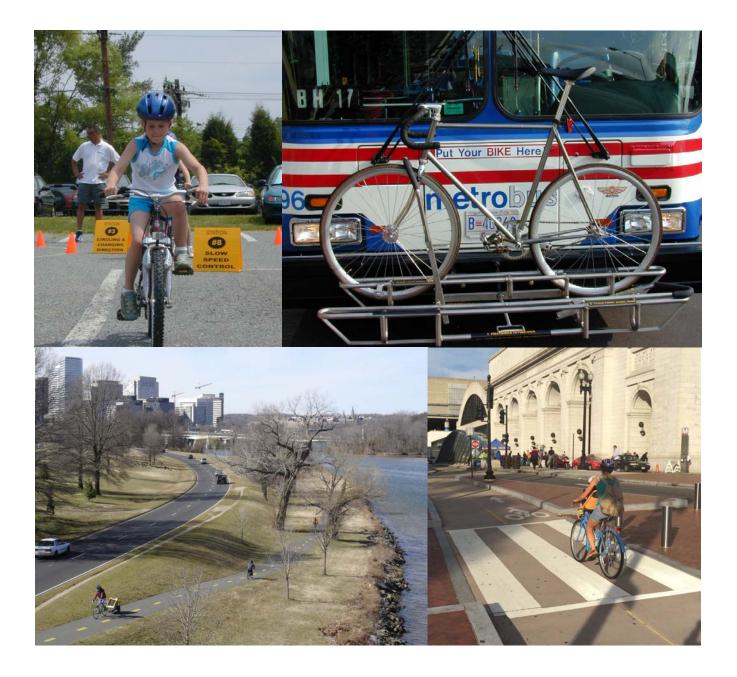
Bicycle and Pedestrian Plan for the National Capital Region



DRAFT November 7, 2014

National Capital Region Transportation Planning Board

CREDITS

Technical Oversight

Bicycle and Pedestrian Subcommittee Of the TPB Technical Committee

Director, Department of Transportation Planning

Kanti Srikanth

Systems Management Planning Director

Andrew Meese

Report Authors

Michael J. Farrell Andrew Meese

Contributors

Andrew Austin Jessica Mirr Jim Sebastian

ABSTRACT

CREDITS

TABLE OF CONTENTS

EXECUTIVE SUMMARY

INTRODUCTION

| A. | The Vision and Region Forward | i-1 |
|----|--|-----|
| B. | Bicycling and Walking in the National Capital Region | i-2 |
| C. | Plan Development and Organization | i-4 |

1. PLANNING CONTEXT

| B. Transportation Vision of the Transportation Planning Board. 1-1 C. Region Forward 2050 1-3 D. Regional Transportation Priorities Plan 1-5 E. Complete Streets 1-6 F. Green Streets and Air Quality. 1-7 G. Constrained Long-Range Plan 1-8 H. Transportation Improvement Program 1-8 H. Transportation Improvement Program 1-8 I. Priority Unfunded Bicycle and Pedestrian Projects 1-9 J. Bicycling and Walking in the Regional Transportation Model 1-11 K. Encouraging Walking and Bicycling 1-11 L. Federal Policies 1-12 i. Americans with Disabilities Act 1-13 iii. MAP-21 and Transportation Alternatives 1-13 iii. American Recovery and Reinvestment Act 1-14 M. State Policies 1-15 i. District of Columbia 1-15 iii. Maryland 1-18 iiii. Virginia 1-21 O. Local Bicycle and Pedestrian Plans 1-21 O. Local Bicycle and Pedestrian Staffing 1-23 P. Safe Routes to School 1-24 Q. WMATA 1-27 R. Regional B | A. Overview 1-1 |
|--|---|
| D. Regional Transportation Priorities Plan.1-5E. Complete Streets.1-6F. Green Streets and Air Quality.1-7G. Constrained Long-Range Plan.1-8H. Transportation Improvement Program.1-8I. Priority Unfunded Bicycle and Pedestrian Projects.1-9J. Bicycling and Walking in the Regional Transportation Model.1-11K. Encouraging Walking and Bicycling.1-11L. Federal Policies.1-12i. Americans with Disabilities Act.1-13iii. MAP-21 and Transportation Alternatives.1-13iii. American Recovery and Reinvestment Act.1-14M. State Policies.1-15i. District of Columbia.1-15ii. Waryland.1-18iii. Virginia.1-19N. Local Bicycle and Pedestrian Plans.1-23P. Safe Routes to School.1-24Q. WMATA.1-27R. Regional Bicycle and Pedestrian Planning.1-28i. Precursors to the Current Plan.1-28ii. Sources of the Regional Plan Projects.1-29 | B. Transportation Vision of the Transportation Planning Board1-1 |
| E. Complete Streets1-6F. Green Streets and Air Quality.1-7G. Constrained Long-Range Plan1-8H. Transportation Improvement Program1-8I. Priority Unfunded Bicycle and Pedestrian Projects1-9J. Bicycling and Walking in the Regional Transportation Model1-11K. Encouraging Walking and Bicycling1-11L. Federal Policies1-12i. Americans with Disabilities Act1-13iii. MAP-21 and Transportation Alternatives1-13iii. American Recovery and Reinvestment Act1-14M. State Policies1-15i. District of Columbia1-15ii. Maryland1-18iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | C. Region Forward 2050 1-3 |
| F.Green Streets and Air Quality.1-7G.Constrained Long-Range Plan1-8H.Transportation Improvement Program.1-8I.Priority Unfunded Bicycle and Pedestrian Projects1-9J.Bicycling and Walking in the Regional Transportation Model1-11K.Encouraging Walking and Bicycling1-11L.Federal Policies1-12i.Americans with Disabilities Act1-13iii.MAP-21 and Transportation Alternatives1-13iii.American Recovery and Reinvestment Act1-14M.State Policies1-15i.District of Columbia1-15ii.Maryland1-18iii.Virginia1-19N.Local Bicycle and Pedestrian Plans1-21O.Local Bicycle and Pedestrian Staffing1-23P.Safe Routes to School1-24Q.WMATA1-27R.Regional Bicycle and Pedestrian Planning1-28i.Precursors to the Current Plan1-28ii.Sources of the Regional Plan Projects1-29 | D. Regional Transportation Priorities Plan1-5 |
| G. Constrained Long-Range Plan1-8H. Transportation Improvement Program1-8I. Priority Unfunded Bicycle and Pedestrian Projects1-9J. Bicycling and Walking in the Regional Transportation Model1-11K. Encouraging Walking and Bicycling1-11L. Federal Policies1-12i. Americans with Disabilities Act1-13ii. MAP-21 and Transportation Alternatives1-13iii. American Recovery and Reinvestment Act1-14M. State Policies1-15i. District of Columbia1-15iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | E. Complete Streets1-6 |
| H. Transportation Improvement Program.1-8I. Priority Unfunded Bicycle and Pedestrian Projects.1-9J. Bicycling and Walking in the Regional Transportation Model1-11K. Encouraging Walking and Bicycling1-11L. Federal Policies.1-12i. Americans with Disabilities Act1-13ii. MAP-21 and Transportation Alternatives.1-13iii. American Recovery and Reinvestment Act1-14M. State Policies.1-15i. District of Columbia1-15iii. Waryland.1-18iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | F. Green Streets and Air Quality1-7 |
| I.Priority Unfunded Bicycle and Pedestrian Projects.1-9J.Bicycling and Walking in the Regional Transportation Model1-11K.Encouraging Walking and Bicycling1-11L.Federal Policies1-12i.Americans with Disabilities Act1-13ii.MAP-21 and Transportation Alternatives1-13iii.American Recovery and Reinvestment Act1-14M.State Policies1-15i.District of Columbia1-15iii.Maryland1-18iii.Virginia1-19N.Local Bicycle and Pedestrian Plans1-21O.Local Bicycle and Pedestrian Staffing1-23P.Safe Routes to School1-24Q.WMATA1-27R.Regional Bicycle and Pedestrian Planning1-28i.Precursors to the Current Plan1-28ii.Sources of the Regional Plan Projects1-29 | G. Constrained Long-Range Plan1-8 |
| J. Bicycling and Walking in the Regional Transportation Model1-11K. Encouraging Walking and Bicycling | H. Transportation Improvement Program1-8 |
| K. Encouraging Walking and Bicycling1-11L. Federal Policies1-12i. Americans with Disabilities Act1-13ii. MAP-21 and Transportation Alternatives1-13iii. American Recovery and Reinvestment Act1-14M. State Policies1-15i. District of Columbia1-15iii. Waryland1-18iiii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | I. Priority Unfunded Bicycle and Pedestrian Projects1-9 |
| L. Federal Policies1-12i. Americans with Disabilities Act1-13ii. MAP-21 and Transportation Alternatives1-13iii. American Recovery and Reinvestment Act1-14M. State Policies1-15i. District of Columbia1-15ii. Maryland1-18iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | J. Bicycling and Walking in the Regional Transportation Model1-11 |
| i. Americans with Disabilities Act1-13ii. MAP-21 and Transportation Alternatives1-13iii. American Recovery and Reinvestment Act1-14M. State Policies1-15i. District of Columbia1-15ii. Maryland1-18iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | K. Encouraging Walking and Bicycling1-11 |
| ii. MAP-21 and Transportation Alternatives1-13iii. American Recovery and Reinvestment Act1-14M. State Policies1-15i. District of Columbia1-15ii. Maryland1-18iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | |
| iii. American Recovery and Reinvestment Act1-14M. State Policies1-15i. District of Columbia1-15ii. Maryland1-18iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | |
| M. State Policies1-15i. District of Columbia1-15ii. Maryland1-18iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | |
| i. District of Columbia1-15ii. Maryland1-18iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | |
| ii. Maryland1-18iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | M. State Policies1-15 |
| iii. Virginia1-19N. Local Bicycle and Pedestrian Plans1-21O. Local Bicycle and Pedestrian Staffing1-23P. Safe Routes to School1-24Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | |
| N. Local Bicycle and Pedestrian Plans | |
| O. Local Bicycle and Pedestrian Staffing | • |
| P. Safe Routes to School | N. Local Bicycle and Pedestrian Plans |
| Q. WMATA1-27R. Regional Bicycle and Pedestrian Planning1-28i. Precursors to the Current Plan1-28ii. Sources of the Regional Plan Projects1-29 | |
| R. Regional Bicycle and Pedestrian Planning | P. Safe Routes to School1-24 |
| i. Precursors to the Current Plan | |
| ii. Sources of the Regional Plan Projects 1-29 | |
| | |
| S. Outlook 1-30 | |
| | S. Outlook |

2. BICYCLING AND WALKING IN THE WASHINGTON REGION

| A. Overview | |
|---|------|
| B. Walking and Bicycling According to the US Census | |
| C. COG/TPB Household Travel Survey | |
| i. Mode Share Trends | |
| ii. Walk and Bike Mode Share by Jurisdiction | |
| iii. Walk and Bike Trips by Purpose | |
| iv. Trip Lengths by Mode | |
| v. Miles Traveled by Jurisdiction | 2-16 |
| vi. Walk and Bike Trips by Jurisdiction | |
| vii. Walking and Bicycling by Time of Day | |
| D. Geographically Focused Household Travel Surveys | |
| E. Bicycle Counts in the Metro Core | |
| F. Demographics of Pedestrian and Bicycle Commuters | |
| G. Commute Trip Distances | |
| H. Walking and Bicycling to Transit | |
| I. Outlook | |
| J. Data Sources | |

3. PEDESTRIAN AND BICYCLE SAFETY

| Α. | Overview | |
|----|--|-----|
| B. | Scope of the Problem | |
| C. | Distribution of Fatalities by Jurisdiction | |
| D. | Distribution of Injuries by Jurisdiction | 3-7 |
| E. | Factors Contributing to Pedestrian and Bicycle Crashes | |
| F. | Legal Status of Pedestrians and Bicyclists | |
| G. | Street Smart Pedestrian and Bicycle Safety Campaign | |
| | i. Evaluation Results | |
| H. | Outlook | |

4. EXISTING FACILITIES FOR BICYCLISTS AND PEDESTRIANS

| A. | Overview | 4-1 |
|----|--------------------------------|-----|
| Β. | Shared-Use Paths | |
| C. | Side-Paths | |
| D. | Bicycle Lanes | |
| E. | Buffered Bike Lanes | 4-4 |
| F. | Protected Lanes (Cycle Tracks) | |
| G. | Dual Facilities | |
| H. | Signed Bicycle Routes | |

| I. Long-distance Bicycle Routes | |
|---|--|
| J. Exclusive Bus/Bike Lanes | |
| K. Bridges | |
| L. On-line Bicycle and Pedestrian Routing | |
| M. Bicycles and Public Transit | |
| N. Pedestrian Access to Transit | |
| O. Bike Parking | |
| P. Bike Sharing | |
| Q. Outlook | |

5. GOALS AND INDICATORS

| A. | Goals from the Vision and Region Forward | 5-1 |
|----|--|-----|
| В. | Targets, Indicators, and Baseline Conditions | 5-3 |

6. RECOMMENDED PRACTICES

| A. Adopt "Complete Streets" Policies |
|--|
| B. Adopt Consistent Design, Construction & Maintenance Guidelines. 6-4 |
| C. Minimize Curb Radii and Crossing Distance |
| D. Set Target Speeds Appropriate to Surrounding Land Use |
| E. Prioritize Urban Core and Activity Centers |
| F. Integrate Walking and Bicycling into Public Transit |
| G. Provide Adequate Bicycle Support Facilities |
| H. Expand the Regional Bike Sharing Program |
| I. Carry out Safety and Education Programs |
| J. Encourage Walking and Bicycling |
| K. Carry out High Visibility Demonstration Projects |
| L. Designate a Bicycle and Pedestrian Coordinator at Each Agency 6-13 |

7. THE 2040 BICYCLE AND PEDESTRIAN NETWORK

| A. Regional Bicycle and Pedestrian Network in 2040. | |
|---|--|
| B. Progress Since 2010 | |
| C. Funding and Cost Estimates | |
| D. Explanation of Project Listings | |
| E. Table of Mapped Bicycle and Pedestrian Projects | |
| F. Map of Major Bicycle and Pedestrian Projects | |

APPENDICES:

A. 2014 Plan Bicycle and Pedestrian Projects

- B. Project Database Data Dictionary and Sample Database Entry Form
- C. Completed Projects from the 2010 Bicycle and Pedestrian Plan
- D. Metro Core Cordon Counts
- E. Metrorail Stations Sorted by Walk and Bike Mode of Access
- F. Links and Resources
- G. Glossary
- H. Glossary of Acronyms
- I. Bibliography

Executive Summary

Prologue

The Washington region has seen rapid changes in the four years since the last regional bicycle and pedestrian plan was adopted. New neighborhoods have grown up and old ones have been revitalized. The people living and working in these new urban neighborhoods are mostly walking, bicycling and using transit for their daily needs. Bicycle infrastructure in the urban core is better than ever, with protected bicycle lanes, paths, on-street bike parking to meet surging demand, and better support facilities at the workplace. Car-sharing, on-line shopping, and delivery services have made it easier to live without a personal automobile. Bike-sharing, which existed only as a pilot program in 2010, has succeeded beyond expectations, providing an option for those who prefer not to own their own bicycle.

Walkable and bikeable activity centers are also growing in the inner suburbs, especially near Metrorail. New Metrorail stations are opening, and old ones are being made more accessible by foot and bicycle. While the automobile still dominates travel and living patterns in the greater Washington region, walkable urban living is growing faster than anticipated.

Overview of the Plan

This *Bicycle and Pedestrian Plan for the National Capital Region* identifies the capital improvements, studies, actions, and strategies that the region proposes to carry out by 2040 for major bicycle and pedestrian facilities. This plan is an update to the 2010 *Bicycle and Pedestrian Plan for the National Capital Region*.

The National Capital Region Transportation Planning Board (TPB), composed of governments and agencies from around metropolitan Washington, has developed this plan with the support of its Bicycle and Pedestrian Subcommittee. The plan incorporates the goals, targets, and performance indicators for walking and bicycling from the *TPB Vision* (1998) and the Council of Governments' *Region Forward 2050* (2010) plans.

In addition to building upon the *TPB Vision*, the *Bicycle and Pedestrian Plan for the National Capital Region* draws on and has been shaped by a number of regional, state, and local policy statements, plans, and studies. These include the TPB's regularly updated Constrained Long Range Plan (CLRP) and Transportation Improvement Program (TIP); federal and state guidance on bicycle and pedestrian facilities; and a wealth of state and local bicycle and pedestrian plans from around the region.

The *Bicycle and Pedestrian Plan for the National Capital Region* is intended to be advisory to the CLRP and TIP, and to stand as a resource for planners and the public. In

contrast to the CLRP, the *Bicycle and Pedestrian Plan* includes both funded and unfunded projects – projects in this plan may not yet have funding identified to support their implementation.

Planning Context

A number of federal, state, and local activities, as noted above, provide the planning context (Chapter 1) for this document. At all levels the trend is to require or strongly encourage the routine inclusion of pedestrian and bicycle facilities in all transportation, a policy sometimes known as "complete streets".

Jurisdictions and agencies around the region maintain active bicycle and pedestrian planning and coordination programs. Within this context, the TPB incorporates bicycle and pedestrian considerations into overall regional transportation planning, bike-to-work components of the Commuter Connections program, the Transportation-Land Use Connections program, and the region's Access for All Committee concerning minority, low-income, and disabled communities. The Transportation Planning Board and the Council of Governments support bicycling and walking and their health, community, pollution reduction, and congestion reduction benefits for the region.

Bicycling and Walking in the National Capital Region

The state of bicycling and walking in the Washington region (Chapter 2) includes success stories, challenges, and opportunities for improvement. Data from the 2007/2008 Household Travel Survey, the U.S. Census, surveys, and other sources provide an understanding of where bicycling and walking are found throughout the region, as well as who is walking and bicycling. These data may point to opportunities for increasing these activities, and support the need to consider bicycling and walking in overall roadway and transit planning and engineering.

Safety

Bicycle and pedestrian safety (Chapter 3) is a key challenge for the region. The plan describes the scope of the safety problem, its geographic and demographic distribution across the region, and the legal rights and responsibilities of drivers, pedestrians, and bicyclists. Unfortunately, bicycle and pedestrian safety issues are found throughout the region. The region and member agencies are actively pursuing a number of engineering, enforcement, and educational strategies to reduce deaths and injuries.

Existing Facilities

The Washington region benefits from a number of popular bicycle and pedestrian facilities in place in our communities (Chapter 4). The region's transit agencies have also worked to provide access and accommodation of bicycling and walking to and on their systems. A goal of this plan is to complement and augment the existing system of facilities.

Goals and Indicators

Region Forward 2050 and the TPB's *Vision* of 1998 both encourage walking and bicycling. *Region Forward 2050* calls for more rapid implementation of the projects in this plan, increased walking and bicycling, and reduced pedestrian and bicyclist fatalities, as well as setting targets and indicators which will measure progress towards the regional goals. It also calls for specific targets and indicators which will measure progress towards the plan goals. Chapter 5 incorporates the goals in the *Vision* and *Region Forward 2050* relevant to walking and bicycling, as well as the corresponding targets and indicators from *Region Forward*. It also suggests additional indicators which could be used to measure progress.

Recommended Best Practices

Convenient and safe bicycle and pedestrian access is a key goal of the TPB's *Vision* and the Council of Governments' *Region Forward 2050* plans. To help achieve this, the Bicycle and Pedestrian Subcommittee developed a set of recommended best practices (Chapter 6) for the design and implementation of bicycle and pedestrian facilities, as well as for the incorporation of bicycling and walking considerations into overall roadway and transit design. Best practices are based upon national and state laws and guidelines.

Planned Bicycle and Pedestrian Facilities and Improvements

Improvements included on the plan's list of regional bicycle and pedestrian projects (overview in Chapter 7 and the full listing in Appendix A) were identified, submitted and reviewed by agency staffs of TPB member jurisdictions. The plan includes 475 bicycle and pedestrian facility improvement projects from across the region.

If every project in the plan were implemented, in 2040 the region will have added over 2000 miles of bicycle lanes, nearly 2000 miles of shared-use paths, hundreds of miles of signed bicycle routes (signage without additional construction), 31 pedestrian intersection

improvements, and fifteen pedestrian/bicycle bridges or tunnels. A new bicycle and pedestrian crossing over the Potomac would be created, at the American Legion Bridge, and bridges over the Anacostia River would be improved for pedestrians and bicyclists. In addition, 27 major streetscaping projects would improve pedestrian and bicycle access and amenities in DC, Bethesda, Arlington, Tysons Corner and other locations.

If it implements the projects in this plan, by 2040 the region will have approximately 4500 miles of bike lanes and multi-use paths, nearly seven times the current total.

Progress since the 2010 Bicycle and Pedestrian Plan

Fifty-four projects from the 2010 Bicycle and Pedestrian Plan have been completed, including the 11th Street Bridge Trail and several protected or buffered bike lanes. The region added 50 miles of multiuse path and 45 miles of bike lanes. This does not include many projects that have been partially completed, or any privately provided facilities, or projects such as sidewalk retrofits that were too small to be included in a regional plan.

The Washington region has become a national leader in innovative policies and designs, especially bike sharing (public self-service bicycle rental). In September 2010, the District of Columbia and Arlington County launched a regional bike sharing system, <u>Capital Bikeshare</u>, which has since expanded to over 2500 bicycles at 300 stations in DC, Arlington, Alexandria, and Montgomery County.

Costs

Total estimated cost of projects in the draft plan is about \$2 billion (2014 dollars). For projects without an agency-submitted estimate, or in which the project appeared to be part of a larger transportation project, cost was imputed on a mileage and project type basis. Cost estimates should be considered as order-of-magnitude and in most cases do not reflect engineering-level estimates.

On-Line Resources

Development of the *Bicycle and Pedestrian Plan for the National Capital Region* has benefited from an on-line plan project database, a resource separate from the printed document. Bicycle and Pedestrian Subcommittee members were able to view, enter, and edit their project listings on-line. This on-line database will facilitate keeping the regional list accurate and up-to-date, and will facilitate integration of information from this plan into the region's *Constrained Long-Range Plan* and Transportation Improvement Program as necessary. A public access version of this on-line version of this database can be found at http://www.mwcog.org/bikepedplan/.

Outlook

The TPB's *Vision* and the Council of Governments' *Region Forward 2050* plans call for convenient, safe bicycle and pedestrian access, walkability in regional activity centers and the urban core, reduced reliance on the automobile, increased walking and bicycling overall, inclusion of bicycle and pedestrian facilities in new transportation projects and improvements, and implementation of a regional bicycle and pedestrian plan. The *Bicycle and Pedestrian Plan for the National Capital Region* provides a blueprint for making the region a better place for bicycling and walking.

Introduction

INTRODUCTION

Bicycling, Walking and the Vision of the Transportation Planning Board

The National Capital Region Transportation Planning Board (TPB) has long recognized the benefits of bicycling and walking in the region's multi-modal transportation system. The Transportation Planning Board's Transportation Vision for the 21st Century, adopted in 1998. emphasizes bicycles and pedestrians in its goals, objectives and strategies.



Figure 1: Green Bike Lane

A key goal of the *Vision*, and of subsequent regional plans, is a strong urban core and a set of regional activity centers, which will provide for mixed uses in a walkable environment and reduced reliance on the automobile.

The Urban Core has a Growing Network of Bicycle Lanes



Figure 2: Woodrow Wilson Bridge Trail

The Woodrow Wilson Bridge Trail opened in 2009

Region Forward 2050

In 2010 the Metropolitan Washington Council of Governments adopted <u>Region Forward</u>, a vision for the National Capital region in 2050. *Region Forward* built on the TPB *Vision*, calling for more rapid implementation of the regional bicycle and pedestrian plan, increased walking and bicycling, and reduced pedestrian and bicyclist fatalities.

This plan incorporated the goals, targets, and indicators from *Region Forward* which relate to walking and bicycling, as well as some additional indicators which will help show how well those goals are being met.

Complete Streets

The National Capital Region Transportation Planning Board adopted a <u>Complete Streets</u> policy in May 2012. The policy defined a complete street as one that safely and adequately accommodates motorized and nonmotorized users, including pedestrians, bicyclists, motorists, freight vehicles, emergency vehicles, and transit riders of all ages and abilities, in a manner appropriate to the function and context of the facility. The TPB endorsed the concept of Complete Streets and encouraged its member governments, which had not already done so, to adopt a Complete Streets policy.

The three States and a majority of the local governments in the Washington region now have Complete Streets policies. This is significant in that, insofar as Complete Streets policies are implemented, some kind of accommodation for pedestrians and bicyclists will be built as part of larger transportation projects.

Regional Transportation Priorities Plan

The National Capital Region Transportation Planning Board Regional Transportation Priorities Plan adopted the <u>Regional Transportation Priorities Plan</u> (RTPP) in January 2014. The Regional Transportation Priorities Plan aims to identify strategies with the greatest potential to respond to our most significant transportation challenges. It also aims

to identify those strategies that are "within reach" both financially and politically--recognizing the need for pragmatism in an era of limited financial resources and a lack of political will to raise significant amounts of new revenue.

The RTTP expands on the TPB Vision goals for walking and bicycling, proposing improved access to transit stops and stations, expanded pedestrian and bicycle infrastructure, promotion of walking and bicycling, and concentration of Walking and Bicycling account for 9% of all trips in the region growth in walkable, bikeable activity centers.

Bicycling and Walking in the National Capital Region

The Washington region is nationally known for the quality, beauty, and extent of its bicycle paths. Its walkable core neighborhoods attract residents and visitors alike. The region has a strong foundation of walking and bicycling facilities to build upon.¹

Taken together, bicycling and walking are a significant and growing mode of transportation in the Washington region. According to the Metropolitan Washington Council of Governments' 2008 Household Travel Survey walking and bicycling account for 9% of all trips in the Washington region, up from 8.3% in 1994. Bicycling to Work in the District of Columbia nearly quadrupled, from 1.16% in 2000 to 4.1% in 2012.

Recent years have seen progress for bicyclists and pedestrians. Several major new trails and bridges have opened, and most local governments have adopted bicycle, pedestrian, and/or trail plans. Most of the transit agencies in the region have added bike racks to their buses. Bicycle or pedestrian coordinators and trail planners are now found at most levels of government. In accordance with federal guidance and state and local <u>Complete Streets</u> policies, pedestrian and bicycle facilities are increasingly being provided as part of larger transportation projects. Employers are investing in bike facilities at work sites, and developers are including paths in new construction.² <u>Capital Bikeshare</u>, which launched in September 2010, has been a dramatic success, and now features over 2500 bicycles at over 300 stations.

One fourth of all driver trips in the Washington Region are less than 1½ miles long Bicycling and walking could reach a greater potential in the Washington region, however. Many trips currently taken by automobile could be taken by bicycle. The average work trip length for all modes in the Washington Metropolitan Statistical Area is 16 miles.³ But 17% of commute trips are less than five miles, a distance most people can cover by bicycle.

Many people who live far from their jobs, but closer to transit or a carpool location could walk or bike to transit or the carpool instead of driving.

¹ Green Bike Lane Photo: City of Alexandria

² Woodrow Wilson Bridge Trail Photo: COG/TPB / Michael Farrell

³ National Capital Region Transportation Planning Board, 2013 State of the Commute Survey Report, p. 32.

INTRODUCTION

The potential for shifting non-work trips to bicycling or walking is even greater than for work trips. The average non-work trip is a little more than five miles, and nearly 3/4 of all trips are non-work trips.⁴ The median auto driver trip in the Washington region, according to the 2008 COG Household Travel Survey, is four miles. The median trip for an auto passenger is only 2.8

The New York Avenue Metro Station Incorporates a Shared-Use Path and Bicycle Parking

miles. One fourth of all auto trips are less than 1½ miles in length. Destinations such as schools, shopping, and recreational facilities are often close enough to walk or bicycle. Bicycling and walking have considerable potential to displace automobile trips if suitable transportation, design, safety, parking, school siting, and land development policies are followed.

Branch Trail

Plan Development and Organization

This plan has been prepared by the National Capital Region Transportation Planning Board, the federally designated Metropolitan Planning Organization (MPO) for the Washington region. The TPB is made up of representatives of 21 local governments, the departments of transportation Marvland. of Virginia, and the District of Columbia, the state legislatures, and the Washington Metropolitan Area Transit Authority (WMATA). Member jurisdictions are shown in Figure i-A on page i-6.



Figure 3: New York Avenue Metro Station and Metropolitan

This document presents the long-range Bicycle and Pedestrian Plan for the Washington Region through the year 2040. The plan is a list of regional projects identified by the TPB member jurisdictions, accompanied by recommended best practices and a description of existing facilities and regional trends for bicycling and walking. This plan includes both funded and unfunded projects. It does not specify design guidelines, but

⁴ National Capital Regional Transportation Planning Board, *1994COG/TPB Household Travel Survey: Summary of Major Findings*, January, 1998. Page 5.

refers instead to state and national guidelines for bicycle and pedestrian facilities.

This update of the *Bicycle and Pedestrian Plan for the National Capital Region* seeks to reflect the goals, objectives and strategies of the 1998 *TPB Vision*, *Region Forward 2050*, and the *Regional Transportation Priorities Plan* while building on information from previous bicycle plans. It includes performance measures that will show progress towards the *Vision* and *Region Forward* goals.

Pedestrian access and safety receives more attention in this update, reflecting increased involvement in transportation safety planning by the TPB. Pedestrian planning is most needed at the county, city and neighborhood level. There is, however, a role for regional pedestrian planning, especially in the area of educating the public.

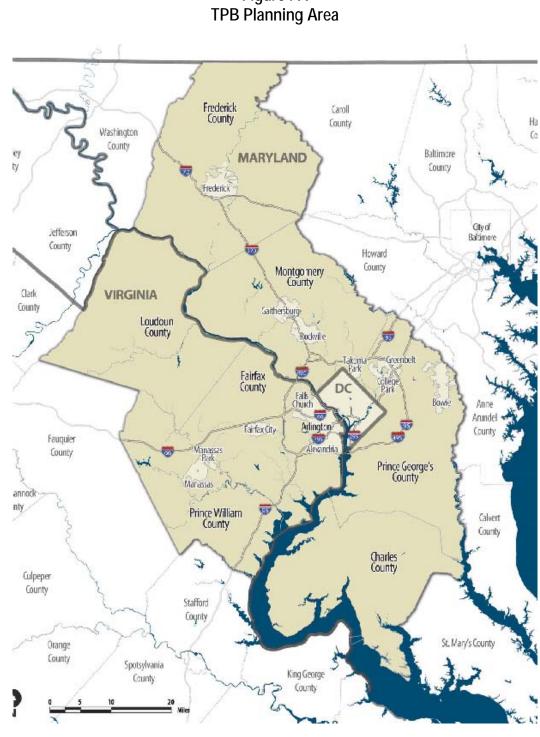


Figure i-A

Chapter 1 Planning Context

DRAFT CHAPTER 1: PLANNING CONTEXT

Overview

This *Bicycle and Pedestrian Plan for the National Capital Region* draws on and has been shaped by a number of regional, state, and local policy statements, plans, and studies, including the *Vision* and *the Regional Transportation Priorities Plan (RTPP)* of the Transportation Planning Board, the *Region Forward 2050* vision of the Council of Governments, federal and state guidance on provision of bicycle and pedestrian facilities, the Constrained Long Range Plan and Transportation Improvement Program, and state and local bicycle and pedestrian plans.

This plan is intended to help fulfill the goals of the *TPB Vision*, *RTPP*, and *Region Forward 2050* for bicyclists and pedestrians. It includes performance measures that will show progress towards the *Vision* and *Region Forward* goals.

I. Regional Planning

The Vision of the Transportation Planning Board

The National Capital Region Transportation Planning Board (TPB) is the Metropolitan Planning Organization for the Washington region. It brings key decision-makers together to coordinate planning and funding for the region's transportation system.

