year Estimates. S0801 Commuting characteristics by Sex. U.S. Census Bureau.



The percentage of residents driving single occupancy vehicles to work has continued to decrease over the past 10 years. According to data from the U.S. Census, the percentage of people driving to work has decreased by almost 10 percent since 2000. This compares to a 28 percent increase for walking and 87 percent increase in rate of bicycling as noted in Figure 4.<sup>9</sup>

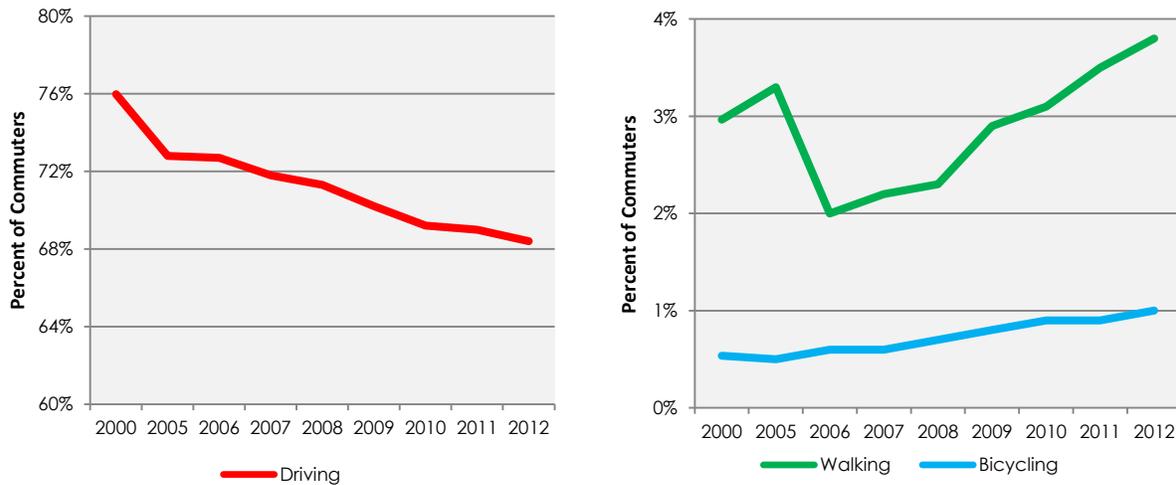


Figure 4 - Driving, Bicycling and Walking to Work (Alexandria Residents)

Nearly half (42 percent) of households in Alexandria own only one car and 6.5 percent of households do not own a car (see Figure 5). It is likely that many of the trips taken by members of these households involve walking and/or bicycling.

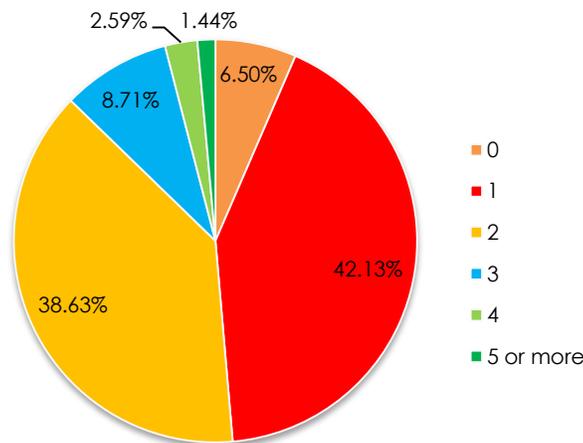


Figure 5 - City of Alexandria Automobiles per Household

<sup>9</sup> 2008-2012 American Community Survey 5-Year Estimates. S0801 Commuting characteristics by Sex. U.S. Census Bureau.



## Capital Bikeshare

The City of Alexandria initiated Capital Bikeshare in September 2012. With eight stations and 80 bicycles, the original system served Old Town and helped link residents and visitors to transit at both Braddock Road and King Street Metrorail Stations. As seen in Figure 6, the Braddock Road and King Street Metrorail stations are the two most heavily used bike share stations in Alexandria.<sup>10</sup>

In August 2014, after two successful years of operations of Capital Bikeshare, the City expanded from eight to 16 stations. The new Capital bikeshare stations serve Del Ray, Carlyle, Arlandria and the Eisenhower Avenue Metrorail Station. Since the launch of the system in 2012, Alexandria residents and visitors have taken over 100,000 rides, and have ridden almost 250,000 miles.<sup>11</sup>