The TPB's official vision statement for the region, the *Transportation Vision for the 21st Century*, adopted in 1998, is meant to guide regional transportation investments into the new century. The *Vision* is not a plan with a map or specific lists of projects. It lays out eight broad goals, with associated objectives and strategies that will help the region reach its goals.

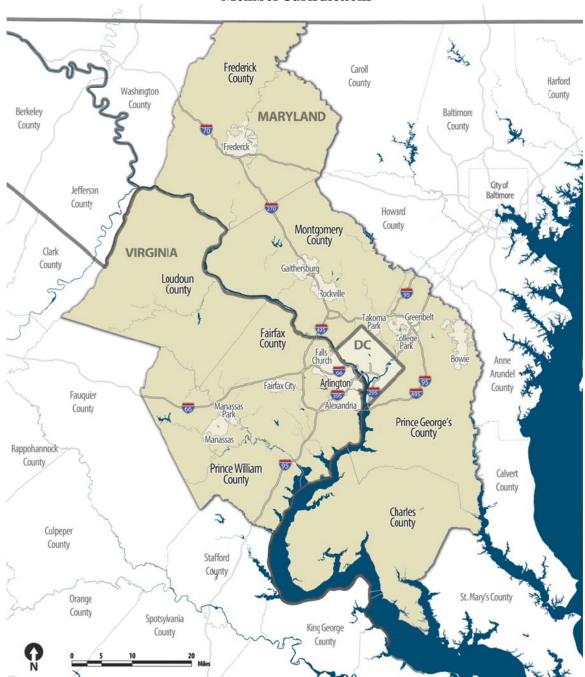
The Vision of the TPB calls for more Walking and Biking

The *Vision* is supportive of pedestrians and bicyclists. It calls for:

- Convenient, safe bicycle and pedestrian access
- Walkable regional activity centers and urban core
- Reduced reliance on the automobile
- Increased walk and bike mode share
- Including bicycle and pedestrian facilities in new transportation projects and improvements
- Implementation of a regional bicycle and pedestrian plan

Other goals of the *Vision* affect bicyclists and pedestrians, such as: maintaining the existing transportation system, reducing the per capita vehicle miles traveled, linking land use and transportation planning, and achieving enhanced funding for transportation priorities. Sections of the *Vision* relating to bicycle and pedestrian goals are highlighted

DRAFT CHAPTER 1: PLANNING CONTEXT



National Capital Region Transportation Planning Board Member Jurisdictions

Figure 1-1: TPB Member Jurisdictions

in Table 1-1.

Table 1-1: Bicycle and Pedestrian Provisions of the Transportation Vision

| Goal 1. | The Washington metropolitan region's transportation system will provide |
|--|--|
| reason | able access at reasonable cost to everyone in the region. |
| Objective 4: | Convenient bicycle and pedestrian access. |
| Strategy 3: intimidating for | Make the region's transportation facilities safer, more accessible and less or pedestrians, bicyclists , and persons with special needs. |
| <u>maintain</u> an promotes a st regional core a | The Washington metropolitan region will develop, implement, and interconnected transportation system that enhances quality of life and rong and growing economy through the entire region, including a healthy and dynamic region activity center with a mix of jobs, housing, and services environment. |
| • | Economically strong regional activity centers with a mix of jobs, housing, recreation in a walkable environment. |
| | Improved internal mobility with reduced reliance on the automobile ional core and within regional activity centers. |
| - | The Washington metropolitan region will plan and develop a system that enhances and protects the region's natural environmental ral and historic resources, and communities. |
| Objective 3: | Increased transit, ridesharing, bicycling and walking mode shares. |
| Strategy 7: and pedestria | Implement a regional bicycle/trail/pedestrian plan and include bicycle an facilities in new transportation projects and improvements. |

Region Forward 2050

The Council of Governments is a regional organization of Washington area local governments. COG comprises 21 local governments surrounding our nation's capital, plus area members of the Maryland and Virginia legislatures, the U.S. Senate, and the U.S. House of Representatives. Region Forward 2050 Calls for Faster Construction of the projects in the Bicycle and Pedestrian Plan

COG provides a focus for action and develops sound

regional responses to such issues as the environment, affordable housing, economic

development, health and family concerns, human services, population growth, public safety, and transportation.

In January 2010 the Council of Governments adopted *Region Forward*, a vision for the National Capital region in 2050. The goals of Region Forward are broader than those of the TPB Vision, encompassing areas such as public safety, land use, economic development, housing. and the environment. For transportation, Region Forward builds on the TPB Vision, calling for more rapid implementation of the regional bicycle and pedestrian plan, increased walking and bicycling, and reduced pedestrian and bicyclist fatalities.

Provisions of *Region Forward* relating to bicycling and walking are summarized in Table 1-2.



Greater Washington 2050: COG's Vision for the National Capital Region in the Twenty-First Century

Table 1-2:Bicycle and Pedestrian Provisions of Region Forward 2050

Goals:

- Transit-oriented, compact, **walkable mixed-use communities** emerging in Regional Activity Centers that will capture new employment and household growth.
- A transportation system than maximizes **community connectivity** and **walkability**, and minimizes ecological harm to the region and the world beyond.
- A broad range of public and private transportation choices for our Region which maximizes accessibility and affordability to everyone and **minimizes reliance upon single occupancy use of the automobile**.
- Safe and healthy communities

Targets:

Reduce daily vehicle miles traveled (VMT) per capita.

Increase the rate of construction of bike and pedestrian facilities from the Transportation Planning Board's (bicycle and pedestrian) plan.

Prioritize walking and biking options by **improving pedestrian and bicycle networks**, especially in the regional activity centers. Planning and street improvements will focus

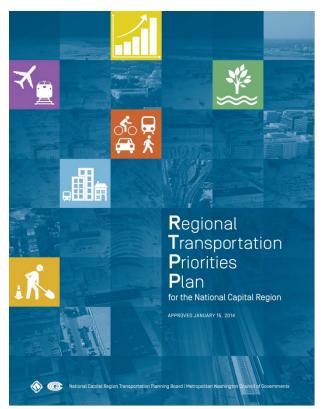
DRAFT CHAPTER 1: PLANNING CONTEXT

| on: | |
|--|--|
| 0 | Wide sidewalks |
| 0 | Street trees |
| 0 | Mixed-use development |
| 0 | Pedestrian-friendly public spaces |
| 0 | Bike stations near transit hubs |
| 0 | Bike lanes |
| 0 | Bike sharing |
| Increase the | share of walk, bike and transit trips |
| 0 | Give people options to meet everyday needs locally by building mixed-use |
| | developments |
| Reduce pedestrian and bicyclist fatalities | |
| 0 | Build sidewalks, bike lanes, and other improvements |
| 0 | Narrower local streets |
| 0 | Better crossings |
| 0 | Lower speeds for vehicles on local streets and arterials |
| 0 | More education and enforcement |
| | |
| Indicators: | |
| • Transi | it, bicycle and walk share in Regional Activity Centers |
| • Street | /node ratio for Regional Activity Centers |
| • Squar | e feet of mixed-use development |
| - | red pedestrian and bicyclist fatalities |

• Reduced pedestrian and bicyclist fatalities

Regional Transportation Priorities Plan

On January 15, 2014, the TPB approved the *Regional Transportation Priorities Plan* (RTPP). The RTPP builds on the *Vision* goals by identifying strategies with the greatest potential to respond to our most significant transportation challenges. The strategies are intended to be complementary, to make better use of existing infrastructure, and to be "within reach" both financially and politically. The RTPP recognizes the need for pragmatism in an era of limited financial resources and a lack of political will to raise significant amounts of new revenue.



Bicycle and pedestrian modes are prominent in the RTPP. It calls for

- **Improved access to transit stops and stations**, connecting them to nearby neighborhoods and commercial areas with sidewalks, crosswalks, and bridges.
- **Incentives to use commute alternatives** such as transit, carpool, vanpool, bicycling, walking, telework, and living closer to work.
- Expanded pedestrian and bicycle infrastructure, including
 - o Sidewalks, crossings, traffic calming
 - Bicycle lanes/paths, bicycle parking, bikeshare
 - o Workplace amenities for bicyclists
- Growth concentrated in Walkable, Bikeable Activity Centers
- **Improve circulation** within activity centers though enhanced
 - Pedestrian and bicycle infrastructure
 - o Local bus service
 - Street connectivity

Expanded use of space-efficient modes such as walking, bicycling, and transit use, particularly in the activity centers, are essential to the success of the RTPP.

Complete Streets

In May 2012 the TPB approved a <u>Complete Streets Policy for the National Capital</u> <u>Region</u>. The policy defines a <u>Complete Street</u> as a "facility that safely and adequately accommodates motorized and non-motorized users, including pedestrians, bicyclists, motorists, freight vehicles, emergency vehicles, and transit riders of all ages and abilities, in a manner appropriate to the function and context of the facility". The TPB endorsed the concept of Complete Streets, provided a sample policy template, and urged its members who had not already adopted such a policy to do so.

All three states and most of the TPB member governments and agencies have adopted some form of Complete Streets policy.

The significance of Complete Streets is that future pedestrian and bicycle projects are likely to be built as part of larger transportation projects, funded out of general revenue, not just as stand-alone bicycle and pedestrian projects built with limited set-aside funds. Therefore, far more such projects are likely to be built. Moreover, designing and building with pedestrians and bicyclists in mind from the start is far more cost-effective than retrofitting after the fact.

As a follow-up action, TPB staff held an implementation workshop on Complete Streets for agency staff. Implementation of State and local Complete Streets policies in the Transportation Improvement Program, the regional information clearing house to provides access to state and local project web sites.

Follow-on actions to the policy included a <u>Complete Streets implementation workshop</u>, held on January 29th, 2013, can be found on the Bicycle and Pedestrian Subcommittee web site, and the establishment of an information clearinghouse, the <u>Transportation</u> <u>Planning Information Hub for the National Capital Region</u>, where links and information on state and regional planning processes and high-profile projects can be found.

The TPB's Complete Streets policy is part of a long-run <u>national trend</u> towards better accommodation of pedestrians and bicyclists in transportation projects.

Green Streets

In February 2012 the TPB adopted a voluntary regional <u>Green Streets Policy</u>. The policy defines a Green Street as an "alternative to conventional street drainage systems designed to more closely mimic the natural hydrology of a particular site by infiltrating all or a portion of local rainfall events". A green street uses trees, landscaping, and related environmental site design features to capture and filter stormwater runoff within the right of way, while cooling and enhancing the appearance of the street.

Green Streets benefit pedestrians and bicyclists by cooling and enhancing the appearance of the street, making it a more pleasant place to walk or bike. Green Streets treatments may compete with pedestrians and bicyclists for space, but can often be placed traffic calming features such as bulb-outs and landscaped islands. Road diets and traffic calming projects can free up space for Green Streets treatments.

Air Quality and Greenhouse Gases

The region has been very successful in reducing emissions relating to Ozone. "Code Red" bad air days have fallen from 65 in 1999 to four in 2014. Total NOx (Nitrous Oxide) emissions from the region's transportation sector have fallen more than 70% since 1990, and that VOC (Volatile Organic Compounds) emissions have fallen more than 80%. These declines have come even as population has swelled some 40% and as total driving, measured in vehicle-miles traveled (VMT), has grown by a similar margin.

Within transportation, reductions in emissions of NOx and VOCs have resulted mostly from federal requirements for cleaner, more fuel-efficient vehicles and for cleanerburning fuels. Efforts to reduce roadway congestion and to encourage less driving have also contributed.

Walk and bike trips can help reduce greenhouse gas emissions. Bicycling is the most energy-efficient mode of transportation available, more efficient than walking. To the extent that the region can divert motorized trips to walking and bicycling, it can help reduce these <u>emissions</u>.

DRAFT CHAPTER 1: PLANNING CONTEXT

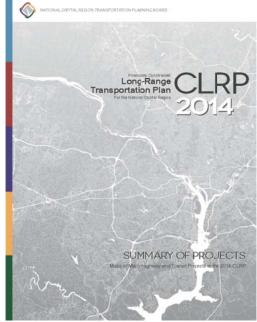
Constrained Long-Range Plan

The financially <u>Constrained Long-Range Transportation Plan</u> (CLRP) is a comprehensive plan of transportation projects and strategies that the TPB realistically anticipates can be implemented by 2040. Some of these projects are scheduled for completion in the next few years; others will be completed much later. Each year the plan is updated to include

new projects and programs, and analyzed to ensure that it meets federal requirements relating to **air quality** and **funding**.

The projects and programs that go into the CLRP are developed cooperatively by governmental bodies and agencies represented on the National Capital Region Transportation Planning Board (TPB). The TPB Vision, the policy framework adopted by the TPB in 1998, and the Regional Transportation Priorities Plan, adopted in 2014, serve guide project development.

To receive federal funding, a transportation project in metropolitan Washington must be included in the CLRP. Because funds must be reasonably anticipated to be available for all the projects in the CLRP, the CLRP is realistic plan based upon available resources.



Historically, less than 1% of the capital funding in the CLRP has been specifically for stand-alone bicycle and pedestrian projects. However, since bicycle and pedestrian projects are usually small projects, they are often added to the plan later than the major highway and transit projects. Moreover, much pedestrian and bicycle spending is subsumed within larger highway or transit projects, and thus is not reflected in the amount programmed for bicycle and pedestrian projects. Therefore, the CLRP may under-estimate the amount of bicycle and pedestrian spending that will occur over the next 25 years. State Departments of Transportation are likely to increase funding levels in the future as they implement their Complete Streets policies, under which they will routinely accommodate pedestrians and bicyclists in most new transportation projects.

Transportation Improvement Program

The <u>Transportation Improvement Program</u> (TIP) provides detailed information showing which projects in the CLRP will be completed over the next six-year period. Like the CLRP, the TIP is subject to federal review. Many projects in the TIP are staged, so a single CLRP project could end being split into multiple TIP projects.

Bicycle and pedestrian projects, and transportation projects that include bicycle and pedestrian accommodation, are tracked in TIP. Under the regional Complete Streets policy, agencies are also required to report future TIPs whether they have a Complete Streets policy in place, and if so whether a project in the advances the goals of that policy. The Transportation Improvement Program includes \$313 million for pedestrian and bicycle projects

Funding for bicycle and pedestrian projects in the TIP is

increasing. For example, the Fiscal Year 2013-2018 TIP includes \$313 million for bicycle and pedestrian projects, nearly triple the \$124 million in bicycle and pedestrian projects in the FY 2010-2015 TIP.

Of the \$313 million in the TIP, \$85 million is programmed for FY 2013, which is two percent of the total capital funds for all transportation projects programmed for FY 2013. Only \$23 million was programmed for bicycle and pedestrian projects in FY 2010.

As with the CLRP, funds spent on bicycle and pedestrian accommodations as part of a larger highway or transit project are often subsumed in budget of the larger project.

Bicycle and Pedestrian Subcommittee of the TPB Technical Committee

The Bicycle and Pedestrian Subcommittee of the TPB Technical Committee advises the TPB, TPB Technical Committee, and other TPB committees on bicycle and pedestrian considerations in overall regional transportation planning. It meets six times per year. One its most important functions is information exchange, at regular meetings, and at sponsored training events.

The Subcommittee also helps coordinate planning efforts which require interjurisdictional coordination. It is currently developing a vision for a regional circumferential bicycle route, or "bicycle beltway".

Transportation Safety Planning

The Bicycle and Pedestrian Subcommittee coordinates with the Transportation Safety Subcommittee of the TPB Technical Committee on issues relating to pedestrian and bicycle safety, including the Street Smart safety campaign, and the safety element of the Constrained Long Range Plan. TPB staff also participate in the State Strategic Highway Safety Planning processes.

Top Priority Unfunded Bicycle and Pedestrian Projects

The Bicycle and Pedestrian Subcommittee periodically identifies a short list of priority unfunded bicycle and pedestrian projects, which it recommends for inclusion in the TIP.

DRAFT CHAPTER 1: PLANNING CONTEXT

These projects are selected from the regional bicycle plan, and from state and local plans. The subcommittee has compiled and forwarded lists to TPB regularly since 1995, to be included in the solicitation document for the TIP/CLRP. In essence, the TPB urges the jurisdictions to consider funding these projects, which the Bicycle and Pedestrian Subcommittee has judged to be regionally significant, within six years.

The following selection criteria are used:

- **Bicycle Network Connectivity:** priority is given to projects that enhanced connectivity of facilities on the regional bicycle facilities network.
- **Pedestrian Safety:** priority is given to projects that promoted pedestrian safety, especially in areas with documented pedestrian safety problems and no pending road project that could address them.
- Access to Transit: priority is given to projects that enhanced access to Metrorail stations and other major transit stops or facilities.
- **Time Frame:** all projects should be able to be completed by 2018, the end of the TIP time frame.
- **Local Support:** the project is a priority for the jurisdiction or jurisdictions in which it is located.
- **Still seeking funding:** the project does not yet have full construction funding committed to it.
- **Reasonable Cost:** the total cost of the list should be a reasonable fraction of the total spending in the region on highways and bridges.

While considerable weight is given to the preference of the representative of the jurisdiction, subcommittee members are urged to think in terms of the regional selection criteria when nominating projects.

Projects are dropped from the list when they receive funding, or if the subcommittee and nominating jurisdiction decide that priorities have changed.

Projects from the list funded since 1995 include:

- US 15 Trail Tunnel (City of Frederick)
- Regional Bike Sharing (Capital Bikeshare), DC, Arlington, Alexandria, Montgomery County
- The Metropolitan Branch Trail in Washington, D.C.
- The Holmes Run Pedestrian/Bicycle crossing in Alexandria
- Pedestrian and Bicycle Safety Improvements on Route 1 in Fairfax County
- The Dumfries Road (Route 234) Bike Path in Prince William County
- The Rosslyn Circle Crossing in Arlington County
- The Eisenhower Trail in Alexandria
- The Matthew Henson Trail in Montgomery County
- The Falls Road Shared-Use Path in Montgomery County

- The Henson Creek Trail in Prince George's County
- The Millennium Trail in Rockville

Bicycling, Walking, and the Regional Transportation Model

Data relevant to walking and bicycling are gathered as part of the regional <u>household</u> <u>travel survey</u>, and are incorporated into <u>regional transportation modeling and forecasting</u>.

The regional travel forecasting model is based on traffic analysis zones, which are large enough that many pedestrian and bicyclist trips begin and end within a single zone, and thus are not modelled. Adding many more traffic analysis zones, to capture more pedestrian trips, would make the model much more complicated and require more computing power. Also, pedestrian and bicyclist trips are likely to occur on local streets or paths that are not part of the modelled network. Therefore the travel forecasting model which MWCOG currently uses does not assign pedestrian or bicyclist trips to particular links in the transportation network, but only predicts in which traffic analysis zone in which they will start.

Other tools are available for modelling local walk and bike trips.

Encouraging Bicycling and Walking: Bike to Work Day, the Bike to Work Guide, and Guaranteed Ride Home

To help realize the *TPB Vision* and reduce congestion, air pollution, and single occupant vehicle traffic, the TPB has developed several programs to encourage bicycling and walking in the Washington region. As part of its <u>Commuter Connections</u> program, every year on the third Friday in May the TPB sponsors a regional Bike to Work Day. This event has grown into one of the largest of its kind in the country, attracting over sixteen thousand riders to seventy-nine "pit stops" or rallying points around the region. The event is meant to encourage first-time riders to try bicycling to work.

The Commuter Connections program also supports publication of <u>Biking to Work in the</u> <u>Washington Area: A Guide for Employers and A Guide for Employees</u>, which provides tips for employees and employers. For employees, there are tips on safe cycling, laws, equipment and clothing, and transit connections. For employers, the guide explains the benefits of bicycling to the employer, the types of bicycle parking, and the ways an employer can encourage an employee to bike to work.

Regional bike routing is available at <u>www.ridethecity.com</u>, and Google maps offers both pedestrian and bicycle routing. Other tools and resources for bicycle commuters are listed on the <u>bicycling resources</u> section of the Commuter Connections web site.

People sometimes drive to work because they need to be able to get home quickly in an

emergency. To meet that need and help get more people out of their cars, the Commuter Connections program offers a free taxi ride home in an emergency for commuters who regularly (twice a week) carpool, vanpool, bike, walk or take transit to work. Commuters who sign up for the <u>Guaranteed Ride Home</u> program may use it up to four times per year.

Encouraging Walkable Development: the Transportation-Land Use Connections Program

The <u>Transportation Land Use Connections</u> (TLC) Program provides support to local governments in the Metropolitan Washington region as they work to improve transportation and land use coordination. Through the program, the TPB provides communities with technical assistance to catalyze or enhance planning efforts for planning for transit and pedestrian access. Since 2007 dozens of pedestrian and transit access planning projects have been funded through the TLC program. Community response has been enthusiastic, and competition for the grants has been stiff.

II. Federal Policies

Routine Accommodation of Walking and Bicycling

U.S. Department of Transportation guidance issued in 2000 calls for bicycling and walking facilities to be incorporated into all transportation projects unless exceptional circumstances exist. Further guidance issued in March 2010 urged agencies to go beyond the minimum standards to provide safe and convenient facilities for pedestrians and bicyclists, set mode share targets, and collect data on walk and bike trips. Bicycling and walking are to have equal importance to other transportation modes. Transportation projects using federal funds may not sever an existing bicycle or pedestrian route, unless an alternate route exists or is provided.

<u>The US DOT headquarters in Washington, D.C.</u> sets an example for other employers by encouraging employee bicycling.

Federal and State policies have evolved over the last few decades, from not requiring (or in some cases prohibiting) the use of transportation funds for pedestrian or bicycle facilities, towards requiring the provision of such facilities. These federal and state guidelines and policies have led to an increase in the number of pedestrian and bicycle facilities provided, with more facilities provided as part of larger transportation projects rather than as stand-alone projects.

Federal and State policies are also evolving away from <u>encouraging single-use cul-de-sac</u> <u>development</u> patterns typical of the last half of the 20th century, to encouraging mixed use development and a connected street grid that is far more accessible to pedestrians and

DRAFT CHAPTER 1: PLANNING CONTEXT

bicyclists.¹

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) is a federal civil rights statute that prohibits discrimination against people who have disabilities. Under the ADA, designing and constructing facilities that are not usable by people with disabilities constitutes discrimination. Public rights of way, including pedestrian facilities, are required by federal law to be accessible to people with disabilities. The ADA Requires that all New and Altered Pedestrian Facilities be made Accessible to the Handicapped

Both new and altered pedestrian facilities must be made accessible to persons with disabilities, including those who are blind or visually impaired. The courts have held that if a street is to be altered to make it more usable by the general public, it must also be made more usable for those with disabilities.

Government facilities which were in existence prior to the effective dates of the ADA and which have not been altered are not required to be in full compliance with facility standards developed for new construction and alterations. However, they must achieve 'program access.' That is, the program must, when viewed in its entirety, not deny people with disabilities access to government programs and services. For example, curb ramps may not be required at every existing walkway if a basic level of access to the pedestrian network can be achieved by other means, e.g., the use of a slightly longer route. Municipalities should develop plans for the installation of curb ramps and accessible signals such that pedestrian routes are, when viewed in their entirety, accessible to people who are blind or visually impaired within reasonable travel time limits.²

Design standards for the disabled, such as smoother surfaces, adequate width, and limits on cross-slope, are also beneficial for the non-disabled pedestrian. Good design for persons with disabilities is good design for all. More information on the Americans with Disabilities Act is available from the <u>US Access Board</u>.

MAP-21 and the Transportation Alternatives Progam

Under MAP-21 (Moving Ahead for Progress in the 21st Century Act) the federal

¹ Southworth, Michael and Eran Ben-Josesph, Street Standards and the Shaping of Suburbia,

Journal of the American Planning Association, Volume 61, Number One, Winter 1995.

² American Council for the Blind, Pedestrian Safety Handbook: A Handbook for Advocates. <u>www.acb.org</u>

and Pedestrian

Projects

transportation legislation signed in July 2012, bicycle and pedestrian projects remained broadly eligible for nearly all funding categories, including transit funding, either for projects incorporated into something larger, or for stand-alone bicycle and pedestrian projects. MAP-21 funded surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014. MAP-21 was the first long-term highway authorization enacted since 2005. MAP - 21 funded surface transportation programs at over \$105billion for fiscal years (FY) 2013 and 2014. MAP-21 was thefirst long-term highway authorization enacted since 2005.

MAP-21 largely eliminated high priority projects, sometimes known as legislative earmarks, many of which were bicycle or pedestrian projects.

However, the biggest change for pedestrian and bicycle projects is that MAP-21 combines several funding programs from its predecessor, SAFETEA-LU, that were often used to fund pedestrian and bicycle projects, into a single program, the <u>Transportation Alternatives program</u>. The TA Program combines three former federal programs: Transportation Enhancements (TE), <u>Safe Routes to School</u> (SRTS), and Recreational Trails (RTP). Eligible recipients include local governments, regional transportation authorities, transit agencies, natural resource or public land agencies, school districts and agencies, and other appropriate local or regional governmental entities. Non-profits are not eligible to be direct recipients of the funds. Eligible projects will include bicycle and pedestrian facilities, complete streets, safe routes to school, environmental mitigation, and others.

One of the key differences between the TA Program and the previous programs is that large MPOs, including the Transportation Planning Board, play a new role in project selection for a portion of program funds now sub-allocated to large metropolitan regions. For the National Capital Region, this new program offers an opportunity to fund regional priorities and complement regional planning activities. In the National Capital Region, Program framed complementary component the is as a of the TA TPB's Transportation/Land-Use Connections (TLC) Program, which provides technical assistance for small planning studies to TPB member jurisdictions, and a potential implementation tool for the Regional Transportation Priorities Plan.

Projects funded under the FY 2013 and FY 2014 TA program for the National Capital are listed on the Transportation/Land-Use Connections program web site.

American Recovery and Reinvestment Act

Signed into law on February 17, 2009, the <u>American Recovery and Reinvestment Act</u> of 2009 (ARRA) provided over \$48 billion for transportation, including \$27.5 billion for highway infrastructure investment, \$8.4 billion for transit capital assistance, \$8 billion for high speed rail, \$1.5 billion for a competitive grant program for surface transportation, and \$1.3 billion for Amtrak.

The District of Columbia was allocated \$123.5 million, Maryland \$431 million (\$129 million sub-allocated to urban areas) and Virginia \$694.5 million (\$208 million sub-allocated to urban areas) in highway formula funds.

The District of Columbia spent nearly half its stimulus funds on pedestrians and bicyclists

ARRA was a one time, "stimulus" bill, intended to promote recovery from the economic recession. Projects funded through ARRA were supposed to be capable of implementation within a relatively short time frame, which has in practice caused funds to be directed to those projects for which design was already complete, and which did not need additional right of way.

The District of Columbia spent nearly half its \$123.5 million allocation on bicycle and pedestrian projects. Over \$50 million was programmed for streetscaping and sidewalk construction, \$4 million for <u>Safe Routes to School</u>, and a \$3 million for an expanded bike sharing program. In addition bridge reconstruction projects will include upgraded sidewalks. Since projects are bid as a whole, the cost of the pedestrian portion of a project is not estimated separately.

Maryland programmed \$4.6 million for ADA improvements. Maryland stimulus funds largely went to resurfacing and bridge rehabilitation projects, often on limited-access highways. In Northern Virginia, \$10 million was allocated to identifiable pedestrian and bicycle projects, such as pedestrian bridges and underpasses, trail reconstruction, streetscaping, and traffic calming.

The degree to which pedestrians and bicyclists benefited from the Act depended to a great degree on the extent to which the Departments of Transportation have included pedestrian and bicycle facilities in their project planning and design. An effective "complete streets" policy is critical.

III. State Policies

District of Columbia

As the center of the Washington region, a major employment center, and one its most walkable and bikeable jurisdictions, the District of Columbia's policies have a significance larger than its population would suggest.

The District of Columbia is to become a "walkcentric, bikecentric" city.

Reflecting its urban character, the District of Columbia is doing much to encourage walking and bicycling. <u>District of Columbia Department of Transportation</u> intends to create a "walk-centric, bike-centric" city. DDOT's 2010 "<u>Action Agenda</u>" called for

safety, sustainability, and increasing livability and prosperity by creating great spaces that are the "living room" of the city.

Streetscaping projects and traffic calming projects are a high priority. By providing pedestrians with plenty of well-designed, safe, and comfortable space, the city hopes to increase retail sales and property values. Business Improvement Districts are to have considerable input into transportation projects.

Due to the built-up character of the District of Columbia, DDOT aims to shift travel from less space-efficient modes, such as single occupant vehicles, to more space efficient modes, such as walking, bicycling, and public transportation.

DDOT's strategy for shifting auto trips to transit, walk, and bike trips encompasses both transportation and land development elements. The District of Columbia will encourage mixed use development projects that promote and support non-auto mobility. Reduced auto parking, increased bike parking, on-site car and bike sharing, and transportation demand management plans will reduce auto trips generated by new development.

On a citywide basis there is to be car sharing, bike sharing, new transit service, streetcars, reduced off-street parking requirements, required off-street bike parking, and rapid construction of new pedestrian and bicyclist infrastructure. The <u>Bicycle Master Plan</u> (2005) and Pedestrian Plan have been succeeded by the pedestrian and bicycle elements of the city's latest Transportation Plan, MoveDC.

MoveDC

In May 2014 DDOT released the District's new Transportation Plan, MoveDC, for public comment. The draft MoveDC plan continues in the same direction as previous planning documents, but in greater detail, and with more ambitious goals and methods. MoveDC is a 25 year plan. It proposes to:





- Achieve 75% of all commute trips in the District by non-auto modes
- Achieve zero fatalities and serious injuries on the District transportation network
- Support neighborhood vitality, public space, and economic development.
- Manage streets to increase person-carrying capacity and reliability, through signal changes, parking management, pricing, and vehicle occupancy requirements

- Reduce travel demand through various Transportation Demand Management strategies
- Invest in better maintenance and asset management

In accordance with DC's Complete Streets policy, every street will accommodate all legally permitted users, but different streets will have different modal priorities.

Pedestrian Element

The Pedestrian Element promises to reduce the number of pedestrian injuries and fatalities, prioritize pedestrians, and create a pedestrian environment that accommodates people of all ages and abilities. To that end,

- All roadway reconstruction and development projects are to include **safe and convenient pedestrian facilities**. All projects should meet the standards identified in DDOT's **Public Realm Design Manual** and the **Design and Engineering Manual**.
- Identified priority corridors are to be improved.
- **Sidewalks** should be provided on **at least one side** of every street and preferably on both sides of every street.
- **Pedestrian crossings should be provided across all legs** of an intersection unless a special exception can be clearly justified.
- Improve **crossing safety**
- Create new street connections
- Expand **pedestrian education**, including the <u>Street Smart</u> campaign, which is carried out in partnership with the Metropolitan Washington Council of Governments
- Expand automated red-light and speed enforcement

Bicycle Element

The Bicycle Element of MoveDC is more ambitious than the 2005 Bicycle Master Plan. MoveDC recommends DDOT expects a 12% bike mode share for trips within the District

adding 213 miles of bicycle infrastructure. The system will eventually total 136 miles of bike lanes, 72 miles of protected bike lanes (cycle tracks), and 135 miles of trails, as well as more public and private bike parking, expanded bike sharing, and signed neighborhood bike routes.

The objective is to make bicycling a "principal and preferred" mode for travel, with a 12 % bicycle mode share for all trips that start and end in the District.

MoveDC will fill major gaps in the regional bicycle network, and improve connections between the District, Maryland and Virginia. MoveDC proposes two new bicycle and pedestrian crossings of the Potomac River, and three new crossings of the Anacostia, including

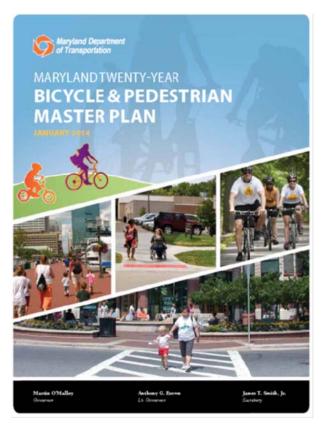
- A Massachusetts Avenue Bicycle and Pedestrian Bridge over the Anacostia River
- A new Long (Railway) Bridge connecting SW DC to Arlington
- A bicycle and pedestrian bridge from the Georgetown waterfront to Roosevelt Island, which together with a proposed K Street Cycle Track would provide an off-street connection between the Mount Vernon Trail, the Capitol Crescent Trail, and the Rock Creek Trail.
- A bicycle and pedestrian bridge and trail over the Anacostia River, from Kenilworth Park in NE and the Anacostia River Trail, to the National Arboretum and near NE.
- A New York Avenue Corridor trail and bridge to connect downtown DC with Anacostia River Trail system in Prince George's County.

Other bridges that currently have outmoded bike and pedestrian facilities will be upgraded, and a multi-use path will be added to the Military Road Bridge across Rock Creek Park. The expanded District bicycle network will host signed national and regional bicycle routes including US Bike Routes 1 and 50, the East Coast Greenway, and the Potomac Heritage Trail.

Maryland

Maryland adopted its first Bicycle and Pedestrian Access Plan in 2002. Under that plan the State made numerous advances in

Maryland will address the needs of all users, including pedestrians and bicyclists promoting bicycling and walking. MDOT invested more than \$283 million in nonmotorized transportation projects to improve bicycling and walking



conditions over the last decade. The proportion of total highway expenditures dedicated to bicycle or pedestrian programs increased from 2% to 4% over the last decade.

The State also created a number of grant programs, including the **Maryland Bikeways Program**, which provides \$3 million per year in technical assistance to a wide range of bicycle network improvements, and **Maryland Bikeshare Program** provides grants to communities interested in adding a bikeshare system, notably Montgomery County.

Maryland State Highway Administration adopted Complete Streets policy in 2012.

The current <u>Maryland Twenty-Year Bicycle and Pedestrian Master Plan</u> (2014) calls for a Complete Streets approach. Complete Streets in Maryland means that the state transportation network will address the needs of all users, regardless of travel mode. It does not, however, mean that all users will have equal priority on all roadways. Design is to be appropriate for the land use and context, including Urban Centers, Towns and Suburban Centers, Rural and Agricultural Areas, and Natural Areas.

The initial focus will be to support biking and walking in urban centers and main streets. MDOT will pilot a Bicycle and Pedestrian Prioritization Area (BPPA) program to foster collaboration with local jurisdictions and support the development of connected bicycle and pedestrian networks in high need locations.

MDOT has also published an <u>Accessibility Policy and Design Guidelines for Pedestrian</u> <u>Faclitilies along State Highways</u> (2010), <u>Bicycle Policy and Design Guidelines</u> (2013), a <u>Strategic Trails Implementation Plan</u> (2009), a bicyclist education video, and other materials designed to share information on best practices with respect to the engineering, education, and enforcement aspects of walking and bicycling.

A <u>Bicycle and Pedestrian Advisory Committee</u> advises State government agencies on issues directly related to bicycling and

pedestrian activity including funding, public awareness, safety and education.

Virginia

In 2004, the Virginia Department of Transportation released its Policy for <u>bicycle and pedestrian</u> accommodation, which commits VDOT to routinely accommodating pedestrians and bicyclists as part of all new construction and reconstruction projects, unless exceptional circumstances exist.³

Virginia requires "routine accommodation" of pedestrians and bicyclists in transportation projects

Since 2004 VDOT has developed a process to ensure that bicycle and pedestrian accommodations are provided in accordance with the policy. The <u>Bicycle and Pedestrian</u>

³ <u>www.virginiadot.org</u>

<u>Accommodations Decision Process</u> gives designers a step by step process to determine if bicycle / pedestrian accommodations are appropriate for the characteristics of a particular roadway, and a <u>Bicycle and Pedestrian Accommodations</u> list and a design guide provides project managers with a menu of possible accommodations. A series of <u>implementation</u> <u>guidance documents</u> for localities have also been developed to improve communication between agencies regarding planning and accommodation of pedestrians and cyclists under terms of the 2004 policy.

VDOT maintains all roads in Virginia outside of urban areas, including thousands of miles of residential streets originally built by developers. In view of the importance of secondary streets for vehicular, pedestrian, and bicycle movement, VDOT has revised its <u>Secondary Street</u> <u>Acceptance Requirements</u> (SSAR) to mandate higher levels of street connectivity in urban areas, as well as adequate pedestrian accommodation. New streets and developments are required to connect to the surrounding streets and future

Virginia requires new developments to connect with the surrounding streets

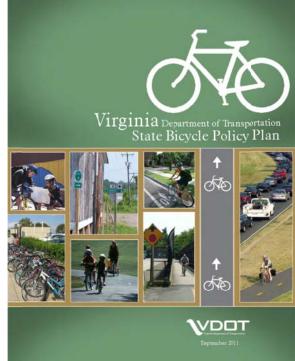
developments in a way that adds to the capacity of the transportation network.

The policy divides Virginia into "compact", suburban, and rural areas, with graduated connectivity requirements for each. Narrower streets, traffic calming and "context-sensitive" design are encouraged where appropriate.

New development proposals initially submitted to counties and VDOT after June 30, 2009, must comply with the requirements of the SSAR.

Cul-de-sac development patterns have long been an obstacle to walking or bicycling in suburban areas. More direct, traffic-calmed secondary streets will allow more people to walk or bike to local destinations.

Virginia has adopted a fairly stringent set of requirements mandating accommodation of pedestrians and bicyclists on both public roads and private developments which are accepted by State for maintenance, which in Virginia means almost all development. As the economy recovers, and new development applications fall under the new rules, we will be able to see the results of the new policies.



Virginia State Bicycle Policy Plan

VDOT completed a <u>State Bicycle Policy Plan</u> in April, 2010, which incorporates the policies discussed above, as well as the most recent federal guidance. The plan calls for bicycling for increased bicycling for all trip purposes, and a transportation system that "accommodates and encourages" bicycling by providing facilities for bicyclists of all ages and abilities. It also calls for better data gathering and benchmarking of bicycling, coordination with various stakeholders, and recommends a number of strategies to improve implementation of VDOT's 2004 policy for bicycle and pedestrian accommodation.

The plan provides some guidance on bicycle facilities to be used. Bicycle lanes and paved shoulders are recommended over other bicycle facilities. Restriping travel lanes, or "road diets" are recommended as a way to provide bicycle lanes within the current right of way. Actuated traffic signals should be able to detect bicycles, and bicycle compatible drain grates should be used on all roads where bicycles are permitted. A signed bike route should have at least a bicycle level of service "C".

IV: Local Bicycle and Pedestrian Planning

Nearly every jurisdiction in the region has completed a bicycle or pedestrian plan, and most have at least part time bicycle or pedestrian planner. Table 1-2 shows local and state plans and studies and the year published. Jurisdictions and agencies drew projects from these individual plans and submitted them for incorporation into the Regional Bicycle and Pedestrian Plan. Local plans may include unfunded projects.

| Table 1-3: |
|--|
| Major Bicycle and Pedestrian Plans and Studies |
| Of the Washington Region |

| Jurisdiction/ Agency | Plan/Study | Year |
|-------------------------|---|--------------------------------|
| Arlington County | PedestrianTransportationPlan,Bicycle Transportation Plan,Bike Lane PlanArlington Master Plan -PedestrianElement,Element | 1997, 1994 2001, 2008 |
| City of Alexandria | PedestrianandBicycleMobility Plan | 2008 |

| 1 | | |
|-------------------------|-------------------------------|-------------|
| District of | District of Columbia Bicycle | 2005, 2009, |
| Columbia | Master Plan, District of | 2014 |
| | Columbia Pedestrian Master | |
| | Plan, MoveDC | |
| Fairfax | Countywide Trails Plan, | 2002, |
| County | County Bicycle Map, Phase I | 2009, 2011, |
| - | Bicycle Master Plan (Tysons), | 2013 |
| | Fairfax County | |
| | Comprehensive Plan | |
| Frederick County | Frederick County Bikeways | 1999, 2003, |
| | and Trails Plan, Bicycle | 2011 |
| | Parking Design Guide, Bicycle | _011 |
| | and Pedestrian Plan, Bicycle | |
| | and Pedestrian Plan | |
| City of | Transportation Plan, Bikeways | 2010, 1999 |
| Gaithersburg | and Pedestrian Plan | 2010, 1777 |
| City of Laurel, | Bikeway Master Plan | 2009 |
| Maryland | DINUWAY IVIASICI FIAII | 2007 |
| 1v1al y1allu | | |
| | | 2002 |
| Loudoun County | Loudoun County Bicycle and | 2003 |
| | Pedestrian Master Plan | |
| | | |
| Maryland | Maryland Twenty Year | 2014, 2012, |
| Department of | Bicycle and Pedestrian Master | 2008 |
| Transportation | <u>Plan</u> | |
| | SHA Complete Streets Policy | |
| | 2009 Maryland Trails | |
| | Strategic Implementation Plan | |
| MNCPPC – | Transportation Priority List | 1999, |
| Prince George's County | (Joint Signature Letter) | 2009 |
| | Countywide Master Plan of | |
| | Transportation | |
| Montgomery | Countywide Bikeways | 2005 |
| County | Functional Master Plan | |
| - | | 2004 |
| National Capital | Comprehensive Plan for the | 2004 |
| Planning | National Capital | |
| Commission | | |
| National Capital Region | Priorities 2000: Metropolitan | 2001, |
| Transportation Planning | Washington Greenways & | 2006, 2010 |
| Board | Circulation Systems, | |
| | Bicycle and Pedestrian Plan | |
| | for the National Capital | |
| | Region | |
| | | |

| | | 1000 |
|------------------------|-------------------------------|------------|
| National Park | Paved Recreation Trails Plan | 1990 |
| Service | | |
| Prince William | Transportation Chapter of | 2008, 1993 |
| County | Comprehensive Plan), | |
| | Greenways and Trails Plan | |
| City of | Bikeway Master Plan | 2014 |
| Rockville | | |
| Virginia Department of | Virginia Department of | 2010 |
| Transportation | Transportation State Bicycle | |
| | Policy Plan | |
| | | |
| Virginia Department of | Northern Virginia Regional | 2003 |
| Transportation, | Bikeway and Trail Network | |
| Northern Virginia | Study | |
| Office | | |
| WMATA | Metrorail Bicycle & | 2010, 2012 |
| | Pedestrian Access | |
| | Improvements Study, Bicycle | |
| | and Pedestrian Element of the | |
| | | |
| | CIP | |
| Jurisdiction/ | Plan/Study | Year |
| Agency | | |
| | | I |

Table 1-3 shows the approximate number of full-time planners each agency has working on bicycle, pedestrian, and trails planning.

| Table 1-4: |
|--|
| Agency Bicycle/Pedestrian Planning Staff |
| Full-Time Equivalents (FTE's) |

| Jurisdiction/ Agency | Bicycle Planner FTE's | Pedestrian Planner FTE's | Trails Planner FTE's |
|-------------------------|--------------------------|-----------------------------|-------------------------|
| Arlington | 1 | 1 | 1 |
| County | | | |
| City of | 0.5 | | |
| Gaithersburg | | | |
| City of | 1 | 0.5 | 0.5 |
| Alexandria | | | |
| City of College Park | 0.5 | | |
| City of Frederick | 0.5 | 0.5 | |
| City of | 0.5 | 0.5 | |

Bicycle and Pedestrian Plan for the National Capital Region DRAFT October 2014

DRAFT CHAPTER 1: PLANNING CONTEXT

| Rockville | | | |
|--|------|------|-----|
| District of Columbia | 2 | 1 | 1 |
| Fairfax County | 1 | 1 | 2 |
| Frederick County | 0.25 | 0.25 | |
| Loudoun County | 0.5 | | |
| Maryland Department of Transportation | 1 | 2 | 1 |
| MNCPPC – Montgomery County | 0.33 | 0.33 | 1 |
| MNCPPC – Prince George's County | | | 1 |
| Montgomery County | 1 | 1 | 1 |
| National Capital Region Transportation Planning Board | 0.5 | 0.5 | |
| National Park Service | | | 1 |
| Prince William County | | | 0.5 |
| WMATA | 0.5 | 1 | |
| Virginia Department of Transportation, Northern Virginia Office | 1 | 1 | |

Safe Routes to School

Safe Routes to School is a national movement that encourages students to travel to and from school by walking or bicycling. Safe Routes to School efforts are supported by parents, schools, community leaders, Safe Routes to School coordinators and local, state, and federal governments to improve the health and well-being of children by enabling and encouraging them to walk and bicycle to school. The Safe Routes to School movement in the United State grew exponentially with a federal funding program starting in 2005. In 2012, Safe Routes to School was incorporated into the Transportation Alternatives program, but Safe Routes to School programs continue to grow.

In the Washington DC region, Safe Routes to School programs have flourished. The majority of school systems in the region have access to a Safe Routes to School coordinator either within the school district or in the department of transportation. In 2013, northern Virginia school districts gained four new coordinators due to a unique partnership between the Virginia Department of Transportation Safe Routes to School program and the Department of Education. This partnership utilized remaining Safe Routes to School funding from the 2005 federal transportation bill the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

| School District | Safe Routes to School Coordinator |
|---------------------------------|--|
| Arlington County Public Schools | Full-time, school district |
| Alexandria City Public Schools | Contracted coordinator with school district 2008-2013, |
| | current designated point person for continuation of activities |
| District of Columbia Public | Full-time, District Department of Transportation |
| Schools | |
| Fairfax County | Full-time, school district |
| Frederick County | 2010-2011, full-time, school district |
| Loudoun County | Full-time, school district |
| Montgomery County Public | One full-time position, Montgomery County Department of |
| Schools | Transportation and one part-time position, City of Takoma |
| | Park |
| Prince George's County Public | Grant application pending, full-time, Prince George's County |
| Schools | Department of Public Works and Transportation |
| Prince William County Public | Full-time, school district |
| Schools | |

All school districts have schools that have registered for either Bike to School Day in May or Walk to School Day in October.

| | 2012 | 2013 | | 2014 |
|----------------------------------|------|------|------|------|
| | WTSD | BTSD | WTSD | BTSD |
| Arlington County Public Schools | 11 | 13 | 20 | 8 |
| Alexandria City Public Schools | 4 | 31 | 4 | 31 |
| District of Columbia Public | 22 | 17 | 22 | 16 |
| Schools | | | | |
| Fairfax County | 14 | 35 | 29 | 32 |
| Falls Church City Public Schools | 2 | | 5 | |
| Frederick County | 4 | 2 | 2 | 1 |
| Loudoun County | 3 | | 16 | 10 |
| Manassas City Schools | 1 | | 3 | 1 |
| Montgomery County Public | 15 | 2 | 43 | 9 |
| Schools | | | | |
| Prince George's County Public | 4 | 1 | 3 | 0 |
| Schools | | | | |
| Prince William County Public | 3 | 0 | 16 | 2 |
| Schools | | | | |
| Total | 83 | 101 | 163 | 110 |

Table 1-6. Schools Registered for Walk to School Day (WTSD) andBike to School Day (BTSD), 2012-2014

Safe Routes to School leadership comes from many different places. In 2013 and 2014, BikeArlington coordinated Bike to School Days at all 31 Arlington Public Schools. In Fairfax County Public Schools, parents in the Town of Vienna have coordinated weekly and monthly Safe Routes to School activities including an annual Walk/Bike Challenge. In 2014, more than 5,400 students at seven elementary schools participated.

In 2012, the City of Takoma Park won national recognition from the Oberstar Award Committee for their comprehensive Safe Routes to School program.

The first Safe Routes to School regional meeting was held in October 2013 with more than 70 Safe Routes to School, transportation, health, school and planning professionals as well as parents and advocates. This is an opportunity to share information and best practices across the region and provide a learning opportunity for those interested in Safe Routes to School.

The Bicycle and Pedestrian Subcommittee and the Safe Routes to School Regional Partnership co-sponsor an annual Safe Routes to School regional workshop. The most recent workshop was held in October 2014 with more than 70 Safe Routes to School, transportation, health, school and planning professionals as well as parents and advocates. These workshops provide an opportunity to share information and best practices across the region.

DRAFT CHAPTER 1: PLANNING CONTEXT

Metrorail Silver Line

Since 2010 one of the most significant changes in the region has been the extension of the Metrorail to Tysons Corner and Reston in Fairfax County. This Metrorail extension is generating new, walkable development. A future phase of the project will extend the line to Dulles Airport and beyond.

Tysons, already the second-largest commercial center in the region, is undergoing a dramatic transformation from an auto-oriented commercial "edge city" to a mixed-use urban downtown. The four new Metrorail stations in Tysons will provide the foundation for this shift. Pedestrian and bicycle access will be critical to making a redeveloped Tysons work.

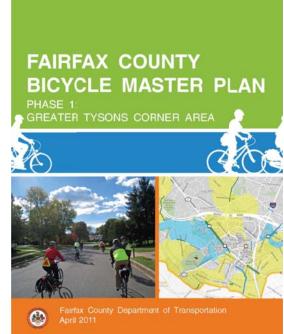
Future <u>Silver Line</u> stations along the Dulles Tollway will serve park and ride commuters, but

will also incorporate some development and some pedestrian and bicycle access, in an area which has been overwhelmingly oriented towards driving. Plans call for an eventual extension further into Loudoun County, which has been working on station-area pedestrian and bicycle access plans.

WMATA Bicycle and Pedestrian Access Planning

In recent years WMATA has become a regional leader in pedestrian and bicycle access and safety, both on and off WMATA property. WMATA's priorities include

• **Passenger safety and security**: Examples of safety-related projects include signage and crosswalk striping on and around stations, designated and improved bicycle access routes into stations, resurfacing deteriorated sidewalks, lighting, and high security bicycle parking.



DRAFT CHAPTER 1: PLANNING CONTEXT

Metrorail Access needs: Improving pedestrian and bike access at and around stations is often a more cost-effective way to boost ridership than to add car parking or connecting bus service. Approximately 45% of Metrorail customers live within walking or bicycling distance from a station (up to 3 miles). **Transit Oriented**

and Joint Development: Walkable and

bikeable station areas will have a positive and mutually reinforcing impact on Metro's Joint Development

MEDICAL CENTER BEFORE AND AFTER, REPLACING OLD RACKS



VIENNA STATION BEFORE AND AFTER, NEW ACCESS POINT



FRANCONIA – SPRINGFIELD BEFORE AND AFTER, NEW SIDEWALK TO IMPROVE SAFETY



programs and local government's encouragement of Transit Oriented Development (TOD). Bringing more people out into the streetscape will increase visibility and safety of those on foot and bike, while also demonstrating the viability of similar future developments.

In its 2010 *Metrorail Bicycle and Pedestrian Access Improvements Study* WMATA identified pedestrian and access problems at its Metrorail stations. A number of the projects identified as part of that process, totaling \$25 million, have been funded in WAMA's Capital Improvement program. A few examples of completed projects are shown below. WMATA is no long builds fences to keep pedestrians out of its rail stations.

WMATA has also been working to identify "hot spots" of short distance auto access; i.e. places where people live close enough to walk to Metro, but don't, and studying those

areas to find out what is missing.

The National Capital Region Transportation Planning Board is currently working with WMATA on another study that will identify needed pedestrian and bicycle improvements at 25 under-used Metrorail Stations, *High Impact Complete Streets Access Improvements for Rail Station Areas in the Washington Region*. This study will build on the results of WMATA's 2010 study.

V: Regional Bicycle and Pedestrian Planning

Precursors to the Current Plan

The Washington region completed its first major bicycle study, the *Washington Regional Bikeways Study* in 1977. This study, created under the supervision of the Regional Bikeways Technical Subcommittee of the Transportation Planning Board Technical Committee, provided an overview of bicycling characteristics and the potential market for bicycle commuting.

In 1988 the Bicycle Technical Subcommittee began work on a bicycle element for incorporation into the region's transportation plan. The plan identified the extent to which bicycle facilities and planning processes already existed in the region, highlighted areas of concern for the future, and drafted a set of policy principles to be applied by the region's jurisdictions in updating their own transportation plans, as well as a list of recommended bicycle projects. The *Bicycle Element* was adopted by the Transportation Planning Board as part of the region's Constrained Long-Range Plan in November 1991.

In 1995, the Transportation Planning Board adopted an update to the 1991 *Bicycle Element*, the Bicycle Plan for the National Capital Region, as an amendment to the Constrained Long-Range Plan. The revised plan emphasized bicycling for transportation and recommended project lists and policy principles produced by the Bicycle Technical Subcommittee.

In February 2001, the TPB completed the *Priorities 2000: Greenways* and *Circulation Systems* reports, which identified greenway and pedestrian circulation systems priorities.

Except for the *Priorities 2000* reports, predecessors to the 2006 *Bicycle and Pedestrian Plan for the National Capital Region* were "bicycle" plans. The 2006 plan fully incorporated pedestrian elements for the first time. The 2006 plan was updated in 2010. This plan is an update to the 2010 plan.

Sources of the Regional Plan Projects

State, local, and agency bicycle and pedestrian plans and staff are the source of the

projects in this plan. Projects should be at least one mile in length or \$300,000 in cost to be included in the regional plan. They need not have an identified funding source.

Outlook

The Transportation Planning Board and the Council of Governments have a continuing and growing commitment to walking, bicycling, and the concentration of future growth in walkable, mixed-use activity centers. COG's *Region Forward 2050* shares the goals of the TPB's *Vision* and proposes specific performance indicators and a schedule for reporting progress. Increasing the rate at which projects in this plan are constructed is an explicit goal of the Council of Governments' *Region Forward 2050* vision.

The *Regional Transportation Priorities Policy* re-affirms the commitment to bicycling and walking in the TPB *Vision*, while better explaining the role that increasing walk and bike mode share will play in supporting the growth of the regional activity centers, and making better use of existing transit infrastructure.

The Federal, State, and local policy environment has been changing in ways that make it more likely that goals of the regional plans will be met. Complete Streets policies are being adopted, strengthened and implemented. Pedestrian and bicycle facilities in most jurisdictions will no longer be "amenities" which agencies will consider providing, but facilities that they will routinely provide as part of every project. At the same time, land use, parking, and urban design policies are changing in ways that will make walking and bicycling a viable choice for more trips.

Partnerships between WMATA, local government, and business are growing transitoriented around existing and new Metrorail stations, notably at Tysons Corner, shifting more trips to walk and bike modes.

As the economy recovers and development restarts, the effects of the policy changes of the last few years will become evident in the way people live, work, and travel in our region.

Chapter 2

Bicycling and Walking in the Washington Region

Overview

Residents of the Washington region walk and bicycle at about the same rate as the nation

| as a whole. | Tables 2-1 and 2- | | Table 2-1 | % Walk | % Walk | % Walk |
|----------------|-------------------------|----|---------------------------------|--------|--------|--------|
| 2 show the | share of walking | | Pedestrian Commuting | to | to | to |
| and bicycling | g trips to work for | | in the Ten Largest | Work | Work | Work |
| 5 2 | the ten largest | | Metropolitan Areas ¹ | 2000 | 2006- | 2008- |
| | metropolitan | | | Census | 2008 | 2012 |
| Nationally, | 1 | 1 | New York | 5.55% | 6.2% | 6.2% |
| 10% of all | areas. | 2 | Boston | 4.12% | 4.8% | 5.3% |
| U | T 11 | 3 | San Francisco | 3.25% | 4.2% | 4.3% |
| urban area | Throughout | 4 | Philadelphia | 3.88% | 3.7% | 3.7% |
| trips are made | the second half | 5 | Washington | 3.10% | 3.0% | 3.2% |
| on foot or by | of the 20^{th} | 6 | Chicago | 3.13% | 2.9% | 3.1% |
| • • | Century, | 7 | Los Angeles | 2.56% | 2.6% | 2.7% |
| bike | driving | 8 | Detroit | 1.83% | 1.5% | 1.4% |
| | increased, | 9 | Houston | 1.62% | 1.5% | 1.4% |
| | ng, bicycling, and | 10 | Dallas-Fort Worth | 1.48% | 1.3% | 1.2% |
| public transp | ortation declined. | | United States | 2.93% | 2.8% | 2.8% |

In 2000 2.93% of Americans walked to work, and 0.38% bicycled. By comparison, in 1960 9.9% of workers walked to work.² The number of people driving alone rose from 73.2% in 1990 to 75.7% in 2000, while use of public transportation fell by 0.5%.

| 0.170 | Trips in the Urban Core are Usually ShortIn the first decade of the 21st Century, growth in solo driving share appears to have stopped, and transit, walking and bicyclingmode shares 76% of workers drove alone in 2012, which is essentially the | 1 2 3 4 5 6 7 8 9 10 | Table 2-2:BicycleCommuting intheTenLargestMetropolitanAreasSan FranciscoLosAngelesBostonPhiladelphiaChicagoWashingtonNew YorkHoustonDetroitDallasFort Worth | % Bike to Work 2000 1.12% 0.63% 0.33% 0.33% 0.33% 0.31% 0.30% 0.30% 0.30% 0.30% 0.30% 0.30% | % Bike to Work 2006- 2008 1.4% 0.7% 0.7% 0.5% 0.5% 0.5% 0.5% 0.4% 0.3% 0.2% | % Bike to Work 2008- 2012 1.7% 0.9% 0.9% 0.6% 0.6% 0.6% 0.6% 0.6% 0.5% 0.3% 0.2% |
|-------------------------------|---|---|---|---|---|--|
| transportation grew from 4.7% | same as in 2000, and public transportation grew from 4.7% | 10 | | | | |

to 5%.

^{1 2000} US Census, 2006-2008, 2008-2012 American Community Survey

^{2 1960} Census of Population, Characteristics of Population, United States Summary

The walk and bike modes are more common than the census commute mode numbers would lead one to believe. Work trips account for less than 20% of all trips, and walking and biking are more common for other purposes. The most recent data documenting mode of transportation for all trips taken in the U.S. comes from the 2009 National Household Travel Survey (NHTS). According to the NHTS 1.0% of all trips taken in the U.S. are made by bicycle and 10.4% are by foot.³

Ethnicity, gender, geography, age, and car ownership affect the decision to walk or bicycle.

People under the age of 44 are more likely to walk or bicycle than people older than age 44, and people over age 65 have the lowest rates of walking and bicycling, with 13% of the U.S. population and but 10% of all walking trips and 6% of all bicycling trips. Children, as would be expected, are most likely to walk and bike - Estimates from NHTS indicate that youth under age 16 make up 39% of bicycling trips, despite accounting for just 21% of the U.S. population. This age group also accounts for 17% of walking trips.

People living in households without cars are more likely to walk or bicycle than those that have one, and those living in households with only one car are more likely to walk or bicycle than those owning two. Middle-income groups are slightly less likely to walk or bicycle than either low-income or high-income groups. Whites are more likely to bicycle. Only 24% of bike trips in the United States are taken by women.

Regionally, bicycling and walking are concentrated in the core neighborhoods of the Washington region, especially areas near downtown D.C. and certain Metro stations, as well as college campuses and military bases.

In the past decade walk mode shares for all trips have grown, while bike mode shares have stabilized. Walking and bicycling have grown in the core. Bicycling, however, suffered a steep decline in the outer jurisdictions, resulting in no net increase between 1994 and 2007/2008.

Cold weather/winter is a major barrier to commuter cycling, along with distance, absence of safe routes, and lack of end-of-trip facilities such as showers and lockers.⁴ Trips in the outer suburbs are usually farther than most people are willing to walk or bicycle. However, most commute trips that are short enough to be bikable or walkable are still taken by car. The average trip distance to transit or carpool is short.

Transit and walking are interdependent, with 80% of bus and 60% of Metrorail access

³ Alliance for Bicycling and Walking, *Bicycling and Walking in the United States: 2014 Benchmarking Report*, page 35.

⁴ Metropolitan Washington Council of Governments, 2013 Bike to Work Day Survey- Summary of Results, January 2014. Page 11.

trips on foot. Mode of access varies tremendously by Metro station. Bicycling to transit is less common and varies greatly by Metro station, with the lowest rates of bicycle access found east of the Anacostia river.

Walking and Bicycling Trends According to the US Census

The 2010 decennial US census form was shortened, and the decennial census no longer provides information on journey to work. In place of the long form, the census bureau carries out an annual survey, the American Community Survey (ACS), which contains information on journey to work.

The ACS data is currently the most up to date source of information on walk and bike mode shares The five-year 2008-2012 rolling averages are reasonably accurate down to the census tract level. At the County level we show the 2012 American Community Survey Data.

The 20th Century trend towards less walking and bicycling also held for the Washington Metropolitan Statistical Area (MSA). In 1990, 6,633 people (0.3 %) biked to work on an average day in the Washington area and 85,292 (3.9 %) walked. In 2000, 7,532 people (0.3%) biked to work and 72,700 (3.1%) walked. In the first decade of the 21^{st} century walk mode stabilized, at 3.2%, while bike mode share doubled, to 0.6%.

Charts 2-14 and 2-15 below show the changes in walking and biking to work by jurisdiction.

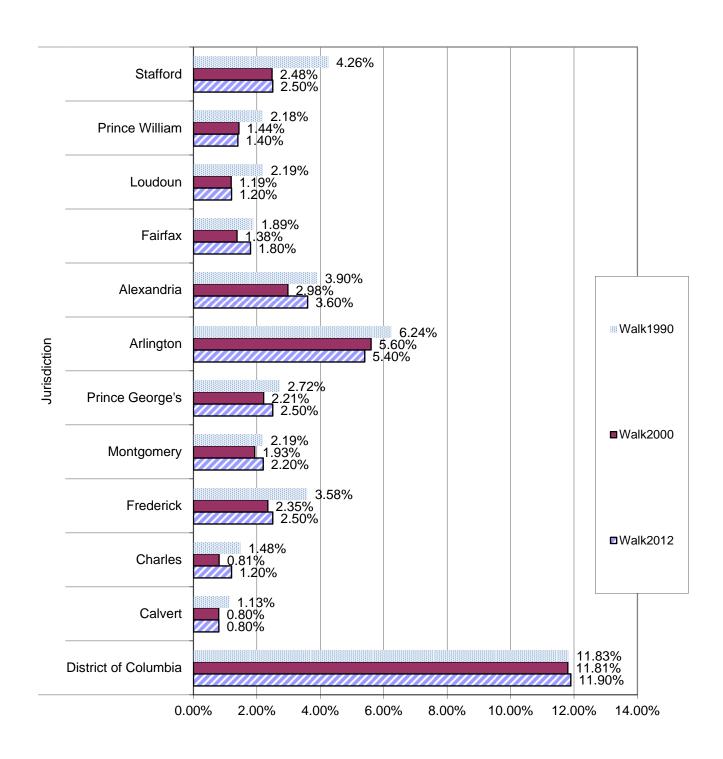
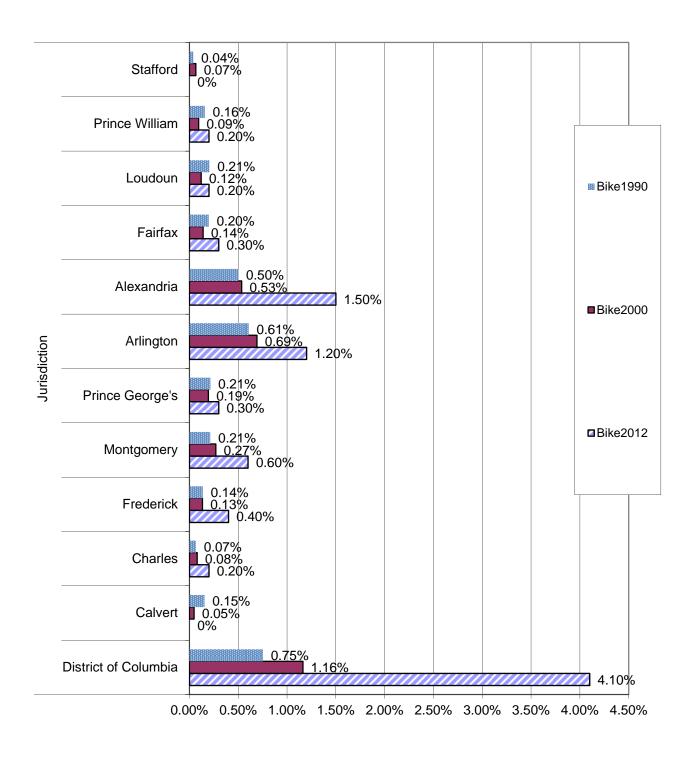


Chart 2-14: Percentage of Workers Walking to Work

Chart 2-15: Percentage of Workers Biking to Work



Generally, the urban core of the Washington region, consisting of the District of Columbia, Arlington, and Alexandria, experienced stable pedestrian mode share and major gains in bicycling between 1990 and 2012. The District of Columbia nearly quadrupled its bicycle mode share.