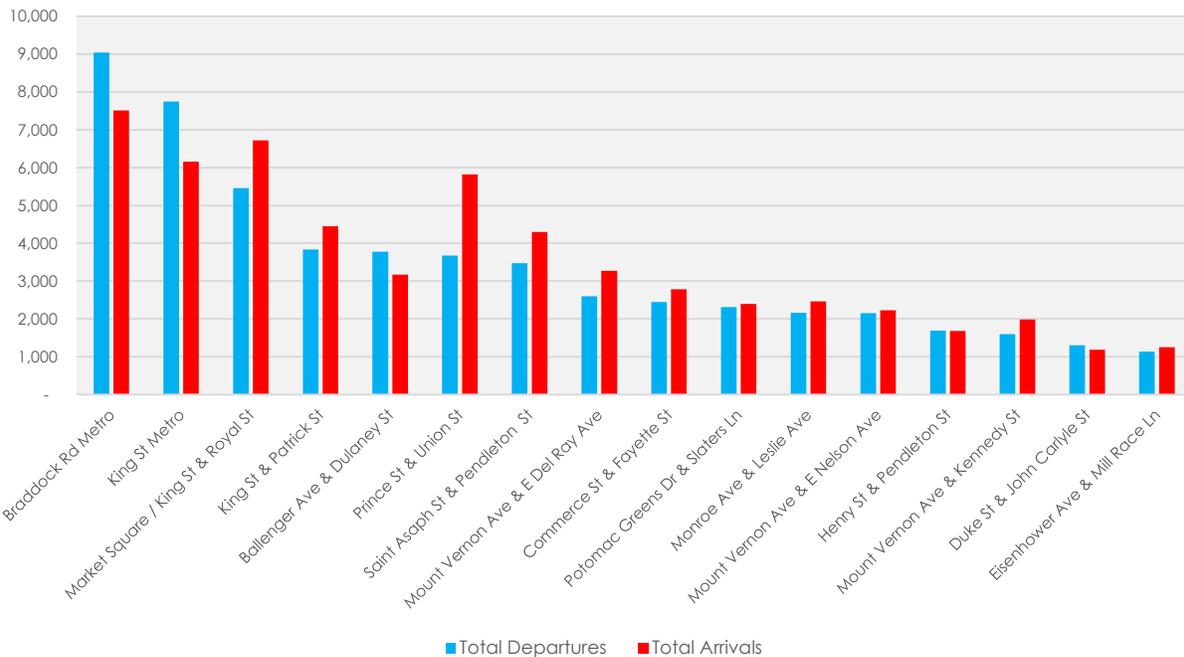


Figure 6 - Total Arrivals and Departures (August 2014-August 2015)

As shown in Figure 7, Capital Bikeshare ridership fluctuates seasonally. It is notable that there are approximately 60 rides per day in January, the coldest month with the lowest annual ridership.

<sup>10</sup> Note: Data includes arrivals and departures from for all 16 stations for the months of August 2014 through August 2015.  
<sup>11</sup> Alexandria Capital Bikeshare Dashboard. Obtained from Hillary Orr. January 2016.



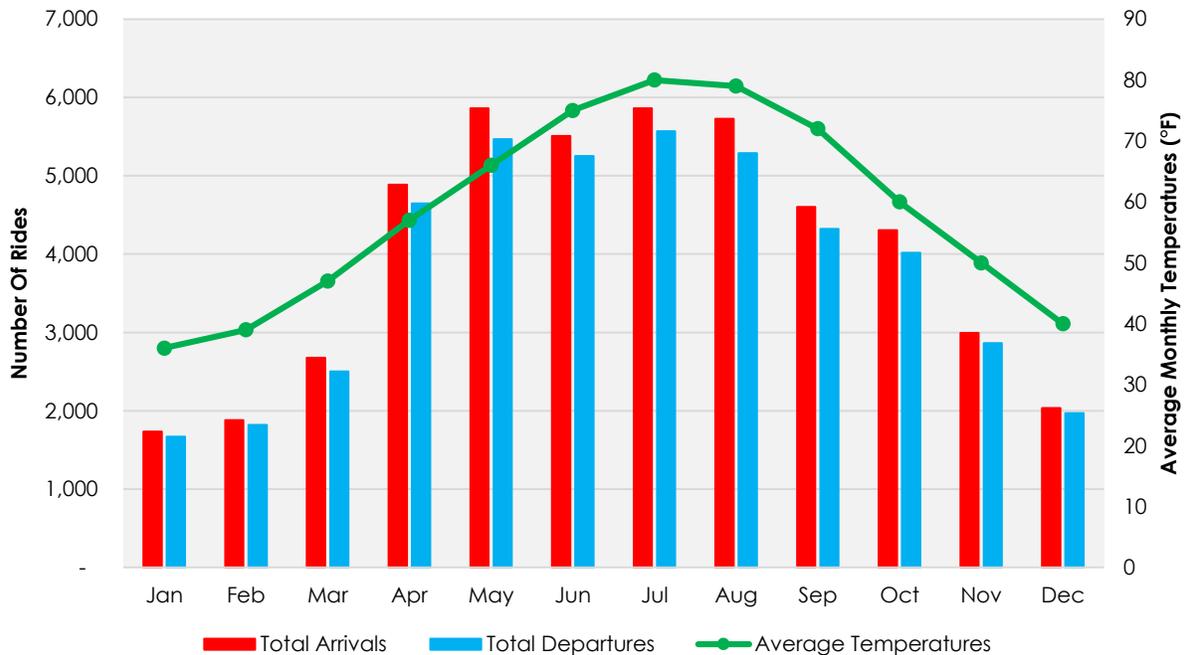


Figure 7 - Ridership Seasonal Variability vs Average Monthly Temperatures

## Pedestrian Facilities

The City of Alexandria has an extensive network of pedestrian facilities that include sidewalks, trails and intersection treatments. However, the level of connectivity and comfort provided by the pedestrian network varies between neighborhoods, depending on the urban form, roadway characteristics and other factors.