The inner suburban jurisdictions of Fairfax, Montgomery, and Prince George's saw a decline in walking to work in the 1990's, which was reversed in the 2000's, leaving them roughly where they were in 1990. Bike mode share increased from 1990-2012, but from a low base.

The outer suburban counties of Frederick, Loudoun, Prince William, and Charles also saw a decline in walking to work in the 1990, which stabilized in 2000-2012, leaving them with less walking to work than in 1990. Bicycling mostly increased, but from a very low base. Frederick County more than doubled its bike mode share, to 0.6%.

The exurban counties of Calvert and Stafford had few people bicycling or walking to work in 1990, and that number fell further during the decades that followed. The American Community Survey counted 18 bicycle commuters in Stafford County in 2012, and 25 in Calvert County.

Mode Share by Census Tract

The Census Bureau recently released a web application that provides commuter mode share information, including bicycle and walking commuting numbers, for each state, county, and census tract.

http://www.census.gov/censusexplorer/censusexplorer-commuting.html

Zooming in to the Washington region, the maps show that bicycling and walking are concentrated in the neighborhoods surrounding downtown D.C., Capitol Hill, and North Arlington. Downtown DC and the surrounding neighborhoods show the highest walk mode shares, as much as 52%, while those a little further out have the highest bike mode shares. Outside DC, North Arlington, Old Town Alexandria, downtown Bethesda, and the City of Frederick the highest (non-campus) walk mode shares.

College campuses and military bases such as University of Maryland, Ft. Meyers, Bolling Air Force Base, the National Institute of Health, George Mason, Howard, Georgetown and Gallaudet all have high walk and bike mode share.

Census tracts abutting major facilities such as the W&OD, the C&O, and the Mt. Vernon Trails tend to show higher levels of bicycling than the surrounding suburban tracts.

However, the highest bike mode share by far is in the ring of neighborhoods within easy biking distance of downtown DC, on the order of 10-15%. A dense network of on-street bicycle facilities, and proximity between housing and employment, seems to be more predictive of bicycling than an isolated trail.

Walking and Bicycling According to the COG/TPB Household Travel Survey

The household travel survey is a roughly once in a decade survey of households in the greater Washington region. The survey was done in 1994, and again in 2007-2008. It is the best available source of information on travel mode shares in the Washington region. For the commute mode share the US Census American Community Survey provides more recent data.

For the most recent survey, 11,000 randomly selected households in TPB Region and adjacent areas (+3,500 in the Baltimore Region) were surveyed. Higher numbers of samples were taken in higher density, mixed use urban areas, and regional activity centers. The sample was address-based. Interviews were conducted between February 2007 and March 2008. Travel is weekday travel only; week-end travel was not counted.

Comparing the results of the 1994 and the 2007/2008 surveys, walk commuting fell from 3% to 2.7%, but bicycle commuting increased slightly, from 0.7% to 1%. Bicycling grew by the same amount as walking declined. Auto commute trips remained stable, while auto passenger (carpooling) declined steeply, and transit use grew.

These results are generally consistent with the 2000 US Census and 2006-2008 American Community Survey results for the Washington region, which also show walk commuting decreasing and bicycle commuting increasing.

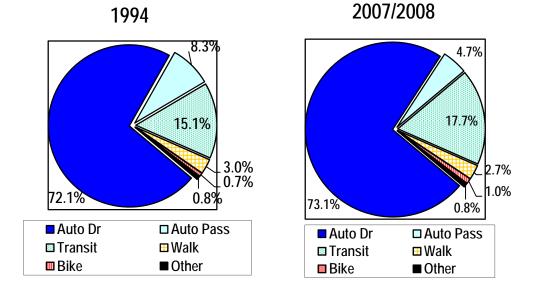


Chart 2-1: Change in Commuting Mode Shares 1994-2007/2008

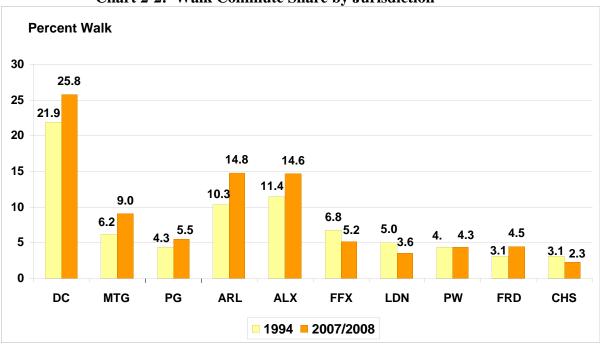
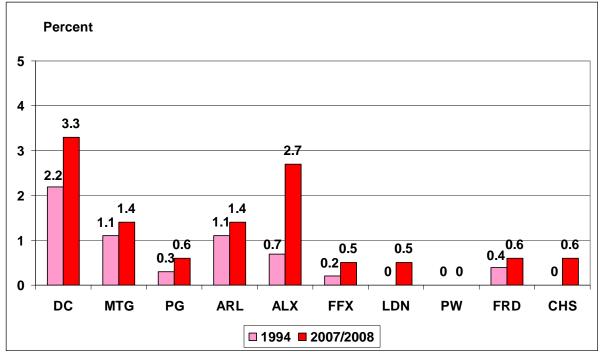


Chart 2-2: Walk Commute Share by Jurisdiction





At the jurisdictional level, walk commuting declined in the District of Columbia, but grew in Alexandria, Arlington and Frederick Counties.

Walk commuting grew in urban core, and in Montgomery and Frederick Counties, but fell in other suburban areas, notably Fairfax and Loudoun Counties, which experienced considerable auto-oriented suburban growth.

Bike commuting grew in most jurisdictions from a low base, with the biggest increases in the District of Columbia and Alexandria.

Mode Share Trends for All Trips in the Washington Region

Commute trips, while they get a lot of attention, account for less than 20% of all trips in the Washington region. Nonwork trips have different characteristics than work trips, and overall trends in mode share are different from trends in commuter mode share.

Solo driving declined significantly in the Washington region between 1994 and 2007/8, while auto passenger, transit, and walk modes increased. Bicycling remained stable at the regional level.

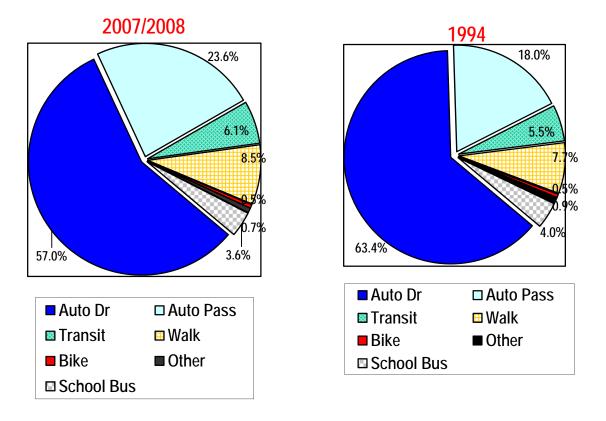
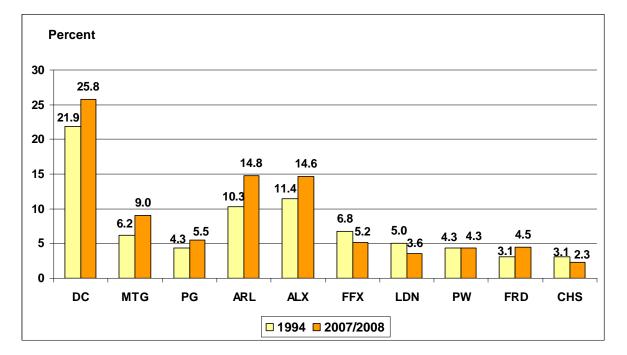


Chart 2-4: Mode Share for All Trips

Walk and Bike Mode Share by Jurisdiction

Walking increased in most jurisdictions, with the notable exceptions of declines in Fairfax and Loudoun Counties. The biggest increases were in the urban core and in Montgomery County.

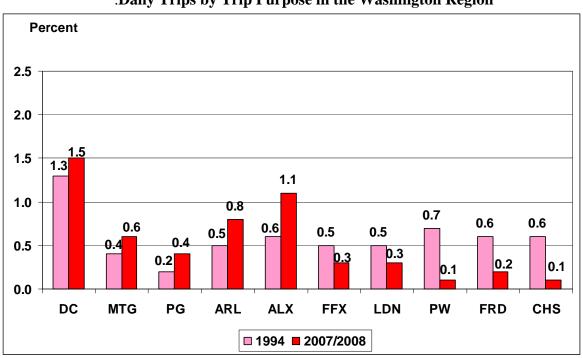




Bike mode share grew in the urban core, but fell steeply from low starting levels in the outer surburban counties. .Growth in bicycling in the core has been offset by an equal decline in the outer suburbs, adding up to zero growth at the metropolitan level. The outer counties have experienced greatly increased auto traffic, much of it on narrow country roads without bike lanes or other accommodation. Fear of traffic is a commonly cited reason in surveys for not riding.

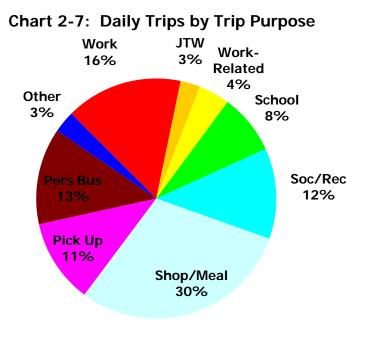
Alexandria had the largest increase at .5% followed by Arlington at .3%.

Chart 2-6: Daily Bike Trip Share by Jurisdiction of Residence (1994 – 2007/2008)

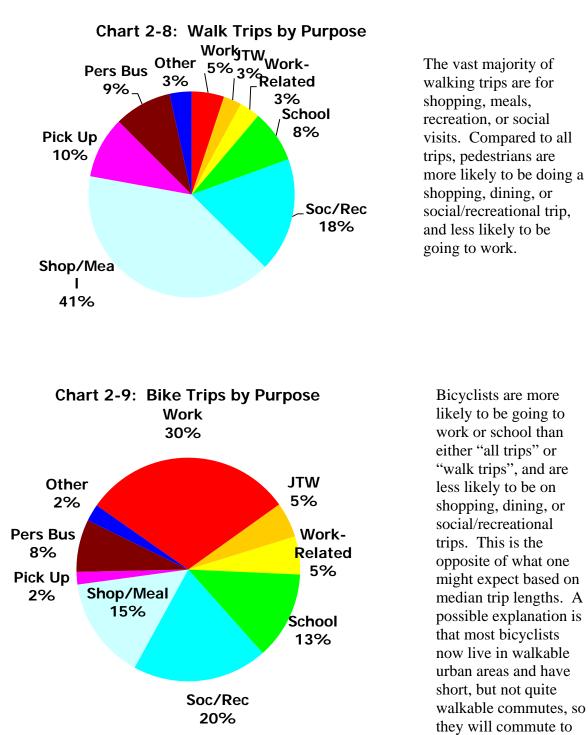


.Daily Trips by Trip Purpose in the Washington Region

Commute trips account for less than 20% of total daily trips in the Washington region,



but have average trip lengths 3 times the distance of other trips for non-work purposes. Commute trips also have the highest median trip length, at 9.3 miles.



work by bicycle but are more likely to walk for other purposes.

Alternately, it may be that bicyclists, while few in number, tend to stick with their chosen mode for all types of trips (like car drivers). Walking is more conducive to being an

access mode or being used for only some legs of a trip chain.

Trip Lengths by Purpose

Based on trip lengths and number of trips shown below, school, shopping/meal, social/recreational, and personal business trips might be more susceptible to being shifted to walk or bike modes than commute trips.

| Purpose | 25% | Median | 75% | 90% |
|-----------------------------------|-----|--------|------|------|
| Work | 4.3 | 9.3 | 17.1 | 25.8 |
| To Work after other stop (JTW) | 1.5 | 4.8 | 12.9 | 22.1 |
| Work-Related | 1.8 | 5.6 | 13.4 | 24.8 |
| School | 0.9 | 2.1 | 4.7 | 9.3 |
| Social/Recreational | 1.0 | 2.9 | 6.7 | 13.7 |
| Shop/Meal | 0.7 | 2.1 | 5.4 | 12.0 |
| Pick-Up | 0.8 | 2.2 | 5.2 | 11.2 |
| Personal Business | 1.4 | 3.5 | 7.5 | 14.9 |
| Other | 0.8 | 1.5 | 4.1 | 7.3 |

Table 2-1: Trip Length Distribution by Purpose(Distance in Miles, 2007/2008 Household Travel Survey)

Trip Lengths by Mode

The median auto trip length in the Washington region is only four miles, and 25% of auto trips are 1.5 miles or less. The median auto passenger trip, which includes many child passengers, is only 2.2 miles, with 25% of auto passenger miles being 1.5 miles or less.

The median walk distance of 0.3 miles is consistent with most estimates of people's willingness to walk. The median bike trip distance of 1.5 miles is brought down in the household travel survey by some short trips that are part of trip chains. Other sources show typical bike trip lengths as being five miles or less.

| Mode | 25% | Median | 75% | 90% |
|-------------------|-----|--------|------|------|
| | | | | |
| Auto Driver | 1.5 | 4.0 | 9.7 | 18.7 |
| Auto Passenger | 1.2 | 2.8 | 6.4 | 12.9 |
| Transit | 3.5 | 6.9 | 14.1 | 23.4 |
| School Bus | 1.2 | 2.3 | 4.6 | 8.2 |
| Walk | 0.1 | 0.3 | 0.5 | 0.9 |
| Bike | 0.8 | 1.5 | 4.1 | 7.3 |

Table 2-2: Trip Length Distribution by Mode (Distance in Miles)

Average Daily Miles Traveled By Jurisdiction

Households in the urban core make slightly fewer trips per day, and travel far fewer miles per day than households in the outer jurisdictions. The average DC household

makes seven trips per day and travels 23.9 miles, while the average Charles County household makes nine trips per day, and travels 91.8 miles, or nearly four times as far.

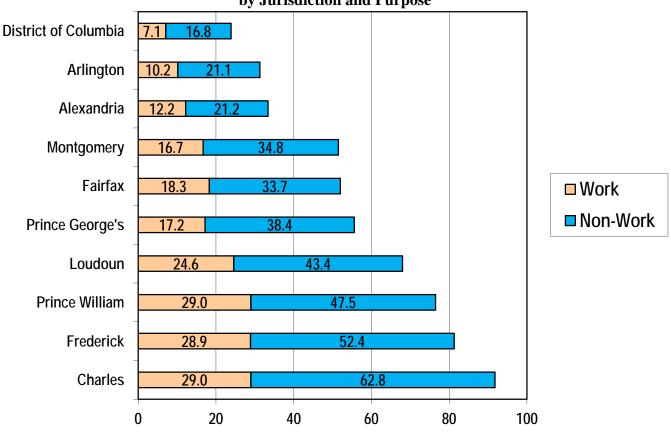


Chart 2-10: Average Daily Miles Traveled Per Household by Jurisdiction and Purpose

Nor are all the long trips in the outer suburbs commute trips; outer suburban households travel three to four times as many non-work miles as DC households. Low-density development patterns in the outer suburbs appear to be generating trip distances which are significantly longer than what most people are willing to walk or bicycle.

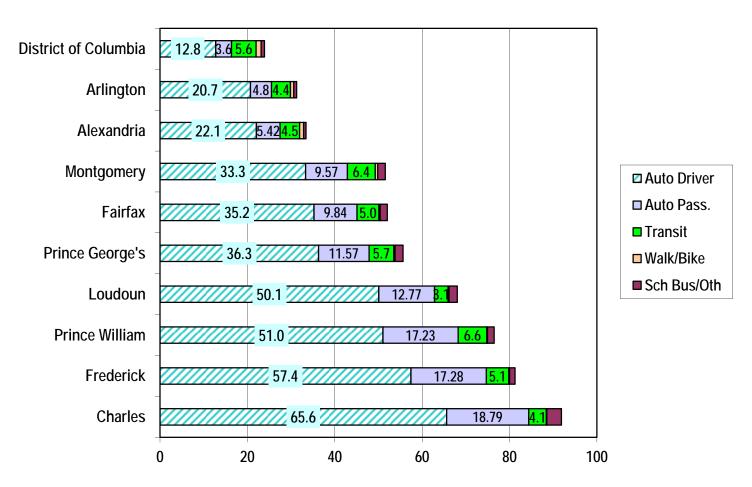


Chart 2-11: Average Daily Miles Traveled Per Household by Jurisdiction and Mode

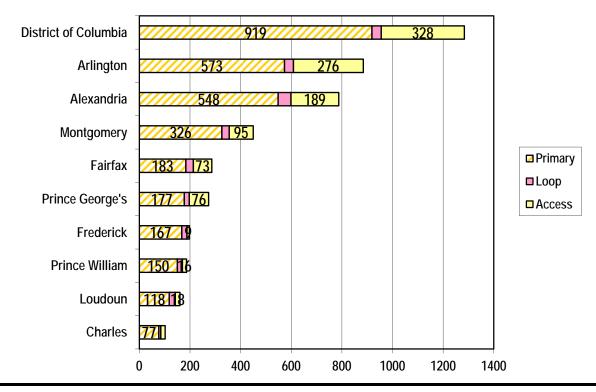
DC residents use an automobile for about half the miles they travel, while more than 90% of outer suburban residents' travel mileage is in a car, with transit and school buses accounting for the rest.

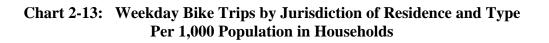
| Table 2-3: Total Weekday Walk and Bike Trips by Type in the Washington Region |
|---|
| (in Thousands) |

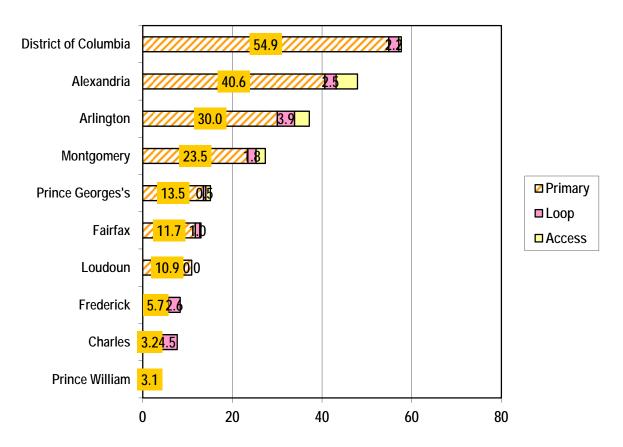
| Type of Trip | Walk | Bike |
|---------------------|---------|-------|
| Primary Travel Mode | 1,370.0 | 87.5 |
| "Loop" Trips | 123.8 | 6.9 |
| Metrorail Access | 464.3 | 4.3 |
| Metrorail Egress | 469.0 | 4.0 |
| Total | 2,427.1 | 102.7 |

Access to transit accounts for a high proportion of the walk trips in the region, especially in the urban core.







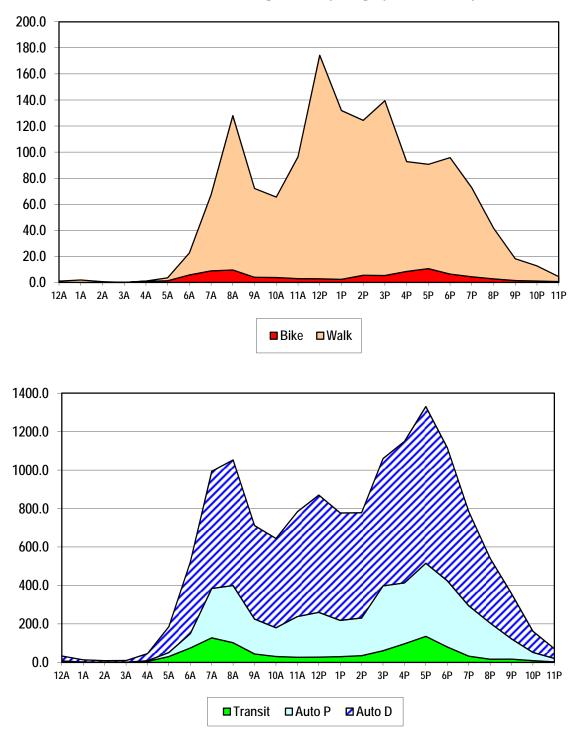


While DC residents are most likely to bicycle, Alexandria and Arlington are most likely to use bicycle to access Metrorail. Charles County has the highest rate of "loop" bicycle trips.

Walking and Bicycling by Time of Day

Walk trips peak at lunch hour, then around 3 p.m. when school lets out, and then during the morning rush hour just before 8 a.m. This is different from auto, auto passenger, and transit modes, which are highest at 5 p.m, and next highest at 8 a.m.

Bike trips are much more evenly distributed throughout the day than other modes. Bike trips peak at the evening and morning rush.





Walking and Bicycling in the Geographically Focused Household Travel Surveys

As a follow-up to the 2008 regional Household Travel Survey, COG/TPB carried out a series of household surveys in geographically focused areas around the Washington region. These case studies addressed a need expressed by local planners, to provide some small area community-level socio-economic data that are no longer available from the Decennial Census

The project sought to analyze daily travel behavior in communities with different densities, physical characteristics and transportation options, including Regional Activity Centers, and eventually track changes in behavior over time. Data on 17 focused areas have been collected so far.

| | | Drive Alone (SOV) | Carpool (HOV) | Transit | Walk | Bike | Other |
|-------|--------------|----------------------|------------------|---------|------|-------|-------|
| re | Logan Circle | 21% | 4% | 28% | 33% | 10.6% | 2% |
| Core | Crystal City | 22% | 4% | 53% | 19% | 0.7% | 2% |
| | | | | | | | |
| ler | Largo | 70% | 11% | 13% | 3% | 2.8% | |
| Inner | Reston | 70% | 17% | 8% | 3% | 0.7% | 2% |
| | | | | | | | |
| Outer | Woodbridge | 76% | 13% | 8% | 1% | 0.3% | 2% |
| Ou | Frederick | 78% | 12% | 4% | 4% | 1.5% | |

Chart 2-16: **Commute Mode Share** 2010/2011 In Selected Neighborhoods in the Washington Region

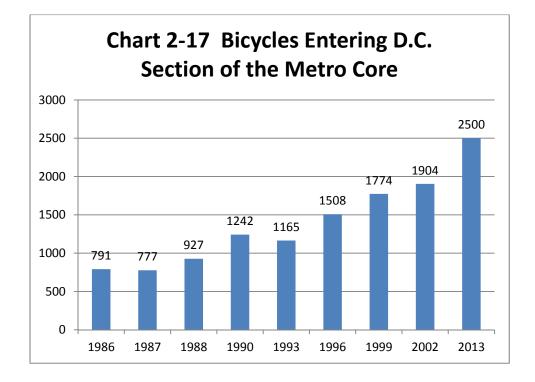
Logan Circle had by far the most walking and bicycling of the neighborhoods surveyed. Density, proximity to transit, distance to the central business district, and urban design appear to affect mode choice.

Bicycling in the Metro Core Cordon Counts

COG/TPB periodically takes a count of vehicular traffic, including bicycle traffic but excluding pedestrian traffic, entering downtown D.C. and Arlington, as well as traffic crossing the beltway. Cordon counts are not done in other parts of the region.

| Bicycling is | concentration of bicycling in the neighborhoods close to downtown |
|---------------|--|
| Growing | D.C., Arlington, and Alexandria. |
| Rapidly in | The most recent counts were done March through June 2013, on |
| Downtown D.C. | Tuesdays, Wednesdays and Thursdays only. Holidays were avoided. |
| and North | Only 5:00 A.M. to 10:00 A.M. inbound traffic was counted. |
| Arlington | The counts show that bicycle traffic into the downtown Metro core is |

growing rapidly, with bicycle traffic into the D.C. section of the Metro core more than tripling from 1986 to 2013. The number of bicyclists entering the Metro core within the District of Columbia between 6:30 a.m. and 9:30 a.m. has grown steadily from 474 in 1986, 1,379 in 2002, to 2,500 in 2013. The number of cyclists crossing the Potomac bridges grew from 317 in 1986 to 525 in 2002, to 811 in 2013. Chart 2-17 shows the number of bicycles entering the D.C. section of the Metro core from 1986 to 2013.



District of Columbia Bicycle Counts

The District of Columbia Department of Transportation has had an annual bicycle count program since 2004. Counts are taken at selected locations in the District Columbia, and on the bridges entering the District of Columbia. Numbers varied a lot by location; bridge locations and some central locations had hundreds of bicyclists per hour, others, in the outer wards, had few or none. Counts are taken at 8 hours at each location, 4 hours in the morning (6 to 10am), and 4 in the evening (3 to 7pm).

DDOT has consistent counts at 19 of the locations dating back to 2004, which are used calculate the growth in *average peak hour* cycling. In 2004, the average peak hour count was 35 cyclists and there were 14 miles of bike lanes. By 2012 these numbers rose to 95 cyclists per hour and 57 miles of bike lanes, a 175% increase in the cycling rate and over 300% increase in the bike lane network.

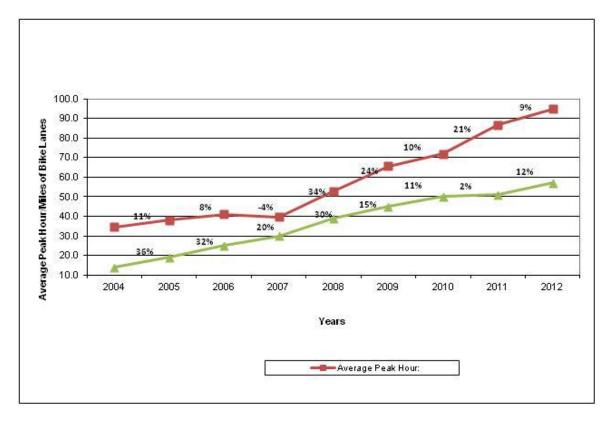


Chart 2-18: Average Peak Hour Bike Counts in DC

Arlington Automated Counters

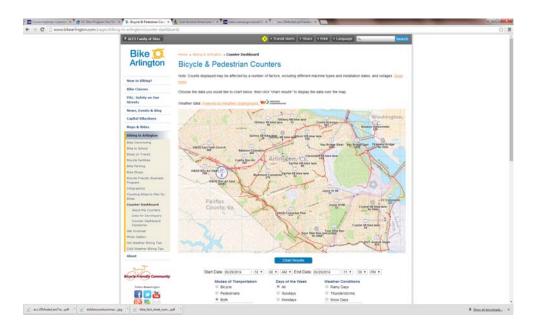
Manual counts have a number of disadvantages, notably cost, an inherently limited time window, unrepresentative counts due to weather events, and a lack of data on cyclists' and pedestrians' off-peak presence. There is strong interest among planners in automated bicycle and pedestrian counters.

Arlington County has by far the largest automated counting program in the region. Arlington's first two automated bike and pedestrian counters were installed in the fall and Spring of 2009-10 on the Custis and Four Mile Run Trails. They use a combination of in-ground inductive loops and passive infrared detectors to collect data on trail volumes and travel direction. The loops detect metal, which distinguishes a bicyclist from a pedestrian.

As of April 2014, the County had sixteen permanently installed bicycle and pedestrian counters on shared-use trails, ten permanent bicycle-only counters in on-street bike lanes, and three mobile counters typically used for short term sidewalk counts. Mobile counters are used to estimate facility needs and guide negotiations with developers.

The data show that people continue to ride in bad weather, but are deterred by snow and ice on the trails, which are not plowed. Weekday bike traffic peaks during the morning and evening rush hours, while week-end traffic peaks mid-day.

The Arlington count data has been posted at <u>bikearlington.com/pages/biking-in-arlington/counter-dashboard/</u>. It can be queried for pedestrians and/or bicyclists by time period, day of the week, temperature, snow, and a number of other variables.



Demographic Characteristics of Pedestrians and Bicyclists

Ethnicity, geography, income, age, and car ownership affect the decision to walk or bicycle to work. The best recent source of this demographic information on pedestrian and bicycle commuters in the Washington region is the 2013 Commuter Connections *State of the Commute Survey*. However, the *State of the Commute Survey* and the US Census both measure work trips only, and the conclusions in terms of both the prevalence and distribution of walking and bicycling can be quite different for all trips than for work trips. Nationally, the 2009 *National Household Travel Survey* is the best source of demographic data on pedestrians and bicyclists for all types of trips.

All data in the following tables comes from the 2013 *State of the Commute Survey* unless otherwise noted. Walking and bicycling were not calculated separately in the *State of the Commute Survey* for the subcategories of ethnicity, income, age, and state of residence due to sample size issues. All mode shares are for primary commute mode, 3+ days per week. Walk/bike mode share varies by household income, state of residence, number of vehicles in the household, ethnicity, and age.

The 2013 *State of the Commute* shows walking and bicycling, from 2.4% in 2001 to 2.2%. However, that change is well within the survey's margin of error, which is 1.2%. *State of the Commute* shows lower mode share for walking and bicycling than does the Census, a discrepancy probably explained by differing methodologies.

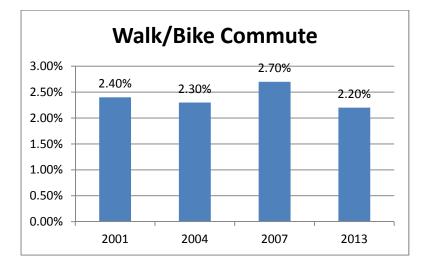


Chart 2-19: Walk/Bike Commute Mode Share

A. Household Income

Chart 2-4 shows walking and bicycling commute mode share by income. Walking and bicycling to work are somewhat more prevalent among the low-income (less than \$30,000 household income per year) than among the very high-income (more than \$140,000 per year). Bicycling and walking are slightly more common at the top and the bottom of the income distribution than in the middle. This is roughly consistent with the national data.

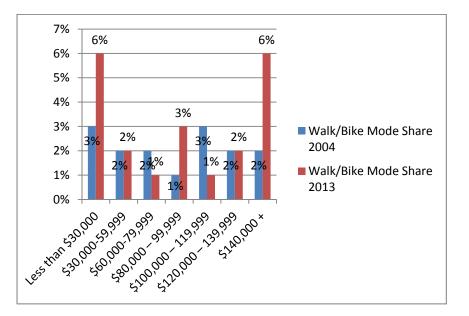


Chart 2-20: Walk/Bike Mode Share by Income

B. Ethnicity

Walk/bike commute mode varies by ethnicity. Whites have the highest walk/bike mode share at 3%, African-Americans the lowest at 1%. Hispanic walk/bike mode share has apparently declined.

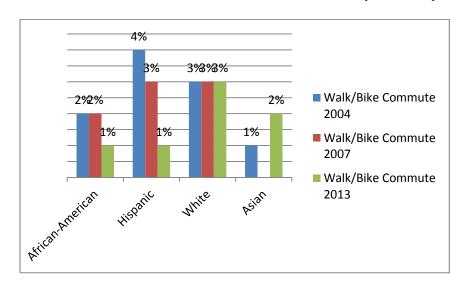


Chart 2-21: Walk/Bike Commute Mode Share by Ethnicity

C. Age

Chart 2-6 shows walk/bike commute mode share by age. People under 35 and over 65 are more likely to walk or bike to work than the middle-aged. Nationally the elderly have a lower than average mode share for bicycling, so we can presume that most of the elderly are walking rather than bicycling.

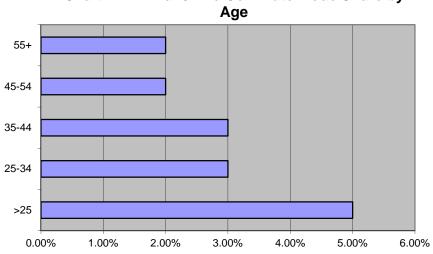


Chart 2-22: Walk/Bike Commute Mode Share by

D. Motor Vehicles per Household

Vehicles per household is another strong predictor of mode share, as shown in Table 2-4. People in households without any vehicles are much more likely to walk or bike to work than households that own one, while those living in households with one vehicle are more likely to walk or bicycle to work than those owning more than one vehicle. Non-work trips also shift radically away from walking in households that have at least one car.

Table 2-4 Walk/Bike Mode Share by Number of Vehicles

| Number of Vehicles in the Household | 0 | 1 | 2 | 3+ |
|---|-------|------|------|----|
| Walk/Bike Commute Mode | 11.4% | 3.7% | 1.2% | 2% |

| Share 2004 | | | | |
|--------------|-------|------|------|----|
| Walk/Bike | 12.4% | 4.0% | 1.2% | 2% |
| Commute Mode | | | | |
| Share 2007 | | | | |
| Walk/Bike | 16% | 3% | 2% | 1% |
| Commute Mode | | | | |
| Share 2013 | | | | |

Trip Distances

Distance was the most frequently cited reason, by 24% of respondents, to COG/TPB's 2013 Bike to Work Day survey to explain why they were *not* riding to work. Reasons One and Three were "Don't ride in cold/winter" (44%) and "No safe route" (21%). So trip distance is of great interest when gauging the potential for increasing bicycling (or walking). The 2013 SOC survey asked respondents about the length of their commutes. Commute mileage is shown in Table 2-5 below.

Table 2-5: Commute Distance

(n = 5,605)

| Distance | Less than 5 miles | 5 to 9 miles | 10 to 14 miles | 15 to 19 miles | 20+ miles |
|------------|----------------------|-----------------|----------------|-------------------|-----------|
| Percentage | 17% | 21% | 17% | 12% | 33% |

17% of commutes in the Washington region are less than five miles and therefore potentially bikable on a daily basis. The average commute distance for Bike to Work Day survey respondents was 16 miles one-way.

Another potential source of walk or bike trips is the trip to transit, park and ride lot, or vanpool and carpool pick-up point. As shown in Table 2-6, most access trips to alternative mode meetings points are short. Respondents travel an average of 2.9 miles to the meeting point. Six in ten (61%) respondents travel one mile or less; these are primarily bus and Metrorail riders who walk to the stop or station. About one-quarter (23%) of respondents said they travel between two and five miles. Only 16% of respondents travel more than five miles. Based on the distances being traveled, some of the 29% of respondents who are currently driving to their alternative mode meeting point might be able to walk or bicycle instead.

Table 2-6 Distance Traveled from Home to Alternative Mode Meeting Point

(n=1,230)

| Distance | 2013 |
|------------------|------|
| 1 mile or less | 61% |
| 2 to 5miles | 23% |
| 6 to 10 miles | 11% |
| 11 miles or more | 5% |

Table 2-7 Means of Getting from Home to Alternative Mode Meeting/Transfer Point

(n=1,442)

| | 2004 | 2007 | 2013 |
|---|------|------|------|
| Access Mode to Alternative Mode | | | |
| Walk | 39% | 35% | 34% |
| Picked up at home | 15% | 12% | 16% |
| Drive to a central location (e.g., Park & Ride) | 18% | 18% | 19% |
| Drive alone to driver's/passenger's home | 11% | 10% | 10% |
| Bus/transit | 9% | 12% | 13% |
| I am the carpool/vanpool driver | 5% | 10% | 6% |
| Dropped off/another CP/VP | 1% | 1% | 2% |
| Other* | 1% | 2% | |

Walking and Bicycling to Transit

Walking is the dominant mode of access to transit. The census walk to work mode share does not include walk trips to transit, since a walk trip to transit is counted as a transit trip

rather than as a walk trip. In areas with high transit ridership the census walk to work numbers significantly undercount the amount of walking to or from work.

In 2012 WMATA surveyed passengers at all 86 of its Metrorail stations. The primary purpose of the survey was to estimate the percentage of total ridership residing in each jurisdiction. Passengers *entering* each Metro station were queried throughout the entire day, so the "mode of access" number for any given Metro station includes both people on their way to work or some other destination, and those on their way home. "Mode of Access" is the mode people use to get to the station, not to leave it.

Appendix E shows mode of access to Metrorail by station.⁵

In 2012 62.2% of all Metrorail passengers walked to the station, essentially the same as 2007. 0.7% arrived by bicycle, an increase from the 0.31% who arrived by bicycle in 2002. However the AM peak results, which are the best measure of how people access the system (as opposed to any particular station), show higher auto mode and bus mode of access. Pedestrian mode of access for the AM peak is only 37%, up from 33.3% in 2007 and bike access is 1%, up from

Fewer People are Driving to Metrorail, and more are Walking and Biking

62% of Metrorail Passengers Walk to the Station 0.7% in 2007.

WMATA is making significant progress on increasing walk mode and decreasing drive mode of access to the system. WMATA is also on track to achieve its 2020 goal of 2% bike access to Metrorail.

^{5 2012} WMATA Rail Passenger Survey, from the table "Origin Station by Mode of Access".

| Table 2-8: Mode of Access to Metrorail | Percent of Daily Total - 2012 | Percent of Daily Total – 2007 | AM Peak - 2012 | AM Peak - 2007 |
|---|--|--|----------------------|----------------------|
| Bus | 15.3 | 15.6 | 21.9 | 22.2 |
| Auto Driver | 12.6 | 13.7 | 25.6 | 29.3 |
| Auto Passenger (drop off) | 4.5 | 5.5 | 7.8 | 9.3 |
| Rode with someone who Parked | 0.5 | 0.6 | 0.9 | 1 |
| Bike | 0.7 | 0.5 | 1.0 | 0.7 |
| Walk | 62.2 | 62.1 | 37.3 | 33.3 |
| Commuter Rail | 1.5 | 1.7 | 3.5 | 3.8 |
| Shuttle | 2.5 | n/a | 2.0 | n/a |
| Taxi | 0.2 | 0.2 | 0.1 | 0.2 |

Mode of Access varies greatly by station, from Mount Vernon Square, with 95% access by foot, to New Carrollton, with 3.7% access by foot. The thirty stations with the greatest share of pedestrian access (as a percentage of total passengers accessing that station) are all located in the District of Columbia, Arlington, or Alexandria.⁶

Stations with a very high share of pedestrians tend to be located in major employment centers, with people walking from work to the station, rather than from home to the station. However, largely residential-area stations such as Cleveland Park, Eastern Market, and Columbia Heights are found in the top twenty. Dense, mixed-use areas such as Bethesda, Foggy Bottom, Crystal City, Pentagon City, Friendship Heights, Van Ness, Dupont Circle, Shaw, and the Rosslyn-Ballston Corridor have high percentages of pedestrian access as well.

The bicycle mode of access to Metrorail ranged from 6.4% at Medical Center to zero at

⁶ Appendix E: Origin Station Sorted by All Day Walk Mode of Access.

31 stations.⁷ Stations with more bicycling tended to be located in the western portion of the region, have access to a major shared-use path, be near a major University, and/or be located in an area with a bicycle-friendly street grid. Stations with no bicycling are either in dense urban employment centers with no bicycle parking, or are located in the eastern portion of the region. Brookland CUA was a notable exception, with no bicycle access despite the presence of a university.

Of the sixteen stations located east of the Anacostia River in 2013, thirteen had bicycle access that rounded to zero. All stations in Fairfax and Montgomery Counties had some bicycle use. The WMATA *Rail Passenger Survey* confirms what the census tells us

about the distribution of walking and bicycling in the region, with walking and bicycling heavily concentrated in the Metro core and at certain inner suburban stations.

Rapid Growth in the Urban Core and Regional Activity Centers favors Walking and Bicycling

Outlook

Walking and bicycling taken together are significant travel modes in the Washington region, especially for non-work trips, and for trips to transit. Walking is the larger mode, and is growing slowly. Cycling is less common, but is growing rapidly.

Exurban and outer suburban areas have developed in ways that often make utilitarian walking and bicycling difficult and dangerous, with long distances, lack of direct routes, heavy, fast automobile traffic, and incomplete facilities for walking or bicycling. They typically have low levels of walking and bicycling.

The story in the urban core is different. In the District of Columbia, Arlington, Alexandria, and portions of Montgomery County and Frederick County, walking and bicycling are growing rapidly.

Since 2010 the urban core jurisdictions have captured a larger share of the region's growth, and are expanding their share of the region's population, at trend which if it continues will help increase walking and bicycling. The urban core is now growing faster, in absolute and in percentage terms, than the exurban jurisdictions.

⁷ Appendix F: Origin Station Sorted by All Day Bike Mode of Access.

It is likely that urban core and inner suburban communities will develop over the next thirty years in ways that will be conducive to walking and bicycling. Many inner suburban activity centers have already reached critical levels of traffic congestion, and regional projections call for rapid employment growth in these same areas. Seventy-two percent of regional employment growth to 2030 is planned to take place within the current regional activity clusters, as well as fifty-four percent of household growth.⁸ Under "Complete Streets" policies new development should accommodate pedestrians and bicyclists.

The most prominent example of this trend is the planned transformation of Tysons Corner, a classic auto-oriented commercial center, into a walkable downtown built around Metrorail.

If growth occurs in ways that are consistent with the TPB *Vision*, *Regional Transportation Priorities Plan*, and *Region Forward 2050*, creating activity centers that mix jobs, housing and services in a walkable environment, we can expect rapid growth in walking and bicycling in the inner suburbs as well as in the core.

⁸ Metropolitan Washington Council of Governments, *Growth Trends to 2030: Cooperative Forecasting in the Washington Region*, October, 2005. Pp. 2, 14-15.

Chapter 3 Pedestrian and Bicycle Safety

Overview

Pedestrian and bicycle fatalities and injuries are a serious problem in the Washington region. More than one quarter of all traffic fatalities in the region are pedestrian or cyclist. Every jurisdiction has a significant pedestrian safety problem. Pedestrian and bicyclist fatalities account for at least 7% of total traffic fatalities in every major jurisdiction.

While all areas and demographic groups are affected, some groups are more affected than others. Urban areas and inner suburban areas are more heavily affected than the outer suburbs, Hispanics and African-Americans more than Whites and Asians.

Adjusted for their high walk and bike mode shares, the urban core jurisdictions are the safest places to walk or bicycle.

This section will describe the scope of the pedestrian and bicycle safety problem, its distribution across the region by jurisdiction and ethnicity, and the legal rights and responsibilities of drivers, pedestrians, and bicyclists. It will also discuss the region's efforts to deal with the problem through the "Street Smart" pedestrian and bicycle safety campaign.

Pedestrian Fatalities in the United States

Pedestrian safety is a major problem nationally and in the metropolitan Washington region. Of the 33,561 traffic fatalities in the United States in 2012, 4,743, or 14%, were pedestrians.

Pedestrian Fatalities are Increasing Nationally

Pedestrian fatalities have been increasing nationally since 2010,

while other traffic fatalities have been falling. More pedestrians died in 2012 than in 2008, causing the proportion of pedestrian fatalities to jump from 11% to 14% of the total.

| Total Fatalities and Pedestrian Fatalities in US Traffic Crashes, 2003-2012 | | | | | | |
|---|-------------------------|------------|------------|----|--|--|
| Year | Total Fatalities | Pedestrian | Percent | of | | |
| | | Fatalities | Fatalities | | | |
| 2003 | 42884 | 4774 | 11% | | | |
| 2004 | 42836 | 4675 | 11% | | | |
| 2005 | 43510 | 4892 | 11% | | | |
| 2006 | 42708 | 4795 | 11% | | | |
| 2007 | 41259 | 4699 | 11% | | | |
| 2008 | 37423 | 4414 | 12% | | | |
| 2009 | 33883 | 4109 | 12% | | | |

 Table 3-1:

 Total Fatalities and Pedestrian Fatalities in US Traffic Crashes, 2003-2012

| 2010 | 32999 | 4302 | 13% |
|------|-------|------|-----|
| 2011 | 32749 | 4457 | 14% |
| 2012 | 33561 | 4743 | 14% |

Pedestrian Fatalities by Age and Ethnicity in the United States

American Indians, Blacks, Hispanics, and people over the age of 65 are over-represented among pedestrian fatalities relative to their share of the population. Pedestrians over age 75 are at high risk

People over the age of 75 are at high risk; with six percent of the U.S. population, but more than 12 percent of pedestrian fatalities.

Adjusted for exposure, pedestrians over the age of 65 have a very high risk of dying, over six times as high as children under age $16.^{1}$ For pedestrians over age 75 the risk is even higher, about eight times the risk for children.

The number of children killed as pedestrians has declined dramatically in recent decades, from more than 1,000 fatalities in 1984 to 319 in 2012. This decline is often attributed to a general drop in physical activity. However,

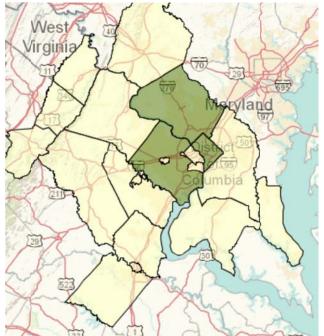
fatal pedestrian injury remains a leading cause of death for those 15 years and younger.²

By ethnicity, American Indians have the highest exposure-adjusted risk, followed by African-Americans. Asians have few fatalities relative to their share of the population, and also lower than average exposure-adjusted risk. Ethnic risk varies significantly by State, so jurisdictions should not rely solely on national numbers when planning safety programs.

Pedestrian Fatalities in the Washington MSA

Urban areas have higher pedestrian fatality rates than rural areas. The greater <u>Washington region</u> ranks <u>24th</u> out of the 51 largest Metropolitan Statistical Areas in terms of pedestrian deaths per capita, with pedestrians accounting for 20% of all

Figure 3-1: Washington-Arlington-Alexandria Metropolitan Statistical Area



¹ Dangerous by Design 2014, Smart Growth America, p. 13.

² Ibid, p. 20.

traffic fatalties.ⁱ³

Fatalities in the TPB Member Jurisdictions

For the TPB member jurisdictions, pedestrians and bicyclists accounted for over a quarter of those killed on the roads in 2013. Over 2,600 pedestrians and bicyclists are injured every year, and 73 are killed. On average, there are 200 motorized fatalities, 68 bicyclist fatalities, and five bicyclist fatalities per year in the Washington region.⁴

Pedestrians and Bicyclists account for 27% of the region's Traffic Fatalities

Chart 3-1 shows the yearly variations in traffic fatalities from 1999-2013. Motorized traffic fatalities have declined sharply since 2006, while pedestrian and bicyclist fatalities have declined only slightly, from 87 to 73. The *proportion* of total fatalities that are pedestrian or bicyclist has risen from 21% to 27%. Chart 3-2 shows pedestrian fatalities only.

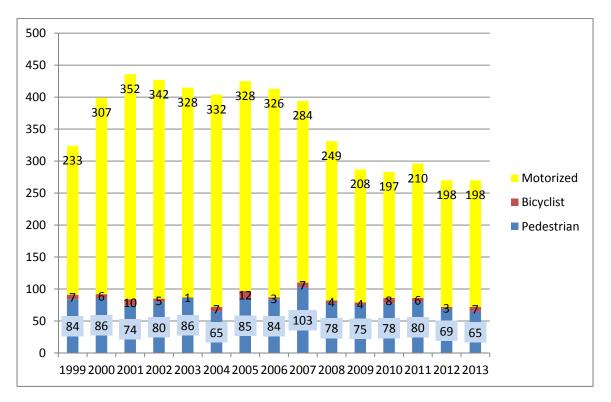


Chart 3-1: Traffic Fatalities in the Washington Region

³ Dangerous by Design 2014, Smart Growth America, p. 17.

⁴ Regional totals compiled from data provided by the District Department of Transportation, the Maryland Office of Highway Safety, and the Virginia Department of Motor Vehicles.

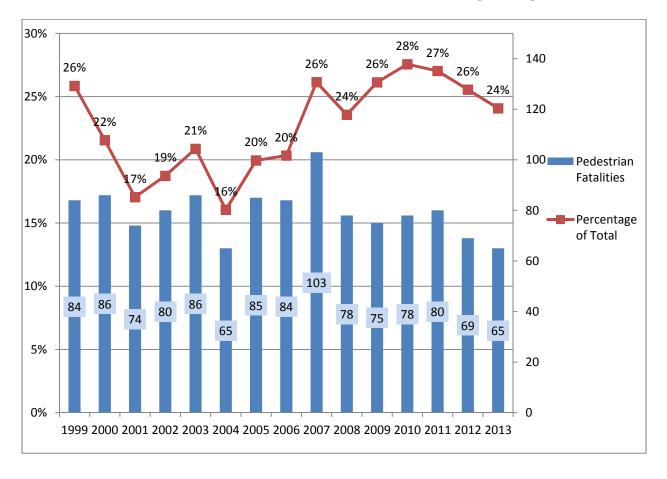


Chart 3-2: Pedestrian Fatalities in the Washington Region

Pedestrian and Bicyclist Fatalities by Jurisdiction

The region is often divided into an urban core, consisting of Arlington, Alexandria and the District of Columbia, the inner suburbs of Fairfax, Montgomery, and Prince George's Counties, and the outer suburbs, such as Frederick, Charles, Loudoun, and Prince William Counties. The independent cities of Manassas, Manassas Park, the City of Falls Church, and the City of Fairfax are shown as "Other Northern Virginia".⁵

Most of the walking and bicycling occurs in the core, and most of the deaths and injuries occur there as well. Even calculated as a rate per 100,000 population as in Chart 3-3, most of the outer jurisdictions have below-average pedestrian and bicyclist fatality rates.

⁵ Towns in Northern Virginia are not included in the surrounding Counties; their traffic fatalities are tallied separately.

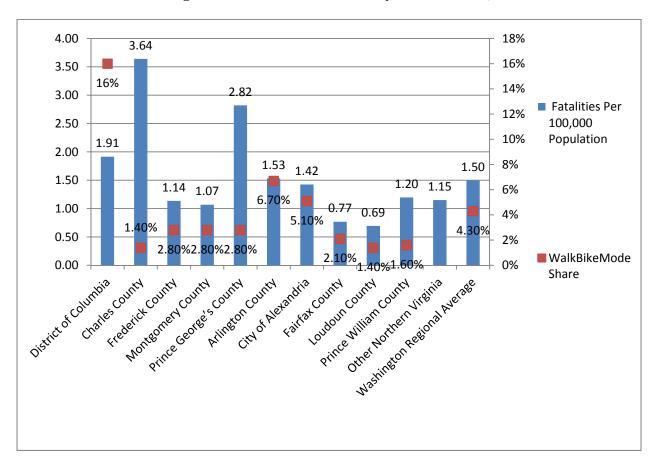


Chart 3-3: Average Annual Pedestrian and Bicyclist Fatalities, 2011-2013

Corrected for exposure, walking and bicycling appear to be safer in the urban core areas with numerous pedestrians than in the inner or outer suburbs. However, some suburban areas appear to be far safer for pedestrians than others.

| Jurisdiction | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Avg |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| District of Columbia | 18 | 20 | 15 | 9 | 18 | 14 | 19 | 17 | 27 | 15 | 16 | 16 | 13 | 8 | 14 | 16 |
| Charles County | 6 | 3 | 2 | 5 | 3 | 1 | 6 | 2 | 6 | 1 | 3 | 3 | 9 | 4 | 3 | 4 |
| Frederick County | 6 | 4 | 0 | 2 | 4 | 2 | 2 | 4 | 1 | 0 | 1 | 3 | 0 | 4 | 5 | 2 |
| Montgomery County | 20 | 17 | 11 | 16 | 12 | 15 | 11 | 15 | 17 | 16 | 12 | 15 | 10 | 8 | 13 | 14 |
| Prince George's County | 19 | 16 | 30 | 28 | 30 | 19 | 35 | 19 | 29 | 39 | 23 | 23 | 32 | 24 | 18 | 26 |
| Arlington County | 2 | 5 | 4 | 2 | 3 | 2 | 3 | 1 | 1 | 1 | 4 | 1 | 5 | 4 | 1 | 3 |
| City of Alexandria | 3 | 2 | 2 | 3 | 2 | 1 | 2 | 1 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 |
| Fairfax County | 13 | 20 | 18 | 12 | 7 | 16 | 11 | 20 | 17 | 4 | 11 | 13 | 10 | 7 | 8 | 12 |
| City of Fairfax | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 1 |
| City of Falls Church | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Loudoun County | 1 | 1 | 1 | 3 | 3 | 2 | 3 | 1 | 3 | 0 | 1 | 2 | 3 | 3 | 1 | 2 |
| City of Manassas | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| City of Manassas Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Prince William County | 2 | 3 | 1 | 3 | 4 | 0 | 4 | 7 | 5 | 6 | 6 | 6 | 1 | 7 | 7 | 4 |
| Total Washington | 91 | 92 | 84 | 85 | 87 | 72 | 97 | 87 | 110 | 82 | 79 | 86 | 86 | 72 | 73 | 86 |

Table 3-2: Pedestrian and Bicyclist Fatalities by Jurisdiction

Injuries

Pedestrian injuries exact a steep toll as well. Of the approximately 3000 persons hit by motor vehicles every year in the region, 90% suffer some sort of injury. Approximately 500 injured pedestrians every year require more than 24 hours of hospitalization, which at an average cost of about \$25,000 leads to more than \$12 million in hospitalization charges alone.⁶ This is probably only a fraction of the total financial costs, which would include costs for those hospitalized for less than 24 hours, further medical care, disability, and lost time at work. Many of the people being hit can ill afford such a setback.

Motorized injuries, shown in Chart 3-4, have decreased substantially in the last decade. Unfortunately, pedestrian injuries have declined far more slowly, only 10% from 2001 to 2012, while bicyclist injuries increased, from 695 to 902. The increase in bicycling injuries has been driven largely by the increase in bicycling, and bicycling injuries, in the District of Columbia. Pedestrian and bicyclist trend lines are broken out in Charts 3-5 and 3-7. Bike injuries have been rising sharply since 2010.

While the absolute numbers have remained relatively stable, the proportion of traffic injuries that are pedestrian or bicyclist rose between 2001 and 2012, from 5.5% to 7.6%.

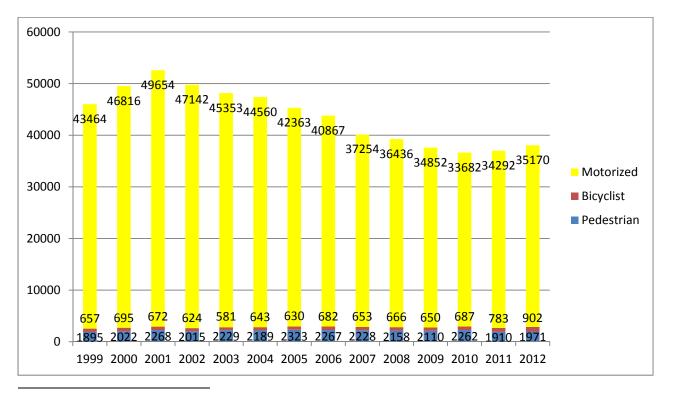


Chart 3-4: Traffic Injuries in the Washington Region, 1999-2012

⁶ Northern Virginia Injury Prevention Prevention Center, INOVA Regional Trauma Center (2005). *Pedestrian Injury in the Washington, D.C. Metropolitan Region.* Page 37.

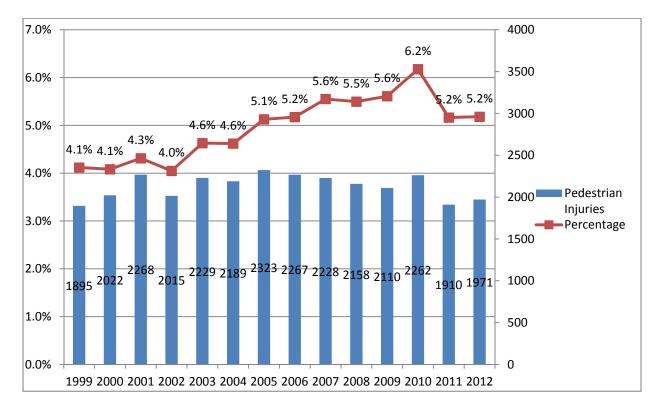
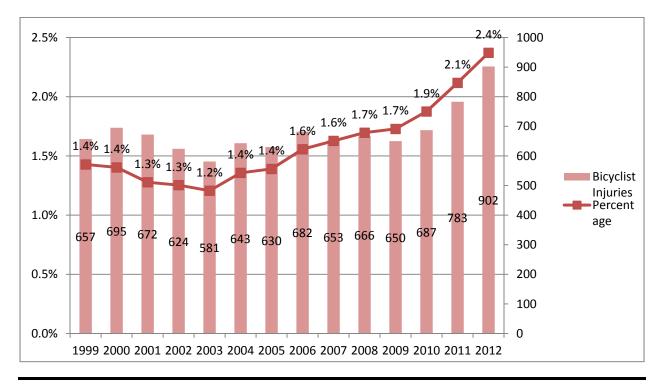


Chart 3-5: Pedestrian Injuries in the Washington Region, 1999-2012

Chart 3-6: Bicyclist Injuries in the Washington Region, 1999-2012

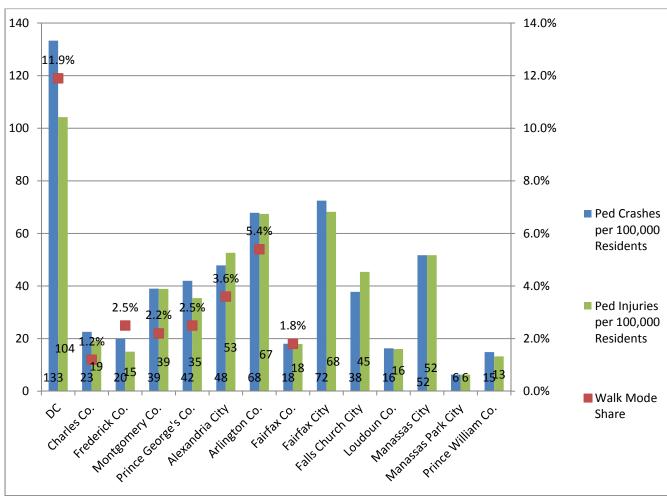


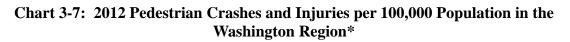
Pedestrian and Bicycle Injuries by Jurisdiction

As seen in Charts 3-7 and 3-8, pedestrian and bicyclist crashes and injuries per 100,000 population generally track mode share as measured by the US census walk to work numbers. The City of Alexandria has few bicyclist injuries but a high bike mode share.

Bike Injuries are Rising Rapidly

And the District of Columbia has a significant number of pedestrian and bicyclist crashes that do not result in injuries.





*Mode share data not available for smaller jurisdictions

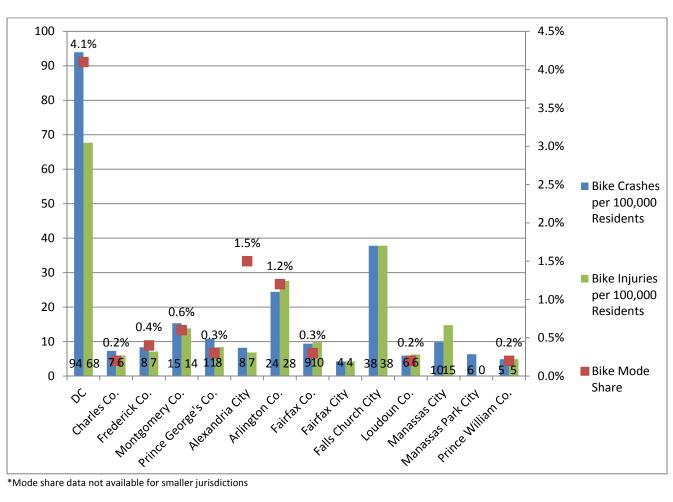


Chart 3-8: 2012 Bicyclist Crashes and Injuries per 100,000 Population in the Washington **Region***

*Mode share data not available for smaller jurisdictions

| Jurisdiction | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | Avg |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| District of Columbia | 718 | 851 | 935 | 779 | 844 | 962 | 998 | 953 | 850 | 776 | 833 | 1074 | 1122 | 1283 | 881 |
| Charles County | 31 | 34 | 60 | 35 | 44 | 53 | 57 | 34 | 50 | 43 | 40 | 49 | 37 | 38 | 44 |
| Frederick County | 61 | 71 | 62 | 72 | 71 | 55 | 55 | 52 | 59 | 67 | 83 | 68 | 40 | 53 | 65 |
| Montgomery County | 482 | 499 | 514 | 477 | 539 | 524 | 532 | 560 | 641 | 632 | 618 | 617 | 401 | 530 | 553 |
| Prince George's County | 444 | 469 | 517 | 486 | 505 | 456 | 510 | 479 | 540 | 558 | 493 | 457 | 375 | 386 | 493 |
| Arlington County | 170 | 185 | 180 | 160 | 154 | 167 | 140 | 178 | 151 | 145 | 137 | 151 | 184 | 210 | 160 |
| City of Alexandria | 107 | 78 | 105 | 90 | 81 | 67 | 104 | 81 | 87 | 75 | 47 | 85 | 68 | 87 | 84 |
| Fairfax County | 376 | 379 | 372 | 368 | 388 | 373 | 374 | 402 | 361 | 402 | 341 | 270 | 270 | 311 | 367 |
| City of Fairfax | 21 | 20 | 22 | 22 | 30 | 22 | 16 | 25 | 18 | 13 | 15 | 14 | 20 | 17 | 20 |
| City of Falls Church | 11 | 14 | 13 | 13 | 6 | 9 | 9 | 5 | 4 | 10 | 8 | 4 | 5 | 11 | 9 |
| Loudoun County | 42 | 36 | 52 | 47 | 52 | 48 | 49 | 52 | 45 | 48 | 40 | 71 | 93 | 75 | 49 |
| City of Manassas | 11 | 13 | 22 | 15 | 19 | 21 | 28 | 20 | 17 | 9 | 21 | 22 | 13 | 27 | 18 |
| City of Manassas Park | 2 | 7 | 8 | 6 | 2 | 3 | 2 | 5 | 3 | 0 | 2 | 0 | 0 | 1 | 3 |
| Prince William County | 76 | 61 | 78 | 69 | 75 | 72 | 79 | 103 | 55 | 46 | 82 | 67 | 65 | 78 | 72 |
| Total | 2552 | 2717 | 2940 | 2639 | 2810 | 2832 | 2953 | 2949 | 2881 | 2824 | 2760 | 2949 | 2693 | 3107 | 2817 |

Table 3-3: Pedestrian and Bicyclist Injuries by Jurisdiction

• Pedestrian and bicyclist injury rates track exposure better than fatalities.