### Pedestrian Facilities

Alexandria has approximately 575 miles of sidewalks which cover an estimated 76% of City streets. Areas without full sidewalk coverage tend to be residential neighborhoods including locations in the North Ridge/Rosemont area and the Taylor Run area. While sidewalk coverage is fairly comprehensive, some sidewalks need repair or feature obstructions like vegetation or other obstacles, which create impediments for pedestrians.

As shown in Table 2, Alexandria has over 29 miles of paved and unpaved multi-use trails that connect parks, neighborhoods, activity centers, transit and other destinations. The major trail systems are the Holmes Run Trail, Four Mile Run Trail, and Mount Vernon Trail. These major trail systems extend into surrounding jurisdictions and handle notable volumes of recreation and transportation trips. The Mount Vernon Trail is discontinuous through Old Town Alexandria, and the Holmes Run Trail currently ends near the Eisenhower Metro Station and does not connect directly to the other two major trail systems.



Table 2 - Miles of Trails by Trail Classification

Trail Classification	Miles of Trails
<b>Shared-Use Path:</b>	<b>21.02</b>
<b>Unpaved Nature Trail:</b>	<b>7.99</b>
<b>TOTAL</b>	<b>26.02</b>

### Pedestrian Crash Data

Pedestrian safety – both real and perceived – is an important factor that influences where and how often people walk. Traffic incident data is one way to assess the safety of transportation system users and can be used to help target safety-related programs and investments. Figure 8 displays reported pedestrian crashes between the years of 2005 and 2014 and identifies crash “hot spots” located throughout the City. Locations with concentrations of darker red coloring correspond to higher numbers of pedestrian crashes.

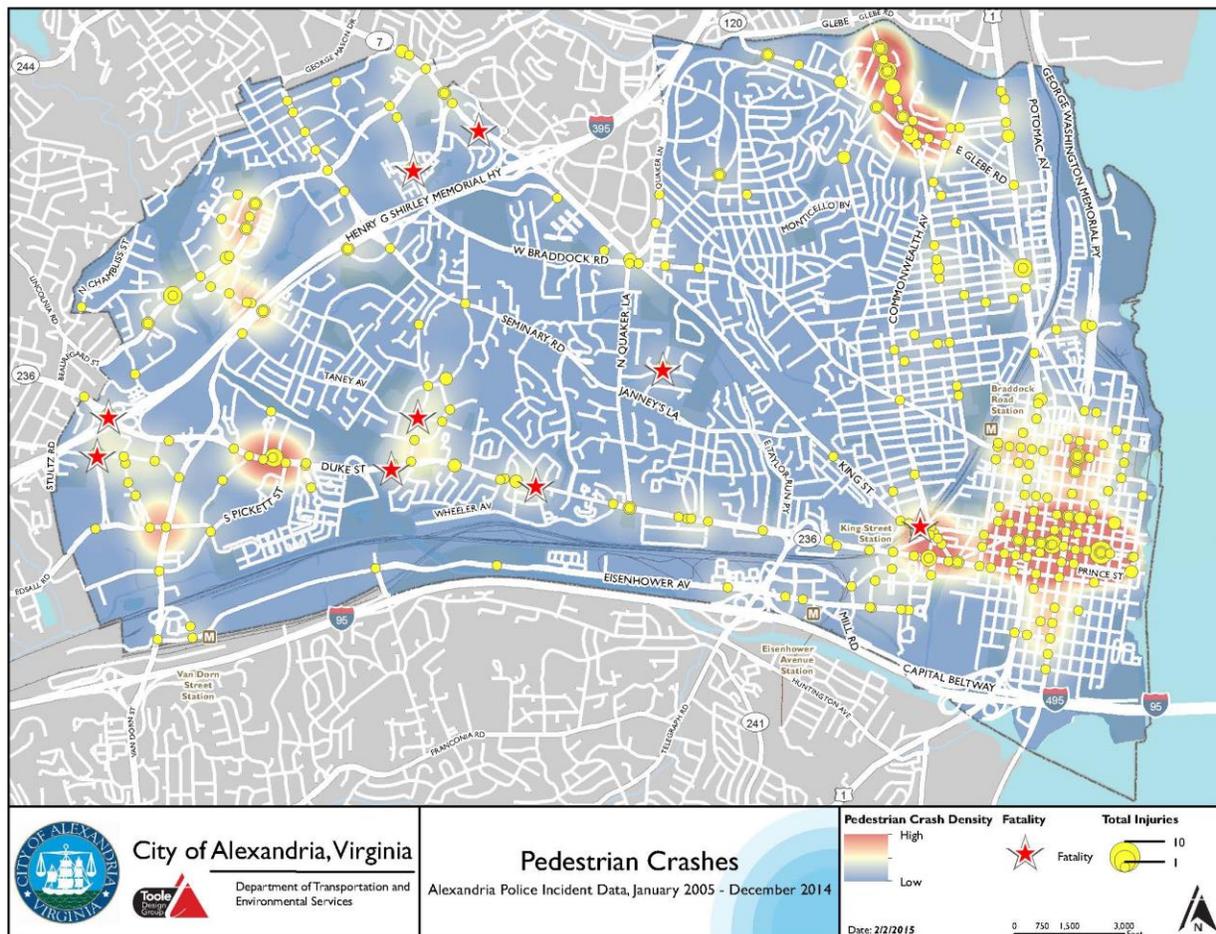


Figure 8 - Reported Pedestrian Crashes (January 2005 – December 2014)