The decline in overall traffic deaths and injuries over the past ten years has slowed.
Pedestrian fatalities have fallen slightly, but have increased as a percentage of the total.
Bicyclist injuries have increased – both in absolute numbers and as a percentage of total. This increase has been driven largely by an increase in bicyclist injuries in the District of

Safety in Numbers

Columbia

In the Washington region the jurisdictions with the most pedestrians are the safest places to walk. The urban core has good pedestrian facilities and low traffic speeds, and drivers expect to see pedestrians and bicyclists. The pedestrian crash rate tends to fall as the number of pedestrians at a location increases. Doubling the number of pedestrians at an intersection already crowded with pedestrians will usually result in little, if any, increase in pedestrian

Pedestrians find some Safety in Numbers

crashes.⁷ Similar effects have been noted for cyclists, with cities having the highest rates of bicycling also having the lowest crash rate per bicycle trip.⁸ High levels of walking and bicycling are associated, in advanced industrialized nations, with very low auto-involved crash rates.⁹ The Netherlands has half the overall traffic fatality rate of the United States, despite a very high walk and bike mode share.

Experience of other nations shows that it is possible to reduce pedestrian and bicycle fatalities while increasing walking and bicycling. On the other hand, it is not possible to eliminate pedestrian fatalities by eliminating pedestrian facilities and discouraging walking; even in our least pedestrian-oriented jurisdictions, pedestrian fatalities account for at least 7% of total traffic fatalities. For the foreseeable future there will be people without cars, and there will always be some trips that will be made on foot.

Numbers alone do not guarantee safety, however. The region's most dangerous areas for walking have high-speed roads and poor pedestrian facilities, together with people who

Conclusions

Bicycle and Pedestrian

DRAFT October 7, 2014

Plan for the National Capital Region

⁷ Raford, Noah. *Space Syntax: An Innovative Pedestrian Volume Modeling Tool for Pedestrian Safety.* Presented at the 2004 TRB Conference, January, 2004. (TRB2004-000977) p. 8.

⁸ Denmark Ministry of Transport (1994) Safety of Cyclists in Urban Areas: Danish Experiences.

⁹ Pucher, John. "Making Walking and Bicycling Safer: Lessons from Europe," *Transportation Quarterly*, Summer 2000.

lack automobiles. Lower vehicle speeds in the urban core are a likely cause of the lower fatality rates there.

Differences in the pedestrian injury rates between the suburban jurisdictions are much smaller than differences in fatality rates.

The District of Columbia has seen rising bicycle crash rates as its rate of bicycling has increased, though the crash rate has risen more slowly than bicycling, indicating that riding is getting safer.

Ethnicity and Hospitalization Rates in the Washington Region

There are large differences in the rates of hospitalization for pedestrian injury by ethnicity. The rate of hospitalization per 100,000 population for pedestrian injuries for Hispanics is nearly three times as high as that for Whites, and twice that for African-Americans.¹⁰

Geographically, the highest rates of hospitalization are found in the area east of the Anacostia river in the District of Columbia, most of Prince George's County inside the beltway, the Columbia Pike corridor in Arlington, the area between Fairfax City and Falls Church in Fairfax County, and Dumfries in Prince William County.¹¹ Hispanics are three times as likely as Whites to be hospitalized for a Pedestrian Injury

Factors contributing to Pedestrian and Bicycle Crashes

Data from the Washington region indicate that drivers are about as likely as pedestrians to be at fault in a crash. Drivers were cited for a violation in about half the crashes.¹² Males aged 25 to 34 are most likely to hit pedestrians, while pedestrians who are hit are most likely to be males aged 25 to 44. Pedestrian crashes are most likely to occur at the evening rush hour, 5-7 p.m., with 6-9 a.m. the second most likely.¹³ Alcohol is a serious problem for both pedestrians and motorists, affecting approximately one third of crashes.

¹⁰ Northern Virginia Injury Prevention Prevention Center, INOVA Regional Trauma Center (2005). *Pedestrian Injury in the Washington, D.C. Metropolitan Region.* Page 35.

¹¹ Ibid, pp. 40-42.

¹² INOVA study, page 23.

¹³ Ibid, page 12.

Legal Status of Bicyclists

State traffic codes allow bicyclists to travel on most roadways with the general rights and responsibilities of drivers of vehicles. Bicyclists must ride in the same direction as traffic, use lights after dark, and yield to pedestrians. Like operators of other slow-moving vehicles, cyclists--when traveling at less than the normal speed of other traffic--should generally ride as far to the right as safely practicable, except when preparing to turn left, passing, avoiding obstructions, mandatory turn lanes or unsafe pavement conditions, or when the travel lane is not wide enough to safely split with a motor vehicle. Cyclists may use the full travel lane if the lane is too narrow to allow them to ride to the right of motor vehicles safely. Cyclists may usually ride on roadway shoulders, paths and sidewalks, except where prohibited. Cyclists have the rights and duties of pedestrians when traveling on paths, sidewalks, and crosswalks, however, they must yield to pedestrians in those locations. Rules relating to bicycles are summarized on page E-4 of the Metropolitan Washington Council of Governments' *Bike to Work Guide*, on the Washington Area Bicyclists are also listed on <u>http://bestreetsmart.net</u>.

| n. | District of Columbia | Maryland | Virginia | | | | | | |
|--------------------------------|---|---|---|--|--|--|--|--|--|
| General | Bicyclists traveling on roadways have all the general rights and duties of drivers of vehicle | | | | | | | | |
| 1 | Ride with the flow of traffic on the right half of the roadway. | Ride with the flow of traffic as far right as practicable and safe. | Ride as close as safely practicable to the right curb or edge of the roadway. | | | | | | |
| Where to Ride & Lane Use | Operate a bicycle in a safe and non-hazardous manner so as not to endanger himself or herself or any other person. | Riding to the right not required when traveling at the speed of traffic, operating on a one-way street, passing, preparing for a left turn, avoiding hazards, avoiding a mandatory turn lane or traveling in a lane too narrow to share. | Full lane use allowed when traveling at the normal speed of traffic, passing, preparing for a turn, avoiding hazards, traveling in a lane too narrow to share and avoiding a mandatory turn lane. | | | | | | |
| Passing Cars | Allowed to pass on left or | Exercise due care when | Same as DC. | | | | | | |

Table 3-4: Selected Bicycle Rules in the Washington Area¹⁵

¹⁴ See <u>www.commuterconnections.org</u>

¹⁵ See <u>http://www.waba.org/resources/laws.php</u>

Bicycle and Pedestrian Plan for the National Capital Region DRAFT October 7, 2014

CHAPTER 3: PEDESTRIAN AND BICYCLE SAFETY

| | right, in the same lane or changing lanes, or pass off road. | passing. | |
|-----------------------------------|---|---|---|
| Cars passing bikes | A person driving a motor vehicle shall exercise due care by leaving a safe distance, but in no case less than 3 feet, when overtaking and passing a bicycle. | The driver of a vehicle overtaking another vehicle, including a bicycle, which is going in the same direction, shall pass to the left of the overtaken vehicle at a safe distanceDrive must not pass any closer than three feet from the bicycle. | Motorists must "pass at a reasonable speed at least two feet to the left of the overtaken bicycle". |
| Dooring | No person shall open any door of a vehicle unless it is safe to do so and can be done without interfering with moving traffic. | Same as DC. | Not mentioned. |
| Bicycling Two Abreast | Allowed when it does | not impede traffic. May not ride | more than two abreast. |
| Mandatory Use of Bike Lanes | Not required. | Use of bike lanes required where available except when passing, preparing for a turn or avoiding hazards. | Not required. |
| | | Yield right of way to pedestrians. | |
| Cycling on Sidewalks | Prohibited in the central business district (bounded by Massachusetts Ave. NW, 2nd St NE-SE, D St SE/SW, 14th St NW, Constitution Ave and 23rd St NW). Allowed where posted in this area, and prohibited where posted outside this area. <u>View Map>></u> | Allowed by local ordinance in unincorporated MoCo, Rockville, Takoma Park, designated sections in PG Co, other towns; prohibited in Gaithersburg, Kensington, Poolesville, Laytonsville, Washington Grove, most of PG Co. When riding on a sidewalk, where such riding is permitted, or a bike path, a bicyclist may ride in a | Allowed except where prohibited by local ordinance, such as Alexandria. Must give audible signal before passing pedestrian. |

CHAPTER 3: PEDESTRIAN AND BICYCLE SAFETY

| | | crosswalk to continue on their route. Motorists are required to yield right of way to a bicyclist operating lawfully in a crosswalk at a signalized intersection. | |
|-------------------------------|---|---|--|
| Audible Warning Devices | Bell or other device required, sirens prohibited. | Bells allowed, sirens and whistles prohibited. | Must give audible signal before passing pedestrians. |
| Helmets | Required for any operator or passenger under 16 years of age. | Same as DC. | Required by local ordinance for any operator or passenger 14 years of age or younger inAlexandria, Arlington Co., Fairfax Co. Falls Church, Vienna and other jurisdictions. |
| Lights at Night | Front white light and rear red reflector (or rear red light) required when dark, may be attached to operator. | Front white light and rear red reflector (or rear red light) required when dark. | Front white light and rear red reflector required when dark; extra rear red light allowed- required on roads 35 mph and up, may be attached to operator |
| Motorist - Dooring | No person shall open a door of a vehicle on the side where traffic is approaching unless it can be done without interfering with moving traffic or pedestrians and with safety to himself or herself and passengers. | A person may not open the door of any motor vehicle with intent to strike, injure, or interfere with any person riding a bicycle, an EPAMD, or a motor scooter. Don't open door into traffic. | |

Legal Status of Pedestrians

Pedestrians are not vehicle operators and are not subject to the same rules. Persons on rollerblades, skateboards, etc. operating on the street are considered pedestrians, but bicyclists are not. Motorists must yield to pedestrians when making turns across adjacent crosswalks. "Jaywalking" is legal in most locations, but pedestrians must yield to motorists if they are crossing at a location other than a crosswalk. Pedestrians may not cross at mid-block if they are between two signal-controlled intersections; they must use the crosswalk. The rules in each state regarding pedestrians are summarized below.

| | DISTRICT OF COLUMBIA | MARYLAND | VIRGINIA ¹⁶ |
|-------------------------|--|--|--|
| Crosswalk Definition | Same as Maryland | Any intersection of two roadways is a legal crosswalk, whether marked or not. Pedestrians have the same rights in marked crosswalks as in unmarked crosswalks | Same as Maryland |
| Blocking a Crosswalk | Pedestrians have the right of way in the sidewalk. Parking on the sidewalk prohibited. | A motorist may not park or stop in a crosswalk | Same as Maryland |
| Sidewalk | Pedestrians have the right of way in the sidewalk | Pedestrians have the right of way in the sidewalk | Pedestrians have the right of way in the sidewalk. |
| Right Turn on Red | Allowed, after coming to a complete stop and yielding right-of-way to pedestrians and other vehicles | When turning right on red after stopping, drivers shall yield the right of way to pedestrians lawfully within the crosswalk | Same as Maryland |
| Turn on Green | A pedestrian who has begun crossing on the walk signal shall be given the right-of-way by the driver of any vehicle to continue to the opposite sidewalk or safety island, whichever is nearest. | Vehicles turning either right or left on a green light must yield to pedestrians in the adjacent crosswalk | Same as Maryland |

Table 3-2: Pedestrian Traffic Law—Motor Vehicles Drivers

¹⁶ <u>http://www.virginiadot.org/programs/bk-default.asp</u>

^{, &}lt;u>www.bikewalkvirginia.org</u>

Bicycle and Pedestrian Plan for the National Capital Region DRAFT October 7, 2014

CHAPTER 3: PEDESTRIAN AND BICYCLE SAFETY

| Red Light | A driver of any vehicle shall STOP and give right-of-way to a pedestrian who has begun crossing on the "Walk" signal to continue to the opposite sidewalk or safety island, whichever is nearest. | Motorist should stop before the crosswalk, or if no crosswalk is striped, before the intersection | Same as Maryland |
|--|--|--|---|
| Stop-Controlled or Uncontrolled Intersection | The driver of a vehicle shall STOP and give right-of-way to a pedestrian crossing the roadway within any marked crosswalk or unmarked crosswalk at an intersection. | Motorist must stop for any pedestrian in the same half of the roadway as the motorist, or who is approaching from the adjacent lane in the other half of the roadway. No motorist may pass another vehicle which has stopped for a pedestrian | The drivers of vehicles entering, crossing, or turning at intersections shall change their course, slow down, or <i>stop if necessary</i> to permit pedestrians to cross such intersections safely. Pedestrians have the right of way unless the speed limit is more than 35 mph, in which case the motorist has the right of way. |
| Overtaking at a crosswalk | Whenever any vehicle is stopped at a marked crosswalk or at an unmarked crosswalk at any intersection to permit a pedestrian to cross the roadway, the driver of any vehicle approaching from the rear shall not overtake and pass the stopped vehicle. | | |

Table 3-3:Pedestrian Traffic Law—Pedestrians

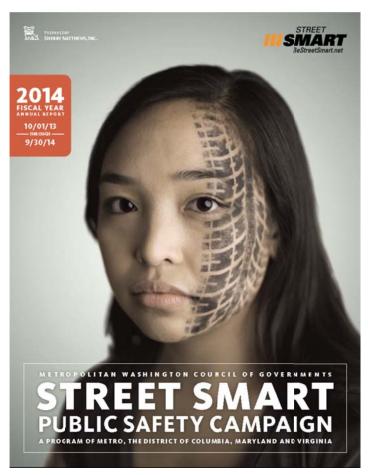
| | DISTRICT OF COLUMBIA | MARYLAND | VIRGINIA | | |
|---------------------------------|---|---|------------------|--|--|
| Green light | A pedestrian facing a green light (other than a turn arrow) may cross the roadway, within a marked or an unmarked crosswalk | A pedestrian facing a green light (other than a turn arrow) may cross the roadway, within a marked or an unmarked crosswalk | | | |
| Red light | Pedestrians shall not enter the roadway on a steady red light. | Pedestrians shall not enter the roadway on a steady red light | Same as Maryland | | |
| Pedestrian Control Signal | Pedestrians shall not enter the roadway when there is a flashing "Don't Walk" or "Wait" indicator | Pedestrians shall not enter the roadway when there is a flashing "Don't Walk" or "Wait" indicator | Same as Maryland | | |
| Stop-controlled or uncontrolled | Essentially the same as Maryland, but with a specific | Pedestrians may cross the roadway within a marked or | | | |

CHAPTER 3: PEDESTRIAN AND BICYCLE SAFETY

| intersection | prohibition on walking suddenly into the path of a vehicle: (a) No pedestrian shall suddenly leave a curb, safety platform, safety zone, loading platform or other designated place of safety and walk or turn into the path of a vehicle which is so close that it is impossible for the driver to yield. | unmarked crosswalk | vehicle traffic if the speed limit is 35 mph or more. Pedestrians may not disregard approaching traffic when entering or crossing an intersection. |
|---|---|--|--|
| Crossing at Other Than Crosswalks | Between adjacent intersections controlled by traffic control signal devices or by police officers, pedestrians shall not cross the roadway at any place except in a crosswalk. Each person crossing the roadway at any point other than within a marked crosswalk, or within an unmarked crosswalk at an intersection, shall yield the right-of-way to all vehicles upon the roadway. | (a) If a pedestrian crosses a roadway at any point other than in a marked crosswalk or in an unmarked crosswalk or in an unmarked crosswalk at an inter section, the pedestrian shall yield the right-of-way to any vehicle. (b) If a pedestrian crosses a roadway at a point where a pedestrian tunnel or overhead pedestrian crossing is provided, the pedestrian shall yield right of way to any vehicle. (c) Between adjacent intersections at which a traffic control signal is in operation, a pedestrian may cross a roadway only in a marked crosswalk. (d) A pedestrian may not cross a roadway intersection diagonally. | "Where intersections contain no marked crosswalks, pedestrians shall not be guilty of negligence as a matter of law for crossing at any such intersection or between intersections when crossing by the most direct route." Pedestrians may not enter the roadway at any point where drivers view of them is blocked by a parked vehicle or other obstruction. |
| Pedestrians on Roadways | Where sidewalks are provided, it shall be unlawful for any pedestrian to walk along and upon an adjacent roadway. | (a) A pedestrian may not walk on a roadway where sidewalks are provided. (b) Where no sidewalk is provided, a pedestrian may walk only on the left side of the roadway, facing traffic. | Same as Maryland. |

Pedestrian and Bicyclist Education and Enforcement: The "Street Smart" Campaign

Pedestrian and bicycle safety efforts generally fall into three broad categories of actions,
the three E's: Engineering, Education, and Enforcement. Engineering deals with the
design of safer roads, streets, and pedestrian and bicycle
facilities. Education includes both classroom-based training
and behavioral modification campaigns. Enforcement



consists of enforcement of the traffic laws with respect to pedestrians and bicyclists. The regional pedestrian and bicycle safety campaign, Street Smart, deals primarily with education through mass media.

Street Smart was created in 2002 by the region's governments in response to an ongoing regional pedestrian and bicycle safety problem. Since the region is a single media market, a unified regional campaign is the most cost-effective approach. The program is supported by federal funds made available through state governments, from WMATA, and is administered by the National Capital Region Transportation Planning Board.

The Street Smart campaign is a twiceyearly, month-long blitz of radio, transit, gas station, and internet advertising, supported by public relations activities and by concurrent law enforcement. The goal of the

campaign is to change driver and pedestrian behavior in order to reduce deaths and injuries. Motorists are urged to "Slow Down and Watch for Pedestrian", bicyclists to "Obey Signs and Signals", pedestrians to "Use Crosswalks. Wait for the Walk Signal" and transit riders to "Don't Run for the Bus". All materials, including radio spots, are translated into Spanish. Since 2007 campaigns have been held twice per year, in the fall and in the spring. Campaign materials can be found on the web site, http://bestreetsmart.net.

Efforts to enforce pedestrian laws are also stepped up in conjunction with the "Street Smart" pedestrian and bicycle safety campaign. Law enforcement has helped reinforce

CHAPTER 3: PEDESTRIAN AND BICYCLE SAFETY

the campaign message, just as it has been used effectively as part of anti-drunk driving and seatbelt advertising campaigns. Public awareness of these heightened enforcement activities has been a key aspect of this campaign. Research shows that fear of fines and legal consequences is more effective at changing behavior than fear of death or injury. Also the TV and press media often covers enforcement stings, increasing the public's perception that they are likely to be ticketed for breaking the law.

The Street Smart campaign sponsors annual seminars on Figure 1-3: Fall 2013 Press Event

best practices in pedestrian enforcement for law enforcement officers. Participating agencies report the number of warnings and citations issued.

Evaluation

Pre and post-campaign surveys show that the public is hearing and remembering the Street Smart messages. 50% of pedestrians and 27% of drivers were aware of at least once of the campaign messages. High pedestrian awareness is likely due to the large amount of free PSA placement on transit properties which the campaign received. Overall PSA value was nearly twice the paid media budget.

Outlook

Pedestrian and bicycle safety has drawn increasing attention in the Washington region and at all levels of government. To build walkable communities, walking and bicycling need to be made safer. Improved occupant



protection and vehicle design have saved the lives of many motorists, but we have not made comparable progress for people outside motor vehicles. As the population of carless immigrants and poor people grows in suburban areas that were designed for driving, pedestrian and bicyclist safety will remain a challenge.

Bicycling mode share has increased sharply in the last four years, most notably in the District of Columbia, and that increase has been associated with increased numbers of injuries.

The Street Smart campaign is yielding positive results, but it is meant to complement, not replace, local three "E" safety efforts. States, cities, and counties need to continue engineering and building safer streets, enforcing the pedestrian safety laws, and educating motorists and pedestrians. We know that the streets can be made safe for pedestrians and

bicyclists, because some of our jurisdictions have already done it. Agencies that make pedestrian safety a priority are getting results.

Chapter 4

Existing Facilities for Bicyclists and Pedestrians

Draft October 7, 2014

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Overview

The Washington region has excellent long-distance separated facilities for bicyclists and pedestrians, and an urban core and certain regional activity centers that have good pedestrian and bicycle facilities. The Washington region is at the forefront of innovation in bicycle facility design. On the other hand, many activity centers, not originally



designed with pedestrians in mind, have grown dense enough to generate significant pedestrian traffic, and face challenges in terms of providing safe facilities and crossing locations for pedestrians and bicyclists. Other parts of the region have developed at low densities, with separated land uses and indirect routes, which increase pedestrian and bicycle travel time. Pedestrian bicycle and accommodations are not always provided.¹

Figure 1: Informal foot path

Informal Foot-Paths Show where People Walk Bicycle connections with transit are generally good, with bicycle parking, bus bicycle racks, and bikes permitted on Metrorail at most hours. Walking is the primary mode of access to transit. Conditions for pedestrian access are excellent at many rail stations, though at some rail stations, originally designed primarily with auto and transit access in mind, pedestrian access could be improved. Bus stops in places

originally designed primarily for automobiles often have access and safety problems.

Pedestrians are found throughout the region, and pedestrian traffic is increasingly found in places that were not built for it. This section highlights some of the region's successes in providing for bicycling and walking. These successes can serve as examples of what the region needs to serve its pedestrians and bicyclists.

¹ Photo of Informal Path, Southern Avenue, Prince George's County, MD: COG/TPB, Michael Farrell

Draft October 7, 2014

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Shared-Use Paths²



The Washington region is renowned for the quality and extent of its major shared-use paths. Shared-use paths are typically located in their own right-of-way, such as a canal, railway, or stream valley, or in the right-of-way of a limited-access highway or parkway, such as the George Washington Memorial Parkway. Shared-use paths are eight to twelve feet in width. The region has approximately 200 miles of major shared-use paths, either paved or level packed gravel

Figure 2: Mount Vernon Trail

surface suitable for road bikes. Well-

known trails include the W&OD and Mount Vernon Trails in Virginia, and the C&O Canal, Capital Crescent, and Rock Creek Trails connecting the District of Columbia and Maryland. Many of the region's shared-use paths go through heavily populated areas, connect major employment centers, and get significant commuter traffic. More

information on trails in the Washington region can be found at http://www.commuterconnections.org/comm uting-resources/bicycling-resources.

The region continues to build new trails along stream valleys and in conjunction with major highway projects, but the remaining inventory of disused rail lines, which often provide the best opportunities for shared-use paths, is fairly small.



Side-Paths³

Figure 3: Side Path on Fairfax County Parkway

Side-paths differ from shared-use paths in that they do not have their own right of way, but are closely adjacent to a non-limited access roadway and thus subject to more

² Photo of Mt. Vernon Trail, Arlington, VA: COG/TPB, Michael Farrell

³ Photo of Sidepath on the Fairfax County Parkway: Photographer Unknown

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Draft October 7, 2014

frequent conflict with driveways, side streets, and turning traffic. Side-paths differ from sidewalks in that they must be at least eight feet wide and are designed to meet the needs of bicyclists.

The Washington region has approximately 300 miles of side-paths, and there are plans to expand that mileage considerably.

Side-paths meet the need for a separated pedestrian facility and provide separation from traffic that is valued by child and slow-moving cyclists, especially in places where the road has speeds of 40 mph or more and high traffic volumes. However, the AASHTO (American Association of State Highway and Transportation Officials) <u>Guide for the Development of Bicycle Facilities</u> offers a number of cautions regarding the use of side-paths or wide sidewalks for bicycles. Frequent driveways, especially with poor sightlines, are hazardous to bicyclists on side-paths. Side-paths remove bicyclists from the motorists' line of sight and allow travel against the flow of traffic, so they may increase the potential for conflicts with motor vehicles at intersections. Since the facility is shared with pedestrians, there is also a potential for cyclist-pedestrian crashes. Side-paths are most suitable where driveways and intersections are few and sight-lines are good. Intersection crossings should be designed carefully, with a protected signal phase providing the best level of protection.

Bicycle Lanes

Bicycle lanes are marked lanes in the public right-of-way that are by law exclusively or

preferentially for use by bicyclists. Bike lanes are oneway, with a bicycle symbol or arrow indicating the correct direction of travel. The minimum width is 4 feet for roadways with no curb or gutter; next to a curb or parked cars 5 feet. Six feet is preferred where there is a curb or onstreet parking. Bike lanes are provided on both sides of the street, except for one-way streets, and allow travel only in the same direction as adjacent motor vehicle traffic. On-street bicycle lanes are generally much less expensive than separated paths. Bike lanes

Figure 4: Green Bike Lane



CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Draft October 7, 2014

decrease wrong-way riding, define the road space that cyclists are expected to use, increase cyclists' comfort level, and call attention to the presence of cyclists on the solution to the presence of cyclists on the roadway. Bicycle lanes are not generally considered safe or

Figure 5: Bike Lane



adequate for pedestrians, though in rural areas without sidewalks the roadway shoulder serves as both a bicycle lane and as a pedestrian facility.⁴

Bike lanes may be colored green for conspicuity.

The number of bicycle lanes is growing rapidly. The District of Columbia currently has 60 miles of bicycle lanes, up from 19 miles in 2006, and three in 1995, Arlington County has 24 miles, up from three in 1995, and Montgomery County has 17 miles.⁵ The regional

mileage of bicycle lanes can be expected to expand significantly in the future as the District of Columbia, Arlington County, and Montgomery County all have ambitious plans to build more. Google maps shows bicycle paths, lanes, and on-road routes.

Buffered Bicycle Lanes

A buffered bicycle lane is a bicycle lane with a spatial buffer to increase the distance between the bicycle travel lane and the automobile travel lane or the parking zone. The buffer zone is usually marked with striped paint. Buffered bike lanes are sometimes used where there is higher than normal

speeds, traffic volumes or truck volumes, or high-turnover parking. It allows additional



Figure 4: Buffered Bike Lane

space to be provided for bicyclists without creating something that looks like a travel lane to motorists. The example above is from Arlington.

⁴ Bike lane photo: <u>www.pedbikeimages.org</u> / Dan Burden

⁵ Countywide Bikeways Functional Master Plan, March 2005. Maryland-National Capital Park and Planning Commission. Page 12.

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Draft October 7, 2014

Protected Bike Lanes (Cycle Track)

A protected bike lane or cycle track is a bicycle-only facility that provides physical separation within the right of way from vehicle travel lanes. Protected lanes can be either one-way or two-way, on one or both sides of a street, and are separated from vehicles by wands, bollards, curbs/medians, parked cars, or a combination of these elements. Protected bike lanes can either incorporate bicycle-only signal phases at intersections (for 100% separation) or utilize "mixing zones" to merge bicycle and motor vehicle

Figure 5: 15th Street NW Protected Lane



traffic.⁶ The District of Columbia Department of Transportation has been an innovator in the development of protected bike lanes in the United States.

Protected bike lanes can pose a design due to the potential conflicts with turning vehicles, and lack of visibility of cyclists to turning vehicles Figure 6: 1st Street NE Protected Lane

when separated by parked cars.

They have been used in numerous cities in Europe with mixed results.⁷ Installation of protected bike lanes was found to result in an

The 15th Street Cycle Track has increased Ridership by more than 200% increase in collisions at intersections in Copenhagen, which more than offset a decrease motoristin overtaking collisions and collisions with parked cars, for a net increase in the number of collisions of 9%. However, the same study showed that installing

protected bike lanes increased bicycle (and moped) ridership 18 to 20 percent.⁸ Installing bike lanes resulted in a 5 to 7% increase in ridership, and a 5% increase in crashes. For both protected bike



⁶ Nactional Association of City Transportation Officials. <u>http://www.nacto.org/cycletracks.html</u>

 ⁷ Jensen, Søren Underlien, Claus Rosenkilde and Niels Jensen. Road safety and perceived risk of cycle facilities in Copenhagen. Available at <u>http://www.ecf.com/files/2/12/16/070503_Cycle_Tracks_Copenhagen.pdf</u>
 ⁸ Cycle Tracks: Lessons Learned. February 2009. Alta Planning and Design. Page 1.

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Figure 7: Protected Lane at Union Station

Draft October 7, 2014

lanes and bike lanes the number of riders can be expected to increase more than the number of crashes.

Riders perceive protected bike lanes as safer,

and it should be noted that motorist-overtaking collisions, while relatively rare, account for a disproportionate number of seri ous and fatal injuries.

Following New York City, and Cambridge, MA, the District of Columbia is actively installing protected bike lane, towards an eventual planned network of 72 miles.

The first segment of protected bike lane in the District of Columbia was installed in 2009 on 15th Street NW. In



terms of ridership, the 15^{th} Street Protected bike lane, which has been in operation the longest, has been a success. After the two-way protected bike lane was installed, there was a <u>205</u> percent increase in bicycle volumes during the p.m. peak hour.⁹

More recent projects include one-way couplet of protected bike lanes on L Street and M Street NW (not yet complete) in Protected Bike Lanes Attract Users of All Ages and Abilities

downtown, and the 1st Street NE protected bike lane, which connects the Metropolitan Branch Trail to Union Station.

To help prevent turning conflicts, protected bike lanes may be equipped with separate signals for bicycles.

⁹ Bicycle Facility Evaluation, Final Report. April, 2012, p. 12.

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Draft October 7, 2014

Dual Facilities

In recognition of the fact that fast-moving cyclists may be better off with an on-road facility, Montgomery County is planning many of its bicycle routes as dual facilities, with both an on-road bike lane and a side-path for pedestrians and slow bicyclists. VDOT's *Northern Virginia Bikeway and Regional Trail Study* recommends that both on- and offroad accommodation be provided.¹⁰ Under the new routine accommodation policy, VDOT is to provide adequate facilities for pedestrians and bicyclists even if not called for in the local plan.

Where bicycle and pedestrian volume warrant it, and right of way permits, multi-use paths may be split into parallel pedestrian and bicycle paths. This separation allows cyclists and rollerbladers to maintain speed without

risk to pedestrians. The Washington & Old Dominion Trail

in Northern Virginia includes several sections with gravel pedestrian paths that parallel the paved shared-use path.

Signed Bicycle Routes

The region has hundreds of miles of signed bicycle routes. Signed routes have the advantage of being inexpensive and informative for cyclists. A signed route has not necessarily had any bicycle-related improvements apart from signing. However, bicycle-friendly features such as paved shoulders, a wide curb lane, or low traffic volumes or speeds *may* be present. Bicycle route signs often include information on distances to destinations.

Long-Distance Bicycle Routes

Several notable long-distance routes promoted by national-level organizations pass through the Washington region. These include the East Coast Greenway, Bicycle Route 1, and the



Figure 9: East Coast Greenway in DC

American Discovery Trail. The East Coast Greenway Alliance is promoting what will



Figure 8: DC Bike Route Sign

¹⁰ Northern Virginia Regional Bikeway and Trail Network Study. November, 2003. Virginia Department of Transporation, Northern District Office. Page 19.

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Draft October 7, 2014

eventually be a mostly off-road path connecting all the major cities of the East Coast. Currently 20% open for public use, it will span 2,600 miles from Calais, Maine to Key West, Florida. With the exception of the National Capital Mall, the proposed route through the Washington region is not yet signed. Bicycle Route 1 is part of a national network of low-traffic road routes promoted by the Adventure Cycling Association. The American Discovery Trail is a coast-to-coast, recreational, non-motorized trail, which follows the C&O Canal Towpath and the Anacostia River Tributary Trails. All organizations promoting long-distance routes rely on local agencies and organizations to realize their vision.

Exclusive Bus/Bicycle Lanes

Exclusive bus lanes are sometimes used on streets with heavy bus traffic. Bicycles are sometimes permitted to use those lanes. Bus/Bike Lanes can be found in the District of Columbia. Conflicts can occur due to differences in speed between buses and bicyclists.

Bridges



The Woodrow Wilson Bridge trail, completed in 2009, allows cyclists to cross the Potomac River on the capital beltway at Alexandria. This multi-use path allows riders on the Mt. Vernon Trail to access the National Harborplace development in Prince George's County without going on street. Connections are also provided to an on-street network of bicycle routes in Prince George's County.

The 14th Street Bridge, the Memorial Bridge, the Theodore Roosevelt Bridge, the Key Bridge, and the Chain Bridge all have bicycle and pedestrian facilities. In the north, cyclists

Figure 7: Woodrow Wilson Bridge Trail and pedestrians may use the ferry at White's Ferry, which connects Montgomery County and L oudoun County. Cyclists may use the US 15 bridge at Point of Rocks and the MD 17 bridge at Brunswick to get across Frederick County and Loudoun County, though they have no separated facilities.

With the completion of the local traffic 11th Street Bridge in 2013, bicyclists and pedestrian now have a first rate multi-use path connection from Anacostia to the Navy Yard area of Southeast DC.

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Draft October 7, 2014

The District of Columbia is in the process of

of Figure 10: 11th Street Bridge

remaining upgrading the Anacostia River separated bicycle and pedestrian river crossings as these aging bridges are replaced and rebuilt.

On-Line Bicycle and Pedestrian Routing

The last few years have seen a flowering of on-line resources that enable cyclists and



pedestrians to locate facilities and plan their routes. Google Maps offers the most familiar interface, but other options include bbbike.org, and <u>RidetheCity</u>, which allow cyclists to point and click their proposed origins and destinations, and choose various routing alternatives.

Google Maps also provides walking and bicycling directions. The bicycling directions show paths, bike lanes, and on-street bike routes, but offer no options for selecting more direct or safer routes.

Accessed via smart phone, these and other on-line applications can replace paper maps for most purposes.

Bicycles and Public Transit

The region has made progress integrating bicycling and public transit, with secure bike parking available at most rail stations, bicycles permitted on Metrorail at most times, and most of the buses in the region now equipped with bicycle racks. Specific agency policies and facilities are described below.

Metrorail Guidelines

- Bicycles are permitted on Metrorail (limited to two bicycles per car) weekdays except 7-10 a.m. and 4-7 p.m. Bicycles are permitted all day Saturday and Sunday as well as most holidays (limited to four bicycles per car). Bicycles are not permitted on Metrorail on July 4th or other special events or holidays when large crowds use the system.
- Folding bikes are permitted on Metrorail during rush hours if folded. No case is required.

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Draft October 7, 2014

- No tricycles, training wheels, tandem bicycles or recumbent bicycles are allowed on Metrorail.
- For other Bike on Rail guidelines see: <u>http://www.wmata.com/getting_around/bike_ride/bikes_rail.cfm</u>

Metrorail Facilities

- <u>Bike & Ride</u> is a secure, enclosed bicycle parking facility with card access and space for over 100 bikes, on the first floor of the Metro garage at College Park-U of MD station. Bike & Ride is more flexible, secure, and space efficient than racks or individual lockers.
- For the most up to date information on bicycle parking at Metrorail, go to the <u>WMATA web site</u> and click on the stations tab. You can see which stations have bike racks and lockers. Or go to <u>http://www.wmata.com/getting_around/bike_ride/</u> for a list of stations with bike racks and lockers, and information on how to rent a bike locker.



Figure 11: Bike & Ride Entrance (WMATA photo)

Systemwide, WMATA maintains about 1,280 single bike lockers and about 1,700 bike racks. Racks are first come, first served. At many downtown stations, local jurisdictions provide additional bike parking near stations. WMATA continues to add and upgrade racks.

Figure 12: New Bike Racks (WMATA photo)



Draft October 7, 2014

Metrobus

- All Metrobuses have racks on the front that carry **up to** two bicycles. No permit is required. Instructions for how to use bus bike racks is available at <u>http://www.wmata.com/getting_around/bike_ride/bikes_bus.cfm</u>
- Metro has adopted guidelines for the design and placement of bus stops to improve their safety, comfort, accessibility, and efficiency.

Park and Ride

Of the 175 park and ride lots in the Washington DC-MD-VA Metropolitan Statistical Area, about 50 have bike lockers or racks. <u>Commuter Connections</u> lists information on Park and Ride lots.

Commuter Rail

Collapsible bicycles are permitted on all <u>VRE trains</u>. Full size bicycles will only be allowed on the last three northbound, the mid-day, and the last three southbound trains on each line.

Collapsible bicycles are permitted on <u>MARC</u>, but not full-size bicycles. No bag or case is required.

Pedestrian Access to Transit

82% of Metrobus passengers walk to transit, and 62% of all Metrorail trips start with the passenger walking to the rail station. However, the a.m. peak walk mode of access, which is the best measure of how people originally get into the system, is 37%.

The quality of pedestrian access to Metrorail and Metrobus is uneven. Many suburban rail stations were built with an emphasis on automobile and bus access. Bus stops are often placed in areas with no sidewalks or available crosswalks. Inventorying conditions and making recommendations for specific locations is beyond the scope of this plan, but there have been a number of efforts to do so, such as MTA's Access 2000 Study, COG/TPB's Walkable Communities Workshops, and efforts in Fairfax County and Montgomery County to improve bus stop safety.

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Draft October 7, 2014

<u>WMATA</u> has developed a set of *Guidelines for Station Site and Access Planning*, and WMATA has plans to upgrade pedestrian access at Metrorail stations Figure 13: Bike Parking Demand is Growing

and carry out station-area development. WMATA also finished an inventory of conditions at all its bus stops in 2008. The inventory included information on the presence of bus shelters, sidewalks, and location at а controlled intersection.¹¹ Suburban bus stops often lack a nearby controlled intersection for safe street crossing, and may also be missing sidewalks. A study on bicycle and pedestrian access to Metrorail provides details on pedestrian access.



Bike Parking

The District of Columbia, Arlington, Alexandria, and other jurisdictions provide bike racks on public property for short-term bicycle parking. They also <u>require</u> secure long-term bicycle parking to be provided as part of new development.

Bike Corrals

As demand grows in congested areas, DC has added bike corrals, which are bike racks placed in the street, and protected by flexi-wands tire stops. Twelve bicycles can be parked in the space required to park one automobile. And because bicycles do not block

Figure 14: Corner Bike Corral



motorists' sight lines, they can be placed near the intersection where parking is not permitted, result in no loss of car parking.

Tire stops are necessary to prevent cars from backing into the racks at some locations.

¹¹ WMATA Bus Stop Inventory Project. Kristin Haldeman, Presentation to TPB Access for All Subcommittee, November 2008.

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Draft October 7, 2014

• DC Bike Station

In response to demand for secure bicycle parking at Union Station, in 2009 the District of Columbia opened a Bike Station. The facility houses over 100 bicycles in 1,600 sq. ft. of free-standing ultra-modern glass and steel design. It is staffed 66 hours per week and available to members 24/7 for self-service parking. In addition to secure bike parking, the



Figure 15: DC Bike Station at Union Station Photo Credit: COG/TPB



Figure 16: DC Bike Station Interior

facility also provides a changing room, lockers, bike rental, bike repair, bike rental, and retail sales. The Bikestation location at Union Station allows commuters to take public transportation to the station, pick up their bicycles and go to work, shopping or entertainment.

The DC bike station is a unique structure designed for a particular site. It required an unusual degree of architectural review due to its location on the National Mall. Far less expensive, modular self-service bike parking structures are available.

Capital Bikeshare

Bike sharing is self-service public bicycle rental. It is similar to a car-sharing system, such as ZipCar, where members pay a fee and have access to any available bike throughout the Capital Bikeshare has over 2500 bicycles and 300 stations

regional system. Unlike earlier "public bicycle" or "yellow bike" programs, which failed due to lack of means of preventing theft, modern bicycle sharing links rentals to a user's

CHAPTER 4: EXISTING FACILITIES FOR BICYLING AND WALKING

Draft October 7, 2014

credit card, which can be charged if the bicycle is not returned. Bike sharing became

common and popular first in Europe and then the United States, with programs in <u>dozens of</u> <u>cities</u>.

Since it opened in 2010, the regional bike sharing program, <u>Capital Bikeshare</u> has grown to include 2500 bicycles at over 300 stations across Washington, D.C., Arlington and Alexandria, VA and Montgomery County, MD. Capital Bikeshare is one of the largest and most successful bike share systems in the United States. Its' solar-powered semimobile bike stations require no utility hook-up, which expedites installation. It operates yearround, with winter ridership a little more than one third the level of the warm weather months. It attracts many tourists as well as residents.



Figure 17: Capital Bikeshare Station

Outlook

Facilities for bicycling and walking in the

Washington region are likely to improve significantly in the future. Federal, regional, state and local policies and transit agency initiatives all call for better and more complete facilities. Bicycle lanes, protected bike lanes, and dual facilities for pedestrians and bicyclists will become more common, and bike sharing will continue to expand in the urban core and beyond.

Chapter 5 Goals and Indicators

Introduction

As seen in Chapter One, both the Vision of the Transportation Planning Board (1998) and the Region Forward (2010) vision plan of the Council of Governments encourage walking and bicycling. *Region Forward*, a vision for the National Capital region in 2050, was adopted in January 2010. *Region Forward* builds on the TPB *Vision*, calling for more rapid implementation of the regional bicycle and pedestrian plan, increased walking and bicycling, and reduced pedestrian and bicyclist fatalities. The goals of *Region Forward* are broader than those of the TPB *Vision*, encompassing areas such as public safety, land use, economic development, housing, and the environment. New development is to be concentrated in walkable, mixed-use activity centers.

Goals

Region Forward 2050 includes a set of goals, and targets and indicators that will help measure whether those goals are being met. Many of those goals relate to walking and bicycling:

Transportation

- 1. A broad range of public and private transportation choices for our region which maximizes accessibility and affordability to everyone and **minimizes reliance upon single occupancy use of the automobile.**
- 2. A transportation system that maximizes community connectivity and walkability, and minimizes ecological harm to the region and the world beyond.

Land Use

- 1. Enhancement of established neighborhoods of differing densities with **compact**, **walkable infill development**, rehabilitation and retention of historic sites and districts, and preservation of open space, farmland and environmental resource land in rural areas.
- 2. **Transit-oriented and mixed-use communities** emerging in regional activity centers that **will capture new employment and household growth**.

Energy & Environment

- 1. Significant **decrease in greenhouse gas emissions**, with substantial reductions in the built environment and transportation sector.
- 2. Protect and enhance region's environmental resources by meeting and exceeding standards for our air, water, and land.

Public Safety & Health

- 1. Safe communities for residents and visitors.
- 2. ...protect the public health, safety, welfare, and preserve the lives, property, and economic well-being of the region and its residents.
- 3. Healthy communities with ...a focus on wellness and prevention

Targets and Indicators

In order to measure progress towards the broad transportation goals, *Region Forward* recommends that certain indicators be tracked. Table 5-1 below shows some of the targets and primary indicators from *Region Forward* that relate to walking and bicycling as well as corresponding, additional indicators which the bicycle and pedestrian subcommittee believes will give a more complete and timely picture of the region's progress. A (?) designates an indicator for which a practical data source has not yet been identified.

Table 5-1:

Region Forward 2050 Targets & Indicators

Bicycle and Pedestrian Plan

for the National Capital Region

Suggested Supporting Indicators

| Region Forward Targets | Primary Indicators | Data Source/Freq. | Baseline | Suggested Supporting Indicators | Data Sources/Freq. | Baseline |
|--|--|---|--|---|--|---|
| Increase the share of walk, bike, and transit trips. | Mode split – Percent of Walk, Bike and Transit Trips | 2007/2008 household travel survey/10 years | Bike: 0.5% Walk: 8.5% Transit: 6.1% Auto: 81.6% | Walk and bike commute mode share Pedestrian and bicyclist counts Pedestrian Access to Transit Mode Share *AM peak access Bike Access to Transit mode share *AM peak access Bike share trips Number of bike share trips per day & per bike share bike. % Female cyclists Adopt complete streets policies - Jurisdictions with complete streets policies | US Census – American Community Survey (ACS) five year rolling average/ Annual DC, Arlington counts/annual WMATA rail passenger survey/5 years Regional Bike Share trip numbers/annual | ACS available in 2010 DC Average 2009 Peak hour count = 69 female bicyclists = 19% 0.55% bicycle mode of access to Metro in 2007 62.12% walk mode of access to Metro in 2007 33.3% am peak walk mode, 0.7% bike mode |
| Reduce VMT per capita | VMT per capita | 2008 CLRP/Annual | Vehicle Miles Traveled per capita = 22.94 | Share of VMT reduction attributable to increase in walking and bicycling | Estimate from mode shift to walking and bicycling/Annual | ACS 2010 |

CHAPTER 5. GOALS & INDICATORS

| Increase the rate of construction of bicycle and pedestrian facilities from the TPB plan. | Number of bicycle and pedestrian projects from the CLRP | Number of bicycle and pedestrian projects in the CLRP | CLRP/Annual | Pedestrian and Bicycle Infrastructure Construction Centerline mileage of bike lane built Mileage of Side Path Built Mileage of Multiuse path built Bicycle and pedestrian bridges and underpasses built Public bicycle parking Staffed bike stations Number of Streetscaping projects completed/Number of pedestrian intersection improvement projects completed Access to Transit Bike share stations and bike share bikes at rail stations and transit hubs Bike share stations and bike share bikes within 3 miles of a transit hub Bike parking - Rack spaces, lockers Bike Sharing Number of bike sharing stations | Bicycle and Pedestrian Regional Project Database/ Annual WMATA rail passenger survey/5 years WMATA web site – Bike 'N Ride WMATA Bus Stop Inventory/? Capital Bikeshare | 9 miles bike lane/year 13 miles shared use path/year 5 bridges/tunnels 1 staffed bike station 9 streetscaping projects 16 pedestrian intersection projects 77 Metro Stations have racks and/or lockers. 1,280 single bike lockers and about 1,600 bike racks - with capacity for about 3,150 bikes Zero bike cage spaces, bike parking structure spaces 10 bike sharing stations 100 bike sharing bikes |
|--|---|---|--|--|---|--|
| Targets | Primary Indicators | Data Source/Freq. | Baseline | Suggested Supporting Indicators | Data Sources/Freq. | Baseline |
| Reduce pedestrian and bicyclist fatalities and | Pedestrian and Bicyclist Injuries and | Virginia DMV, DDOT, and Maryland Office of | 2004-2008: 84 pedestrian deaths 7 bicyclist | Education Number of school children trained in safe walking and bicycling (?) Recognition of key safety | Safe Routes to School Program/Annua l | • 3500 children trained in DC in 2008, 2700 in Rockville. |

Bicycle and Pedestrian PlanCHAPTER 5. GOALS & INDICATORSfor the National Capital Region

| 5 | Fatalities | Highway Safety/Annual | deaths 2007: 1962 pedestrian injuries 653 bicyclist injuries Baseline | messages by the general public Number of Bike to Work day participants Enforcement: Number of pedestrian- related and bicycle-related citations and warnings issued as part of the Street Smart campaign. Speeding Speeding, school zone Reckless driving Passing stopped school bus Failure to yield to pedestrian or bicyclist Cross against the signal (pedestrian) Walk into the path of motor vehicle outside marked or unmarked crosswalk. Ignore traffic signal (bicyclist) Wrong way riding Ride on sidewalk where prohibited | Street Smart Annual Report Bike to Work Day Annual Report Street Smart Enforcement Reports/annual | Virginia SRTS does not tally such numbers. • 8500 Bike to Work Day participants in 2010 • 30,221 ped- related citations • 7,804 warnings |
|---|------------|--------------------------|---|--|---|--|
| 0 | Indicators | Source/Freq. | Dubtint | Suggested materiols | Duta Sources/Freq. | Dubenne |

Chapter 6

Recommended Practices

Bicycle and Pedestrian PlanCHAPTER 6: RECOMMENDEDfor the National Capital RegionPRACTICESDraft October 7, 2014PRACTICES

The *TPB* Vision, *Region Forward*, and *Regional Transportation Priorities* plans call for a transportation system that allows convenient and safe bicycle and pedestrian access, with dynamic regional activity centers and an urban core that contain a mix of jobs, housing and services in a walkable environment. In order to achieve these goals, the Bicycle and Pedestrian Subcommittee has developed the following set of recommended best practices.

A. Incorporate bicycle and pedestrian elements in all jurisdictional planning and design policies. Adopt "Complete Streets" policies.

- 1. Include bicycling and walking, including provisions for persons with disabilities, in all stages of the transportation and land use planning process, from initial concept through implementation.¹
- 2. In particular, consistent with federal policy and the National Capital Region Transportation Planning Board's <u>Complete Streets</u> policy,



every jurisdiction and agency should Figure 1: Missing sidewalk near Ft. Totten Metro adopt a Complete Streets policy that

includes elements that the TPB believes reflect current best practices.

Under Complete Streets policies pedestrians and bicyclists will be accommodated as part of all transportation projects, with a few limited and well-defined exceptions. A Complete Streets policy would typically not apply:

- To a new transportation facility construction or modification project for which, as of the effective date of the adoption of the policy, at least 30 percent of the design phase is completed.
- To a transportation facility which prohibits, by law, use of the facility by specified users, in which case a greater effort should be made to accommodate those specified users elsewhere in the travel corridor.

"A complete street safely and adequately accommodates motorized and non-motorized users, including pedestrians, bicyclists, motorists, freight vehicles, emergency vehicles, and transit riders of all ages and abilities, in a manner appropriate to the function and context of the facility."

¹ Ft. Totten, DC Photo: COG/TPB, Michael Farrell

- When the cost to the exempted project in achieving compliance with the applicable complete streets policy would be excessively disproportionate (as per FHWA guidance), as compared to the need or probable use of a particular complete street.
- When the existing and planned population and employment densities or level of transit service around a particular roadway are so low that there is a documented absence of a need (as per FHWA guidance) to implement the applicable complete streets policy.
 "VDOT will initiate all highway construction projects with the"
- To passenger and freight rail projects, which shall not be required to accommodate other motorized users in the railway right of way, although safe and adequate rail crossings for motorized and non-motorized users should be provided.

"VDOT will initiate all highway construction projects with the presumption that the projects shall accommodate bicycling and walking "

• To transportation projects which do not provide for direct use by the public, such as maintenance facilities, drainage and stormwater management facilities, education and training, transportation security projects, beautification, and equipment purchase or rehabilitation.

Agencies should carry out periodic **audits to monitor compliance** with a Complete Streets policy once it is adopted.

An effective complete streets policy is critical, since retrofitting pedestrian and bicycle accommodations is far more expensive than designing them in from the beginning. Policies which urge agencies to "consider" or "encourage" the provision of pedestrian and bicycle facilities often do not provide clear guidance as to when pedestrian or bicycle facilities should or should not be provided. Absent a clear mandate, pedestrian and bicycle facilities tend to be omitted.

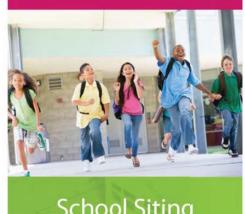
- 3. **Take into account likely future demand** for bicycling and walking facilities in planning transportation projects; do not adopt designs that would preclude future improvements.
- 4. **Encourage public participation** by bicyclists and pedestrians and other community groups in the planning process.
- 5. Ensure **adequate funding** for bicycle and pedestrian transportation staff and facilities, including land acquisition, design, construction, and proper maintenance.

- 6. **Integrate bicycling and walking** into new development, including new schools.
 - Require land developers to **finance and construct sidewalks**, shared-use paths, and bicycle parking facilities within their developments.

Students who walk to school behave and perform better • Require land developers to design developments in

a way that facilitates internal and external bicycle and pedestrian access. New development should feature a dense network of interconnected streets to minimize trip distance and offer many low-speed, low-Superblock and cul-de-sac traffic routes. development patterns should be discouraged, and transit-oriented development should be encouraged. Use the Virginia Department of Transportation's Secondary Street Acceptance Requirements as a model.²

- Locate new schools in walkable communities. Use the EPA school siting guidelines.³
- 7. Design, construct, operate, and maintain sidewalks, shared-use paths, street crossings (including over- and undercrossings), pedestrian signals, signs, street furniture, transit stops and



School Siting Guidelines

Figure 2: EPA School Siting Guidelines

facilities, and all connecting pathways so that **all pedestrians, including people with disabilities**, can travel safely and independently.

- 8. Improve inter-jurisdictional coordination to identify, plan, construct and preserve **multi-jurisdictional routes**, and provide connecting links for existing routes to assure the establishment of a continuous bicycle and pedestrian transportation system throughout the Washington metropolitan area.
 - a. Identify networks of existing bicycle routes (both on-street and off-street) in the urban core, suburbs, developing fringe, as well as connecting **long distance inter-**

² http://www.virginiadot.org/info/secondary_street_acceptance_requirements.asp

³ http://www.epa.gov/schools/guidelinestools/siting/

city routes. Ensure that these routes are included in land use and transportation plans, and not eliminated as development occurs.

- b. Identify shared-use path corridors before they are developed, and preserve opportunities for development as shared-use paths.
- c. Identify existing physical barriers to bicycling (such as rivers and streams, bridges, railroad tracks, highway crossings, and limited access highways with no crossing route) and identify solutions to overcome them.
- d. Implement uniform wayfinding and/or designation for inter-jurisdictional routes that will provide easily understood instructions and information.
- e. Convene and participate in a regional **working group** consisting of state and regional representatives to identify regional and long distance travel corridors for bicyclists, develop common guide signage guidelines, and develop of recommended bikeway alignments within travel corridors.

B. Develop and adhere to consistent bicycle and pedestrian the Development of Bicycle facility design and construction standards in each Facilities jurisdiction:

- 1. Assure adequate planning, construction and maintenance standards for comfortable and safe bicycling on both onstreet routes and off-street paths, as well comfortable and safe walking on paths and sidewalks.
 - a. Adopt, as minimum standards for privately and publicly built facilities, the AASHTO Guide for the Development of Bicycle Facilities, AASHTO's A Policy on Geometric Design of Highways and Streets, and the AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities, the ADA Accessibility Guidelines from the U.S. Architectural and Transportation Barriers Compliance Board (Access Board), and the Manual on Uniform Traffic Control Devices (MUTCD) from the Federal Highway Administration.

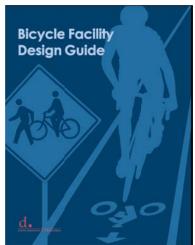


Figure 3: DDOT Bicycle Facility Design Guide





Figure32: AASHTO Guide for

- b. Establish and maintain **minimum design and maintenance standar**ds for each type of facility.
- c. In accordance with <u>federal guidance</u>, go beyond the minimum requirements where necessary to provide safe and comfortable accommodation for bicyclists and pedestrians. Agencies such as the District of Columbia Department of Transportation have developed their own design manuals to meet their specific needs, and which may incorporate experimental measures which are not found in the current AASHTO bicycle facility design guide. The National Association of City Transportation Officials (NACTO), an alliance of city transportation departments, including the District Department of Transportation, has developed guides for bikeways and for urban areas. The NACTO guides provide designs and treatments not currently found is the AASHTO guides.
- d. Use the NACTO <u>Urban Street Design</u> <u>Guide</u> and <u>Urban Bikeway Design</u> <u>Guide</u> where appropriate. FHWA <u>has</u> <u>endorsed</u> the "appropriate" use of the Urban Bikeway Design Guide to help agencies fulfill the above-mentioned 2010 federal guidance. FHWA notes that most of the treatments in the NACTO guide are allowed or not precluded by the MUTCD. Noncompliant traffic control devices can still be used as pilots, under the MUTCD experimentation process.

The NACTO guides were developed, and are most applicable, for dense urban centers with low-traffic speeds and relatively high levels of bicycling and walking.

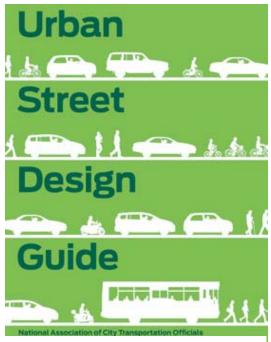


Figure 4: Urban Street Design Guide

2. Improve Access for Persons with Disabilities to Pedestrian Facilities⁴

The Transportation Planning Board's Access for All Advisory Committee has identified the following recommended best practices for improving access for persons with disabilities to pedestrian facilities. More detailed recommendations can be found in the *Accessibility Guidelines* as noted above. With the exception of hand-

⁴ "Lessons Learned" fact sheet for Disability Awareness Day. National Capital Region Transportation Planning Board Access for All Committee, October 20, 2004.

rails on steep sidewalks, all of the following practices are legally required under the ADA for all new facilities and all reconstructed facilities:

- a. Sidewalks should have curb ramps. Ramps should be well-maintained, well-placed, and not too steep in order to permit their use by persons in wheelchairs.⁵
- b. The height of wheelchair users should be considered when placing shrubs or other objects where they might block them from the view of motorists.
- c. Objects such as security barriers, fences, fire hydrants, telephone poles, parking meters, newspaper boxes, signal control boxes, and other street furniture should be placed in locations where they will not block curb ramps.
- d. The placement of crosswalk buttons must take into consideration the needs of people with disabilities.
- e. Audible pedestrian signals make communities safer for all pedestrians, including seniors and children as well as people with visual impairments.
- f. Sidewalks with steep slopes are difficult for people with disabilities to navigate, especially for people who use manual wheelchairs or people who have trouble walking. Hand rails could help mitigate these difficulties.

C. Minimize roadway width, curb radii & crossing distance.⁶

To minimize pedestrian crossing distances and reduce impermeable, heat–absorbing asphalt coverage, the paved roadway of **all streets should be designed to be the minimum width** — **and have the minimum number of lanes** — that safely and cost– effectively allow for the desired operations of motor vehicles, buses, and bicyclists. Excess width should be reallocated to provide walking, transit, and bicycling facilities, public open space, green cover, and/or stormwater source control measures. If financial limitations preclude final implementation of street retrofits (e.g., curbing, streetscaping, etc.), the reallocation of space should still proceed with temporary or least costly approaches such as restriping.



Figure 4: New York City Street Design Manual

To further reduce pedestrian crossing distances and slow turning vehicles, **all roadway corners should be designed with the smallest possible radius** that still accommodates the intended vehicle and emergency vehicles.

⁵ Wheelchair ramp photo: COG/TPB, Access for All Committee

⁶ New York City Department of Transportation, *Street Design Manual*, 2009. Page 46.

D. Set target vehicle speeds appropriate to surrounding land use.

Urban streets should function as **public spaces for people** as well as arteries for traffic and transportation. The best street design adds to the value of businesses, offices, and schools located along the roadway.⁷ Lower speeds are often needed to enable a street to serve as a comfortable place to gather, shop, work, or live.

Streets should be designed with target speeds and speed limits appropriate to their surrounding uses and desired role in the vehicular network. Slower target speeds and speed limits should be considered on local streets, residential streets, alleys; on streets adjacent to schools, senior or disabled pedestrian trip generators; waterfronts, parks, rail stations, and other significant pedestrian destinations.

Traffic calming features may be designed in from the beginning, or retrofitted where needed, to bring traffic speeds down to the desired level.⁸

E. Improve bicycle and pedestrian circulation within and between regional activity centers and the urban core.

- 1. Improve sidewalks, bikeways, intersections, signage and links to transit for bicyclists and pedestrians in activity centers
- 2. Improve access to and between regional activity centers.
 - Provide access to activity centers from surrounding neighborhoods.
 - Provide facilities to connect nearby activity centers



Figure 5: Bike Racks and Lockers at New York Avenue Metro Station

⁷ NACTO, Urban Street Design Guide, 2013.

⁸ Ibid, pp. 76-91.

F. Integrate bicycling and walking into the public transportation system.⁹

- 1. Make it easier and safer to walk and bike to bus stop and rail stations.
 - Build sidewalks and pedestrian crosswalks and/or overpasses that connect transit stops to nearby neighborhoods, commercial areas, and existing pedestrian infrastructure.
 - Improve lighting, signage, and wayfinding around transit stations.
 - Improve bicycle parking at Metro, commuter rail stations, and park and ride lots.Replace broken and obsolete bicycle racks with current models. Add more <u>Bike & Ride</u> secure bicycle parking facilities at Metrorail stations.
 - Improve customers' ability to make the "last mile" of their trip by locating bike sharing or increasing bike parking options at rail stations, and eliminate the need to bring a bike on the train during peak periods. If/when capacity constraints permit, expand the hours when bicycles are permitted on Metrorail.
- 4. Provide bicycle racks on all transit buses.¹⁰
- Provide for more efficient accommodation of bicycles on future rail services, including commuter rail, Metro, and light rail, in the Washington region. Vertical storage racks such as those on the <u>River light rail line</u> in New Jersey are a good model.

All Metrobuses have been equipped with racks to carry up to two bikes per bus



Figure 6: Bike on Metrobus.



Figure 7: On-Street Bike Parking, Georgetown

 ⁹ Photo of NY Avenue Metro Bike Lockers: COG/TPB, Michael Farrell
 ¹⁰ Photo of Bike on Bus by WABA/Eric Gilliland

G. Provide adequate bicycle support facilities.

- 1. Enact zoning laws to **require bicycle parking and related facilities** as part of all new construction or major renovation, including office, retail, and housing developments.
 - Construct bicycle parking facilities in well-traveled and lighted areas. Facilities should be covered and secure.

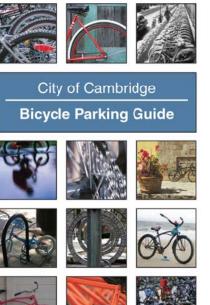


Figure 9: City of Cambridge Bike Parking Guide

• Require placement of bicycle parking facilities in convenient locations; short-term parking should be as close as possible to building entrances; long term parking facilities should be located in secure areas.

• The District of Columbia requires bike parking in any building that has automobile parking. However, bicycle parking requirements need not be tied to auto parking. The City of Cambridge, MA has developed a <u>model ordinance</u>.

• Ensure the provision of showers and changing facilities in all new or renovated commercial developments.

2.Providebicycleparkingonpublicproperty.Jurisdictionsshouldinstallbicycleparkinginpublicspaceswhere there is demand, such

as public libraries, parks, and sidewalks near storefront retail.¹¹

H. Expand the Regional Bike Sharing Program

Bike sharing is self-service public bicycle rental. It is similar to a car-sharing system, such as ZipCar, where members pay a fee and have access to any available bike throughout the regional system. Unlike earlier "public bicycle" or "yellow bike" programs, which failed due to lack of means of preventing theft, modern bicycle sharing links rentals to a user's credit card, which can be charged if the



Figure 10: ITDP Bike Share Guide

Bicycle and Pedestrian Plan for the National Capital Region Draft October 7, 2014

CHAPTER 6: RECOMMENDED PRACTICES

bicycle is not returned. Bike sharing took hold first in Europe, but has now <u>become</u> <u>common</u> in North America, with programs in dozens of cities.

The bike sharing system for the Washington region is <u>Capital Bikeshare</u>, currently one of the largest and most successful North American bike share systems. Their solar-powered docking stations have proven easier and faster to install than stations that require a utility hook-up.

The Institute for Transport Development Policy publishes a detailed <u>bike share planning guide.</u>

I. Develop pedestrian and bicycle safety education and enforcement programs in all jurisdictions.

- 1. Promote pedestrian and bicycle safety education programs for children, beginning at the early ages.
 - Establish pedestrian and bicycle safety programs at the elementary school level, including classroom and on-bicycle instruction.
 - Develop and distribute pedestrian and bicycle safety information materials designed to teach beginning cyclists and young pedestrians.



• Emphasize the use of bicycle helmets as a means of Figure 11: Cyclist training injury reduction, lights after dark, reflectors, and Photo Credit: WABA

reflective clothing for pedestrians.

- 2. Improve cycling skills and pedestrian safety habits of adults and young adults.
 - Produce and distribute information on bicycle usage and safety.

Volunteer Patrols can help with Trail Security

pedestrians.

• Emphasize the use of helmets for rider protection, lights after dark, reflectors, and reflective clothing for



Figure 12: Trail Patrol, C & O Canal Park

- 3. Increase motorist awareness and accommodation of bicyclists and pedestrians, and bicyclist and pedestrian awareness and accommodation of motorists.
 - Include bicycle and pedestrian information in automobile drivers' training classes, driver's manuals, and license exams, and through the media.
 - Coordinate public media campaigns with law enforcement
- 4. Encourage jurisdictional uniformity of traffic laws relating to bicycling and walking. Encourage conformity with such regulations as the <u>Uniform Vehicle Code</u>.
- 5. Encourage consistent bicycle law enforcement to assure safe bicycling and walking.
 - Emphasize the enforcement of traffic laws dealing with offenses known to cause crashes between bicycles and motor vehicles, such as wrong way bicycling, and ignoring stop signs or stop lights.
 - Emphasize enforcement of traffic laws dealing with Dc offenses known to cause crashes between pedestrians C_{II} and motor vehicles, such as motorists failing to yield to pedestrians, and pedestrians disobeying "Don't walk" signals.