It should be noted that crash concentration alone does not indicate a location is inherently more dangerous than another location. Locations with higher volumes of pedestrians tend to experience higher overall numbers of crashes, but the likelihood that any individual would be involved in a crash (the relative risk) may actually be lower.



As shown in Figure 9, the City has experienced an average of 64 pedestrian crashes per year (2004-2014). During that same 10 year period, there were nine pedestrian fatalities on City of Alexandria streets.<sup>12</sup> Half of all accidents (50 percent) occur Tuesday through Thursday and the majority occur during daylight hours (73 percent) as noted on Figure 10 and 11.

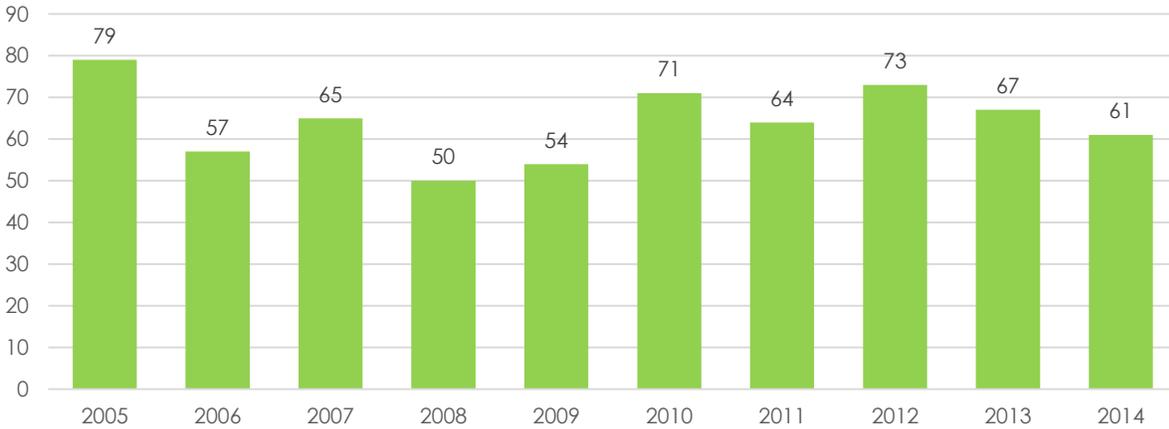


Figure 9 - Reported Pedestrian Crashes (January 2005-December 2014)<sup>13</sup>

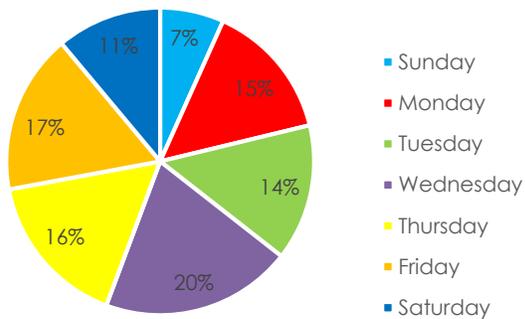


Figure 10 - Reported Pedestrian Crashes by Day

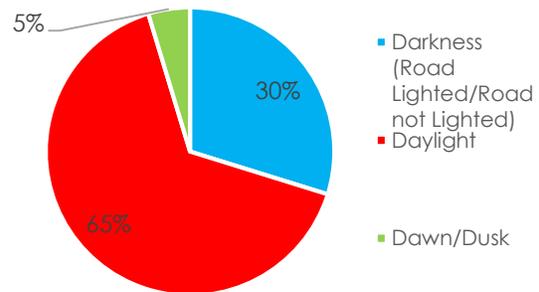


Figure 11 - Reported Pedestrian Crashes by Time of Day

### Pedestrian Counts

Pedestrian count data is collected by the volunteers of the Alexandria Bicycle and Pedestrian Advisory Committee (BPAC). These counts are performed annually during the months of January, May, July and September. Counts are completed two times per day (12:00 to 2:00 p.m. and 5:00 p.m. to 7:00 p.m.) on Tuesdays and Saturdays. The counts have been taken in 17 locations throughout Alexandria. Table 3 provides the full list of count locations and the total number of pedestrians for the years of 2011 through 2014. While conducting the counts, BPAC volunteers note the time of day, location, and gender of the pedestrians. During the period of July 2011 through May 2014, the majority of recorded pedestrians were female (54 percent).

<sup>12</sup> Alexandria Police accident reports for the years of 2005 to 2014 were used for this analysis. It is important to note that while this data includes information on 641 pedestrian related incidents for the ten year period, the true number of incidents may be different as many pedestrian crashes tend to not be reported to police and therefore are not reflected in the data.

<sup>13</sup> City of Alexandria Police. Reported Pedestrian Crashes. January 2005 through December 2014.



Count Location	Total Counts
Intersection of Prince Street and Washington Street.	3,343
Mount Vernon Trail - south of intersection with Marina road.	2,900
Mt Vernon Avenue - South of Four Mile Run Trail	2,798
Intersection of Cameron Street and Washington Street.	2,547
Intersection of Commonwealth and Mount Vernon Avenues.	2,328
Holmes Run Trail, adjacent to the Holmes Run Parkway near North Ripley Street.	1,959
Mount Vernon Trail - south of the Woodrow Wilson Bridge	1,858
North Beauregard Street just south of the intersection with King Street	1,661
Mount Vernon Trail - Western entrance to trail at Woodrow Wilson Bridge	1,501
Holmes Run Trail at the intersection of N Pickett/Holmes Run Pkwy	1,317
Off Street trail between Braddock and King Metrorail Stations	1,304
Eisenhower Avenue just west of the SpringHill Suites	1,152
Slaters Lane west of Portner Road	494
Sidewalk/trail on Van Dorn St just N of Metrorail overpass and S of Eisenhower	290
Washington St Bridge Deck	236
MVT East towards Jones Point Park	100
Route 1 Connector	53
<b>TOTAL</b>	<b>25,841</b>

Table 3 – Pedestrian Counts 2011 – 2014 (BPAC Annual Count Data)<sup>14</sup>

## Bicycle Facilities

The existing bicycle network in the City of Alexandria consists of on-street facilities (e.g., bike lanes, shared lane markings or sharrows, and signed routes), and off-street sidepaths and multiuse trails. In 2015, the bicycle network consists of a network of approximately 24 miles on-street and 29 miles of off-street facilities (discussed above under Pedestrian Facilities). Figure 12 shows the existing bicycle/trail network and Table 4 documents existing bicycle facilities by type.<sup>15</sup>

Facility Type	Miles
Bike Lanes	10.35
Shared Lane Markings (Sharrows)	13.31
Paved Trails	21.02
Unpaved Trails	7.99
<b>TOTAL</b>	<b>52.67</b>

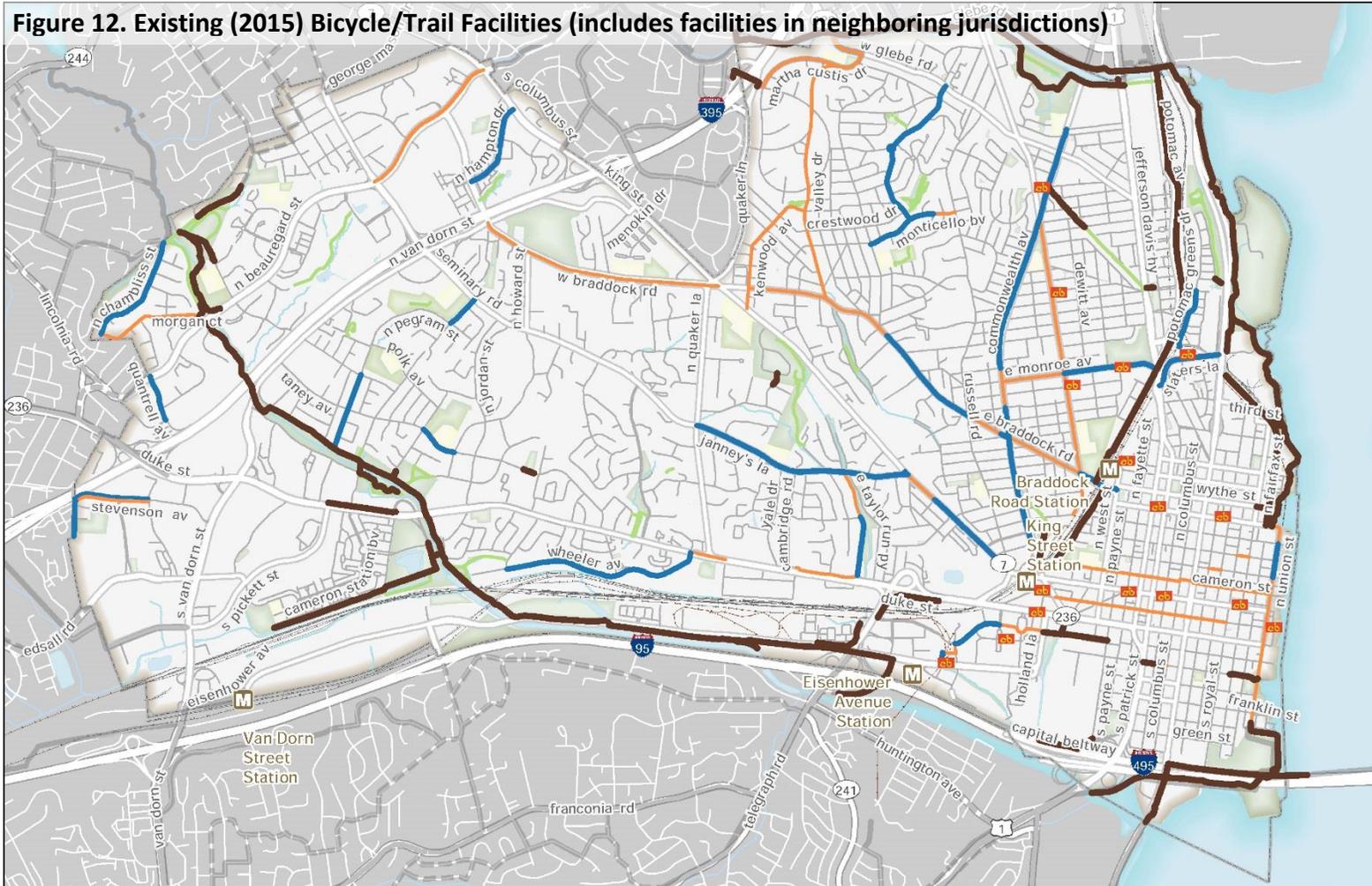
Table 4 - Bicycle Facilities by Type (2014)

<sup>14</sup> It should be noted that the location of some counts changed year to year (although they remained in the same general area), and some locations were dropped and new locations added over the years.

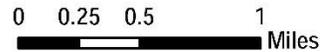
<sup>15</sup> The map in Figure 15 includes facilities (existing and planned) in surrounding jurisdictions for easy understanding of regional importance and connectivity.



**Figure 12. Existing (2015) Bicycle/Trail Facilities (includes facilities in neighboring jurisdictions)**



- |                           |                            |                                  |                      |
|---------------------------|----------------------------|----------------------------------|----------------------|
| <b>Capital Bike Share</b> | <b>Existing Facilities</b> | <b>Bike Network Outside City</b> | <b>Metro Station</b> |
| Existing Station          | Trail                      | Existing                         | Metro Station        |
|                           | Unpaved Nature Trail       | Proposed                         |                      |
|                           | Bike Lane                  |                                  |                      |
|                           | Climbing Lane              |                                  |                      |
|                           | Sharrow                    |                                  |                      |



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### Bicycle Crash Data

As shown in Figure 13, there were an average of 19 bicycle crashes per year from 2005 through 2014. During that same period there was only one reported bicyclist fatality.<sup>16</sup> Seventy three percent of bicycle crashes occur during daylight hours, and crashes are fairly evenly distributed throughout the days of the week, with Monday through Thursday having higher daily crash volumes than Friday through Sunday. Additional information on the time of day, day and location of accidents is provided in Figures 14-16.

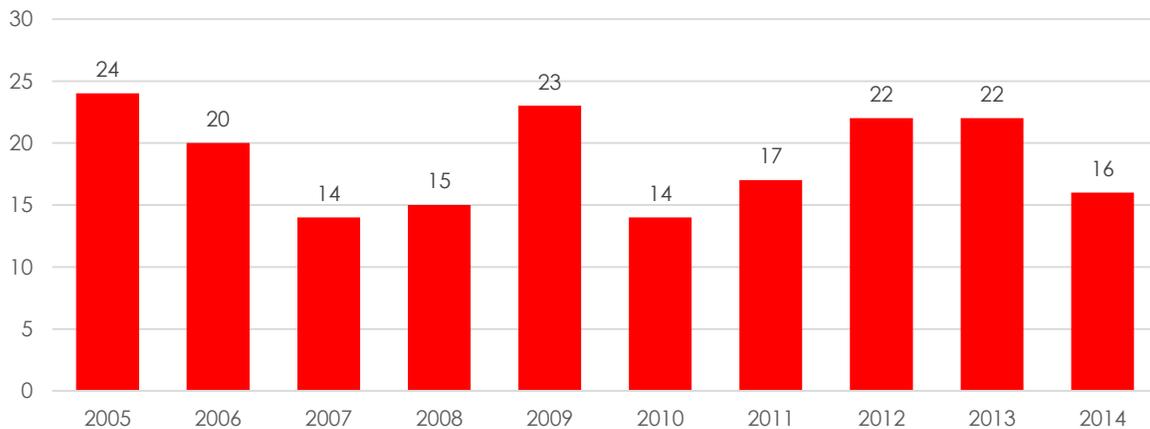


Figure 13 -Reported Bicycle Crashes January 2005 – December 2014<sup>17</sup>

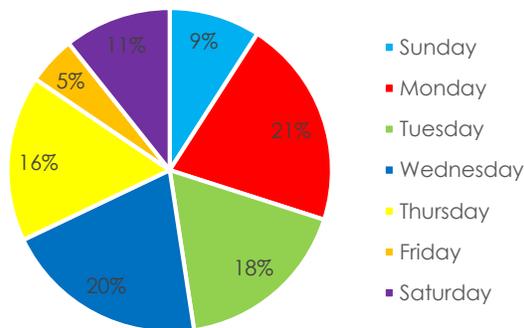


Figure 14 - Reported Bicycle Crashes by Day of the Week

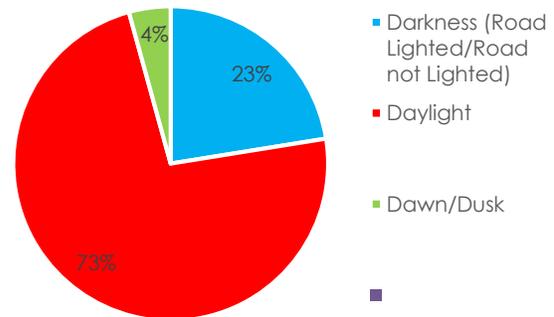


Figure 15 - Reported Bicycle Crashes by Time of Day

<sup>16</sup> Alexandria Police accident reports for the years of 2005 to 2014 were used for this analysis. It is important to note that while this data includes information on 187 bicycle related incidents for the ten year period, the true number of incidents may be different as many pedestrian crashes tend to not be reported to police and therefore are not reflected in the data.

<sup>17</sup> City of Alexandria Police. Reported Bicycle Crashes. January 2004 through December 2014.



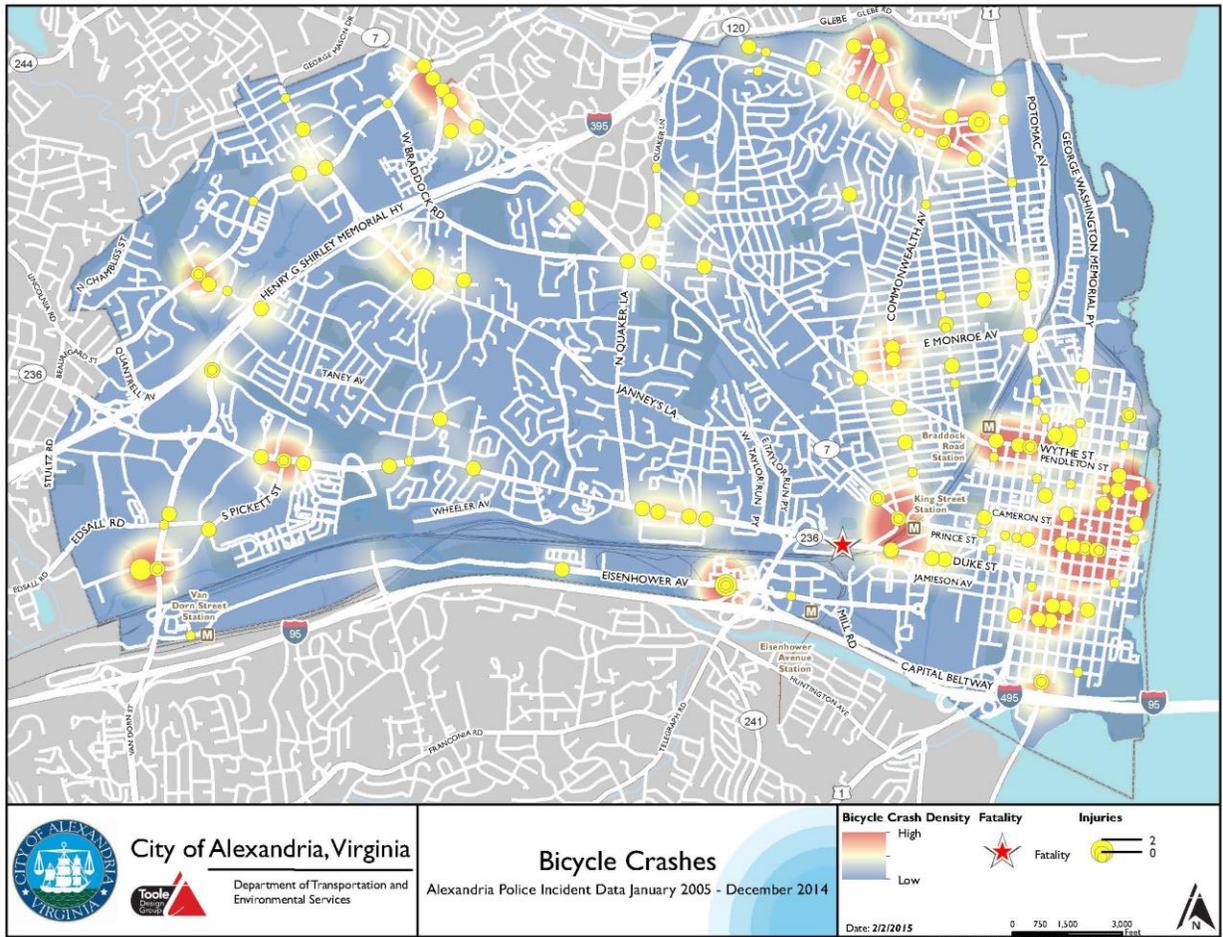


Figure 16 - Reported Bicycle Crashes (January 2005 - December 2014)

### Bicycle Counts

Alexandria BPAC volunteers collect bicycle counts at locations throughout Alexandria several times each year. The bicycle counts are collected concurrently with pedestrian counts during the months of January, May, July and September, during the hours of 12:00 to 2:00 p.m. and 5:00 p.m. to 7:00 p.m. Table 5 provides a summary of counts and the geographic locations where data was collected during the years of 2011 through 2014.

The count locations are throughout the City at intersections or other locations with significant bicycle connections and where bicycle activity is expected (e.g. Mt. Vernon Trail).<sup>18</sup>

Seventy one percent of bicyclists observed were male, and there were a higher numbers of bicyclists recorded in the more temperate months of May and September. Finally, as indicated in Table 5 the locations with the most bicycle activity observed were:

1. Mount Vernon Trail – South of the intersection Marina Road.
2. Mount Vernon Trail – South of the Woodrow Wilson Bridge
3. Intersection of Commonwealth Avenue and Mount Vernon Avenue.

<sup>18</sup> It is important to note that the data is not available for all locations and all years. Because there was some variation in the count locations from year to year, a longitudinal data comparison is difficult to provide.



4. Mount Vernon Trail – Western entrance to trail at Woodrow Wilson Bridge
5. Mt Vernon Ave South of Four Mile Run Trail

Count Location	Total Bicyclists
Mount Vernon Trail - South of the intersection of Marina Road	8,461
Mount Vernon Trail - South of the Woodrow Wilson Bridge	4,603
Intersection of Commonwealth Avenue and Mount Vernon Avenue	1,589
Mount Vernon Trail - Western entrance to trail at Woodrow Wilson Bridge	1,395
Mt Vernon Ave South of 4 Mile Run Trail	1,183
Eisenhower Avenue just west of the Spring Hill Suites	1,160
Mount Vernon Trail East towards Jones Point Park	612
Holmes Run Trail, adjacent to the Holmes Run Parkway near North Ripley Street.	594
North Beauregard Street just south of the intersection with King Street	422
Holmes Run Trail at the intersection of N Pickett/Holmes Run Pkwy	377
Prince Street just west of the intersection with Washington Street.	361
Cameron Street just west of the intersection with Washington Street.	353
Off Street trail between Braddock and King Metrorail Stations	341
Washington St Bridge Deck	262
Slaters Lane just west of Portner Rd	162
Sidewalk/trail on Van Dorn St just N of Metrorail overpass and S of Eisenhower	126
Route 1 Connector	56
<b>TOTAL COUNTS</b>	<b>2,2057</b>

*Table 5 - Bicycle Counts by Location (2011-2014)*



## Safe Routes to School

Safe Routes to School (SRTS) programs are designed to encourage children to bicycle and walk to and from schools safely, and support the improvement of walking and bicycling routes to and from schools. In Alexandria, SRTS programs have included some combination of engineering, encouragement, education, and enforcement activities. Since 1999, the City has continued to set aside a portion of its local budget to implement traffic calming measures to increase safety around schools. More recently, building off of an existing program run by Trails for Youth (a local organization focusing on increasing access to trails and nature), the City hired its first part-time Safe Routes to School coordinator to help manage all activities and programs related to getting to children safely to and from school. Also since 2008, the City has completed SRTS infrastructure improvements focused on pedestrian/bicycle safety near Charles Barrett, Cora Kelly and George Mason Elementary Schools.

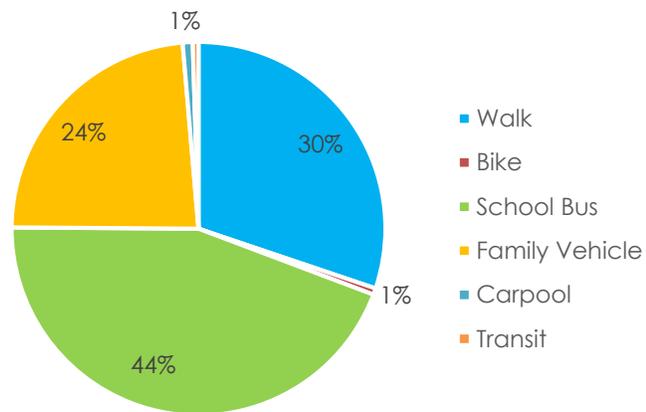


Figure 18 - Student Travel Modes for Participating Schools in Alexandria

Fourteen of the City's 16 elementary and middle schools have participated in SRTS programs in some way. School participation has included events for International Bike to School Day and/or Walk To School Day, and administration of Student/Parent Travel Surveys (described below). Other schools have also received federal and state funding for the implementation of programs that educate and encourage kids to walk and bicycle to school.

In 2014, Alexandria Schools with SRTS programs participated in a voluntary Parent Survey, to help understand student travel to and from school and assess parent/guardian attitudes regarding walking and bicycling to school. This voluntary survey was completed by 4,271 parents in ten elementary and middle schools, and included questions on how students get to and from school. Figure 18 displays the results of the survey based on the various travel modes to and from school.<sup>19</sup>

<sup>19</sup> National Center for Safe Routes to School. Data Central. Parent Survey 2014. Accessed from <http://www.saferoutesinfo.org/data-central> on December 9, 2014.