The regional "<u>Street</u> <u>Smart</u>" Pedestrian and Bicycle Safety Campaign urges motorists and pedestrians to "Slow Down" and "Use Crosswalks"

- 6. Improve bicycle and pedestrian accident reporting and analysis procedures at the state and regional levels, to provide jurisdictions with a better understanding of accident causes and countermeasures.
- 7. Provide significant law enforcement presence along regional off-road trail networks and encourage interjurisdictional cooperation and coordination to provide for the safety and security of all pedestrians and bicyclists.



Figure 8: Street Smart Poster

J. Encourage Walking and Bicycling

Each jurisdiction and agency should encourage walking and bicycling, and promote the perception of both as legitimate forms of travel, in the way most appropriate to that organization. Examples include:

- Have walk and bike-friendly policies for employees. Let employees know that walking and bicycling is both permitted and encouraged. Organize/support/participate in events such as Bike to Work Day, <u>Car-Free Day</u>, etc.
- Carry out pedestrian and cyclist education programs that also encourage walking and bicycling, such as <u>Safe Routes to School</u>. Designate a Safe Routes to School coordinator for every community.
- Provide high-quality information to the public on the benefits of walking and bicycling, and where and how it can be done in your community, through programs such as <u>WalkArlington</u> and <u>BikeArlington</u>. Partner with employers, transportation demand managers, and advocacy groups.
- As part of a comprehensive transportation demand management program, provide financial incentives for employees to walk and bicycle.
- For States and Metro regions, consider investing in paid media campaigns.

K. Each jurisdiction should develop a high visibility bicycle or pedestrian project to demonstrate the effectiveness of bicycling and walking as a short distance transportation mode.

- Ensure that projects are feasibly implemented, and supported by the community and the government agencies responsible for implementation.
- Undertake extensive publicity and promotion for each facility or service included in the project.
- Conduct an extensive analysis of the effectiveness of each project following the demonstration period.

Bicycle and Pedestrian Plan for the National Capital Region Draft October 7, 2014

CHAPTER 6: RECOMMENDED PRACTICES



Figure 9: Lawyers Road Before Road Diet Photo credit: VDOT



Figure 10: Lawyers Road After Road Diet

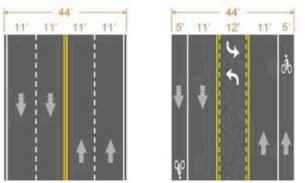


Figure 11: Before and After Illustration

VDOT completed a model Road Diet project in Reston, VA, shrinking Lawyer's Road from four lanes to two plus a turn lane and bike lanes

L. Each agency should designate a bicycle coordinator and a pedestrian coordinator to oversee bicycle and pedestrian programs.

Experience has shown that without a designated staff person or persons responsible over for overseeing their implementation, pedestrian and bicycle programs and policies are not implemented effectively. Staffing levels should be proportional to the size of the agency and volume of work.

All TPB member jurisdictions with active pedestrian and bicycle programs designate a lead staff person or coordinator.

Chapter 7

The 2040 Bicycle and Pedestrian Network

The Regional Bicycle and Pedestrian Network in 2040

The *Bicycle and Pedestrian Plan for the National Capital Region* includes 643 bicycle and pedestrian facility improvement projects from across the region. If every project in the plan is implemented, in 2040 the region will have added approximately 2100 miles of bicycle lanes and 2000 miles of shared-use path. The overall network length (allowing for some dual bike lane/sidepath facilities) will increase by approximately 4000 miles.

In addition, hundreds of miles of signed on-road bicycle routes will be created. In many cases roads are designated for improvement as bicycle routes, but the exact nature of the improvement – bike lane, widened shoulders, wide outside lane, shared lane markings, signs – has not yet been determined.

Thirty-one major pedestrian intersection improvements will be carried out, and fifteen pedestrian/bicycle bridges or tunnels will be built. Hundreds of intersections will receive new crosswalk signals, and ongoing sidewalk improvement programs will retrofit sidewalks in areas where they are missing.

A new bicycle and pedestrian crossing over the Potomac will be created at the American Legion Bridge, and the bridges over the Anacostia River will be improved for pedestrians and bicyclists. In addition, twenty-seven major streetscaping projects will improve pedestrian and bicycle access and amenities in places such as Atlantic Boulevard, Tysons, Maryland Avenue NE, and downtown Bethesda.

Table 7-1 below summarizes the new facility mileage that will be added by 2040 if this plan is implemented in full.

| | Miles of Bicycle/Pedestrian Facilities in the Washington Region | | | | | | | | | | | |
|--------------------|--|--------------------------------|------------------------------------|--|------------------|--|--|--|--|--|--|--|
| Facility Type | Total in 2005 | Completed 2006- May 2010 | Completed June 2010 May 2014 | Planned New Facilities/ Upgrades | Total in 2040 | | | | | | | |
| Bicycle Lane | 56 | 35 | 45 | 2090 | 2226 | | | | | | | |
| Shared-Use Path | 490 | 53 | 50 | 1990 | 2583 | | | | | | | |
| Total | 546 | 88 | 95 | 4080 | 4809 | | | | | | | |

Progress Since 2010

Fifty-four projects from the 2010 Bicycle and Pedestrian Plan have been completed. This total does not count projects on which significant progress has been made, unless for reporting purposes the project was split into phases, and the earlier phases reported as complete.

Ten major pedestrian intersection improvements, seven streetscaping projects, and two pedestrian bridges or tunnels were completed.

Notable projects finished since 2010 include Capital Bikeshare in the District of Columbia and Arlington, and the L Street NW protected bike lane in DC.

Mileage of sidewalk construction was not tracked, but there are ongoing sidewalk retrofit and pedestrian safety programs in all the major inner jurisdictions. Privately provided facilities are generally not counted.

The region is currently adding about twelve miles of shared-use path and eleven miles of bike lane per year. At the current pace of construction the region will have completed about 420 miles of shared use path, and 385 miles of bike lane by 2040, or about one fifth of the planned network.

However, it should be noted that the planned network is twice as large as the one in the 2010 plan. The pace of implementation is increasing, but the agency plans are now much more ambitious.

Funding

While many of these projects have no identified funding source, and are not expected to be built soon, some are very close to being realized. Of the 485 planned projects, seventeen are under construction, ninety-one are fully funded, and another ninety-nine have some funding identified.

Under "Complete Streets" policies, most bicycle and pedestrian projects are now built as part of larger transportation projects. Of the transportation projects in the <u>FY 2013-2018</u> <u>Transportation Improvement Program</u>, 133 include some form of bicycle and pedestrian accommodation, while 30 projects were identified as being specifically bicycle or pedestrian.

Cost Estimates

Cost estimates were provided by the agencies for about 30% of the planned projects. For most of the planned projects that have not yet been designed, no meaningful project-level estimates can be made. Many of the projects which have cost estimates are part of a larger project. In a combined project it is nearly impossible to disentangle the portion of the cost attributable to bicycle or pedestrian features.

Given the difficulties of getting actual cost estimates for each project, we have imputed a range of regional costs for the plan based on an <u>assumed typical cost per mile</u> or per project.¹ The total cost of improvements listed in the plan is estimated at about \$5 billion (2014 dollars).

| | Table 7-2 Imp thousands of c | | for Selected Bicyc | cle Facilities (in |
|---|--|---------|--------------------------------|----------------------------|
| Facility Type | Imputed Cost Range per Mile or per Project | Average | Miles or Number of Projects | Imputed Cost |
| Shared Use Path | \$300 - \$4,000 | 480 | 1990 miles | \$600,000 - \$8,000,000 |
| Bicycle Lane | \$5 \$500 | 133 | 2090 miles | \$10,000 - \$1,000,000 |
| Pedestrian/Bicycle Bridge/Tunnel | \$1,000 - \$6,000 | | 15 projects | \$15,000 - \$90,000 |
| Pedestrian Intersection Improvement | \$300 - \$600 | | 31 projects | \$10,000 \$20,000 |
| Streetscape | \$2,000 - \$4,000 | | 27 project | \$54,000 - \$108,000 |
| Total | | | | \$700,000 - \$9,000,000 |

No comparable "financially unconstrained" plan exists for other types of transportation projects over the next 30 years. The six-year, FY 2013-2018 Transportation Improvement Program includes \$15.6 billion worth of transportation projects and programs, an amount which is widely seen as inadequate for the region's transportation needs. Assuming the region continues to fund transportation at the same real level for the next 30 years, fully funding the bicycle and pedestrian plan over the same period would cost about 6% of the total transportation budget.

Explanation of Project listings

Appendix A lists the plan projects, organized alphabetically by state and jurisdiction. Facility type, responsible agencies, limits, length, funding status, and cost are also included. Note that due to the nature of bicycle and pedestrian facility improvements, the list in Appendix A is expected to change annually, as projects are added or removed.

The project list is drawn from a database that includes more extensive information, including project status, agency project ID number, facility lengths, facility alignment, description, project status, project web site, date of (projected) completion, date the record was last updated, and project manager name and contact information. Agency

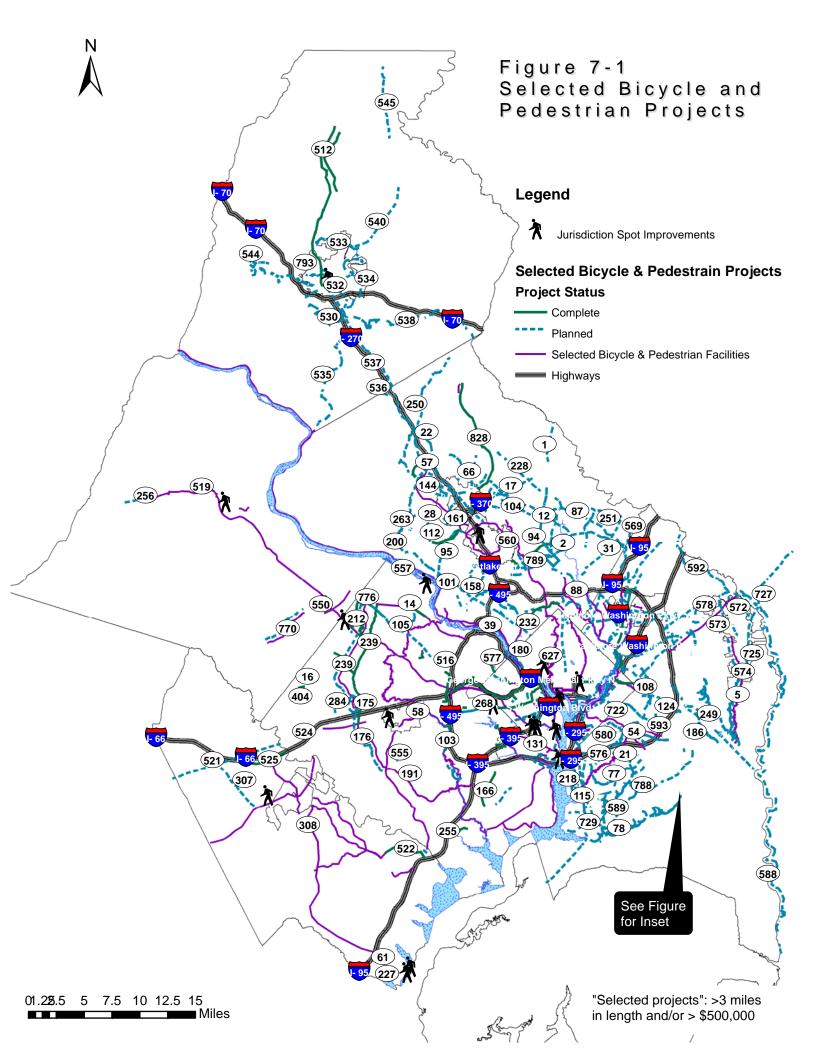
¹ Costs for Pedestrian and Bicyclist Infrastructure Improvements" UNC Highway Safety Research Center, October 2013.

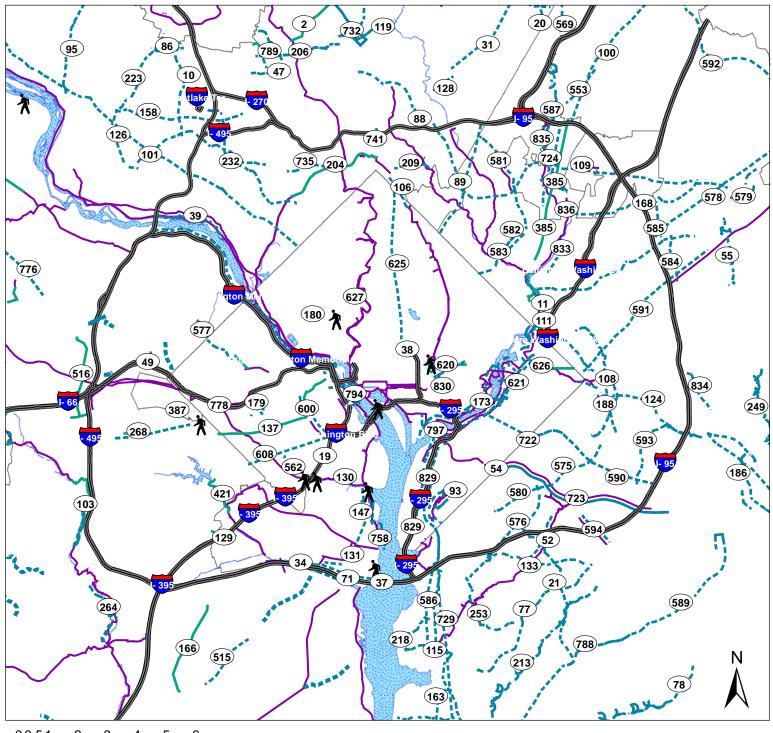
staff may enter via a password-protected web site to enter, edit, and delete project information, making the process of keeping the database accurate simple. A public access version of this on-line version of this database can be found at http://www.mwcog.org/bikepedplan/.

Over time the database has proven useful in tracking the progress of bicycle and pedestrian projects at a regional level. A sample database entry and a data dictionary are found in Appendix B.

This project list is intended to be a list of significant planned bicycle and pedestrian projects in the Washington region. Agencies were encouraged to submit projects for inclusion if they were one mile or more in length, or cost more than \$400,000. Small sidewalk projects are not included unless they were part of a larger pedestrian or bicycle project.

Figures 7-1 and 7-2 show the location of major bicycle and pedestrian projects throughout the region. Pedestrian/bicycle bridge or tunnel projects, multi-use paths greater than three miles in length, and projects estimated by their sponsors to cost more than \$500,000 are mapped, except for area projects that cannot be mapped in a meaningful way. About a quarter of the plan projects are mapped. Project details can be found in the project list in Appendix A, which groups the projects by state and jurisdiction.





00.51 2 3 4 5 6 Miles

Figure 7-2 Selected Bicycle and Pedestrian Projects



Selected Bicycle & Pedestrain Projects Project Status

| | | | Complete | |
|---|---|--|----------|--|
| _ | - | | Diamand | |

Highways

Planned



Appendix A

Bicycle and Pedestrian Projects Of the Long-Range Bicycle and Pedestrian Plan For the National Capital Region This appendix contains a complete list of the projects in the Bicycle and Pedestrian Plan for the National Capital Region. Below is a guide to the printed project list. Appendix B contains a data dictionary for the electronic database, which contains more information than this printed list, as well as a sample data entry form.

| PROJECT LIST DATA DIC | PROJECT LIST DATA DICTIONARY | | | | | | | | | |
|-----------------------|---|-------------------|--|--|--|--|--|--|--|--|
| Field | Explanation | | | | | | | | | |
| Line Number | Short ID number used to label projects on the n | naps | | | | | | | | |
| Agency Project ID | The sponsoring agency's project identifying nu | umber | | | | | | | | |
| Project Name | Descriptive name provided by the sponsoring a | agency | | | | | | | | |
| From | Project Limits | | | | | | | | | |
| То | Project Limits | | | | | | | | | |
| Length (Miles) | Length of the project from start to finish in mil | | | | | | | | | |
| | if a project consists of four miles of road with | | | | | | | | | |
| | bike lane and sidewalk, the project length is fo | | | | | | | | | |
| | projects that have no length, such as bicycle ra | cks, the listed | | | | | | | | |
| D 111 A 1 | length is zero. | | | | | | | | | |
| Responsible Agencies | Agencies responsible for implementing the pro otherwise involved | oject or | | | | | | | | |
| Bike Lane | Bike lanes are striped lanes at least 4' wide in t | the public right_ | | | | | | | | |
| Dike Lane | of-way, marked for the exclusive use of bicycl | | | | | | | | | |
| Multi-Use Path | A paved or hard-surface path separated from tr | | | | | | | | | |
| | designated for bicycles and other non-motorize | | | | | | | | | |
| | Should be at least 8' wide. | | | | | | | | | |
| Sidewalk | Sidewalks are usually less than 8' wide, and ar | e not designed | | | | | | | | |
| | for bicyclists. | | | | | | | | | |
| Type of Spot/Area | For non-linear projects. The pull-down menu | gives the | | | | | | | | |
| Improvement | following options: | | | | | | | | | |
| | Type of Improvement | Code Letter | | | | | | | | |
| | 1. Pedestrian Intersection Improvement | I | | | | | | | | |
| | 2. Pedestrian/Bicycle Bridge or Tunnel | B | | | | | | | | |
| | 3. Traffic Calming | TC | | | | | | | | |
| | 4. Streetscape/Pedestrian Improvements | S | | | | | | | | |
| | 5. Bicycle Parking | PK | | | | | | | | |
| | Bicycle Route Marking Other | BR O | | | | | | | | |
| In CLRP | Project is in the Financially Constrained Long- | - | | | | | | | | |
| III CLKP | Transportation Plan for the National Capital Ro | U | | | | | | | | |
| | therefore is officially considered to have funding | - | | | | | | | | |
| | support project completion. | | | | | | | | | |
| In TIP | Project is in the most recent National Capital R | Region | | | | | | | | |
| | Transportation Improvement Program with spe | | | | | | | | | |
| | amounts identified for program completion. | č | | | | | | | | |

| Field | Explanation | | | | | | | | |
|--------|---|---|--|--|--|--|--|--|--|
| Status | The pull-down menu offers the following | g options: | | | | | | | |
| | | Code Letter | | | | | | | |
| | 1. Fully Funded ¹ | F | | | | | | | |
| | 2. Partially Funded | Р | | | | | | | |
| | 3. Unfunded | U | | | | | | | |
| | 4. Under Construction UC | | | | | | | | |
| | 5. Complete C | | | | | | | | |
| Cost | In thousands of dollars. As many project be built for many years, and have not bee can be a very rough estimate. If a projec project the total project cost is <i>not</i> listed, the cost which is attributable to the bicyc facility. Use of a rule of thumb for such acceptable, i.e. 3% of total project cost. I have a cost estimate available. | en fully scoped, this t is part of a larger only that portion of le or pedestrian estimates was | | | | | | | |

¹ "Funded" indicates that the sponsoring agency has considered funding for completion of this project to be reasonably available within projected funding sources. "Unfunded" indicates, that while the project has been identified, there is no projected funding to support its completion at this time.

2014 Draft Bike/Ped Plan Project List

| Pro | oject ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Pa | Side th walk | Spot/ Area | In CLRP | In TIP | Status | Cost |
|-------|---------------------|---|----------------------|--------------------|-------------------|--------------------------------|------------|-----------------|---------------|------------|--------------|--------|----------|
| DC | | | | | | | | | | | | | |
| Washi | n <mark>gton</mark> | | | | | | | | | | | | |
| 1 | 794 | 14th Street Bridge Multi-use Path Improvements | East Basin Drive | 14th Street Bridge | 0.02 | National Park Service, DDOT | | | 0 | | | Ρ | \$515 |
| 2 | 173 | Anacostia Riverwalk Trail Phase II | Potomac River | Maryland | 20 | DDOT | | | | ✓ | \checkmark | F | \$20,000 |
| 3 | 797 | Anacostia Trail Support | | | | National Park Service, DDOT | | | | | | | \$500 |
| 4 | 215 | Bicycle Lanes Phase I | | | 20 | DDOT | | | | | ✓ | С | \$600 |
| 5 | 843 | Bicycle Lanes Phase II | | | 20 | DDOT | | | | | | F | |
| 6 | 56 | Bicycle Parking Racks | | | | DDOT | | | | ✓ | ✓ | | \$500 |
| 7 | 74 | Bicycle Route Signs | | | | DDOT | | | | | ✓ | Ρ | \$100 |
| 8 | 619 | Blagden Avenue Hiker and Biker Trail - EA | Matthewson Drive | Beach Drive | 0.4 | DDOT, National Park Service | | | | | | С | |
| 9 | 613 | Capital Bikeshare - District of Columbia | | | | DDOT, Arlington County | | | 0 | ✓ | ✓ | С | |
| 10 | 142 | Cultural/Heritage Trail System | | | | DDOT | | | | | ✓ | С | \$0 |
| 11 | 622 | District-Wide Bicycle and Pedestrian Program | | | | DDOT | | | | | ✓ | Ρ | \$3,300 |
| 12 | 625 | Great Streets - Georgia Avenue | | | | DDOT | | | | | ✓ | | \$16,140 |
| 13 | 620 | Great Streets - H Street NE Streetscape | 3rd Street NE | 14th Street NE | 1 | DDOT | | | S | | ✓ | С | \$62,000 |
| 14 | 621 | Great Streets - Minnesota Avenue NE | A Street SE | Sheriff Road NE | 1 | DDOT | | | | | | F | \$7,000 |
| 15 | 626 | Great Streets - Nannie Helen Burroughs | | | | DDOT | | | | | ✓ | С | \$12,300 |
| 16 | 627 | Klingle Trail | Porter Street | Woodley Road | 1 | DDOT | | | | | ✓ | F | \$9,100 |
| 17 | 803 | L Street Cycle Track | New Hampshire Avenue | 12th Street NW | 1 | DDOT | | | | | | С | \$300 |
| 18 | 830 | Maryland Avenue NE Complete Street Project | 2nd | 15th | 1 | DDOT | | | S | | | Ρ | \$2,000 |
| 19 | 197 | Metropolitan Branch Trail Phase I | Union Station | Bates Road NE | 4 | DDOT | | | | ✓ | ✓ | С | \$20,000 |
| | | | | | | | | | | | | | |

31-Oct-14

Page 3

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Path | Side walk | | In CLRP | In TIP | Status | Cost |
|-----|------------|---|----------------------|-----------------|-------------------|--|--------------|--------------|-------|------------|-----------|--------|----------|
| 20 | 842 | Metropolitan Branch Trail Phase II | Bates Road NE | Silver Spring | 2 | DDOT | | | , loa | | ✓ | Р | |
| 21 | 93 | Oxon Run Trail Restoration | South Capitol Street | Southern Avenue | 2 | DDOT | | | | | ✓ | | \$6,000 |
| 22 | 628 | Pavement Markings & Traffic Calming | | | | DDOT | | | ТС | | ✓ | F | \$34,390 |
| 23 | 623 | Pedestrian Bridge over Kenilworth Ave | | | 1 | DDOT | | | В | | ✓ | F | \$12,000 |
| 24 | 178 | Rock Creek Park Trail | | | 4 | DDOT, National Park Service | | | | | ✓ | Ρ | \$2,500 |
| 25 | 629 | Safe Routes to School | | | | DDOT | | | | | ✓ | | \$1,000 |
| 26 | 97 | Safe Routes to School Program | | | | DDOT | | | | | ✓ | F | \$1,000 |
| 27 | 96 | Sidewalk Construction | | | | DDOT | | ✓ | | | | | \$2,000 |
| 28 | 829 | South Capitol Street Trail | Firth Sterling Ave | Oxon Cove | 3 | DDOT | | | | ✓ | ✓ | Ρ | \$7,000 |
| 29 | 624 | Transportatation Enhancements | | | | DDOT | | | S | | ✓ | F | \$13,800 |
| 30 | 75 | Union Station Bike Station | (Union Station) | | | DDOT | | | | | ✓ | С | \$4,000 |
| 31 | 181 | Watts Branch Trail | Minnesota Ave | 62nd Street, NE | 2 | DDOT | | | | | ✓ | С | \$3,000 |
| 32 | 750 | WMATA DC Metrorail Crossing Improvement Projects | | | | WMATA | | | | | | Ρ | \$346 |
| 33 | 747 | WMATA DC Metrorail Sharrow Projects | | | 1 | WMATA | | | | | | Ρ | \$5 |
| 34 | 744 | WMATA DC Metrorail Sidewalk/ Pathway Projects | | | 1 | WMATA | | | | | | Ρ | \$623 |
| DC | /MD/VA | | | | | | | | | | | | |
| Reg | ion-wide | 9 | | | | | | | | | | | |
| 35 | 617 | Capital Bikeshare Region-Wide | | | | DDOT, DDOT, Arlington, City of Alexandria, Montgomery | | | 0 | | | С | \$22,284 |
| 36 | 795 | Implement Recommendations of NCR Paved Trails Plan | | | | National Park Service | | | | | | | \$1,000 |
| 37 | 568 | WMATA Bicycle Parking Project | | | 0 | WMATA | | | | | | Ρ | \$1,165 |

DRAFT

| Pro | pject ID Project/Facility Name | From | То | Responsible Agencies | | Spot/ In In Area CLRP TIP Status | Cost |
|--------|------------------------------------|------|----|-------------------------|---------|-------------------------------------|------|
| DC/V | Α | | | | | | |
| Arling | ton County, District of Columbia | | | | | | |
| 38 | 258 Boundary Channel Bridge Trails | | | National Park Service | e 🗌 🗌 🗌 | | |

| F | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Pa | Side th walk | Spot/ Area | In CLRP | | Status | Cost |
|------|------------|--|-----------------------------|------------------------|-------------------|---|------------|-----------------|---------------|--------------|--------------|--------|-----------|
| MD | | | | | | | | | | | | | |
| City | of Coll | ege Park | | | | | | | | | | | |
| 39 | 385 | College Park Trolley Trail | Paducah Road | Albion Road | 4 | City of College Park | | | R | | | С | \$500 |
| City | of Fred | lerick | | | | | | | | | | | |
| 40 | 532 | Carroll Creek Trail | Rocky Springs Road | Monocacy River | 0 | City of Frederick, MDOT | | | 0 | | ✓ | Ρ | \$10,000 |
| 41 | 849 | City of Frederick Bike Lanes | | | 6 | City of Frederick | | | | | | С | |
| 42 | 552 | Citywide Sidewalk Retrofit | City of Frederick | City of Frederick | 0 | City of Frederick | | | | | | Р | \$240 |
| 43 | 551 | East Street Rail Trail | Carroll Creek | Tuscarora Creek | 0 | City of Frederick, MDOT & MTA | v | | 0 | | ✓ | Ρ | \$2,000 |
| 44 | 531 | Rock Creek Trail | Stonegate Park | US Route 15 | 0 | City of Frederick | | | | | \checkmark | Р | \$1,000 |
| 45 | 793 | US15 Undercrossing | Baker Park | Waterford Park | 1 | City of Frederick, MDSHA | | | В | | | F | \$2,250 |
| City | of Gree | enbelt | | | | | | | | | | | |
| 46 | 802 | Springhill Lake Elementary Safe Routes to School | Cherrywood Lane | Springhill Lane | 0.3 | City of Greenbelt, SH | A 🗌 🗌 | | TC | | | UC | \$195 |
| Fred | erick C | County | | | | | | | | | | | |
| 47 | 530 | Ballenger Creek Trail | Ballenger Creek Park | Monocacy River | 5 | Frederick County | | | | | ✓ | UC | \$3,200 |
| 48 | 538 | Bush Creek Trail | Monocacy River | Montgomery County Line | 0 | Frederick County | | | | | | U | \$1,300 |
| 49 | 558 | Frederick County Safe Routes to Schools | Countywide | Countywide | 0 | Frederick County, Frederick County Public Schools | | | | | | Ρ | \$350 |
| 50 | 754 | MD 180/MD 351, Jefferson Creek Pike | MD 180 Stoney Creek Drive | MD 351 Crestwood BLVD | 3.1 | MDOT | | | | \checkmark | ✓ | Ρ | 2,000,000 |
| 51 | 738 | MD 85, Buckey's Town Pike | South of English Muffin Way | North of Grove Road | | MDOT | | | | \checkmark | ✓ | Ρ | 5,000,000 |
| 52 | 535 | Monocacy River Greenway Future Phases | Ballenger Creek Trail | Potomac River | 0 | Frederick County | | | | | | U | \$7,000 |
| 53 | 547 | On-Street Bikeways Countywide | Countywide | Countywide | 0 | Frederick County, MD SHA |) 🗸 🗌 | | | | ✓ | Ρ | \$3,000 |

DRAFT Key to Codes

| F | Project ID Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Side Sp Path walk Are | ot/ In In ea CLRP TIP Status | Cost |
|-------|---------------------------------------|------------------------------|------------------------|-------------------|--|-------------------------------|---------------------------------|---------|
| Frede | erick County, City of Frederick | | | | | | | |
| 54 | 512 H&F Trolley Trail Phase II | Water Street | Moser Road | 0 | Frederick County, Frederick County Div of Parks & Rec; City of Fred | | □ □ C | \$7,000 |
| 55 | 534 Monocacy River Greenway Phase I | Tuscarora Creek | Ballenger Creek Trail | 0 | Frederick County, Frederick County Div of Parks & Rec; City of Fred | | U | \$5,500 |
| 56 | 533 Tuscarora Creek Trail | Yellow Springs Road | Monocacy River | 0 | Frederick County, Frederick County Div of Parks & Rec; City of Fred | | U | \$2,250 |
| Frede | erick County, City of Frederick, Town | of Thurm | | | | | | |
| 57 | 529 H&F Trolley Trail Phase III | Thurmont | Frederick | 0 | Frederick County, Frederick County Div of Parks & Rec; City of Fred | | U | \$6,000 |
| Frede | erick County, Montgomery County | | | | | | | |
| 58 | 537 I-270 Transitway | City of Frederick | Montgomery County Line | 0 | Frederick County, Frederick County Div of Parks & Rec | | U | \$5,000 |
| 59 | 536 Sugarloaf – Little Bennett Trail | Little Bennett Regional Park | Monocacy River | 0 | Frederick County, Frederick County Div of Parks & Rec; City of Fred | | <u> </u> | \$375 |
| Frede | erick County, Town of Emmitsburg | | | | | | | |
| 60 | 545 Emmitsburg Railroad Trail | Rocky Ridge | Emmitsburg | 0 | Frederick County, Frederick County Div of Parks & Rec / Emmitsburg | | <u> </u> | \$3,250 |

DRAFT

| Pro | ject ID Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Si Path w | de Spot/ alk Area | / In Ir LCLRP TI | P Status | Cost |
|--------|---|----------------|----------------------|-------------------|---|-------------------|----------------------|---------------------|----------|---------|
| Freder | ick County, Town of Middletown | | | | | | | | | |
| 61 | 543 Middletown – Myersville Trolley Trail | Frederick | Myersville | 0 | Frederick County | | | |] U | \$5,000 |
| 62 | 544 Middletown Greenway | Middletown | Middletown | 0 | Frederick County, Frederick County Div. of Parks & Rec; Middletown | | | |] U | \$3,000 |
| Freder | ick County, Town of Mt. Airy, Carroll (| County | | | | | | | | |
| 63 | 539 B&O Trail | Mount Airy | Mount Airy | 0 | Frederick County, Town of Mt. Airy, Carroll County | | | |] U | |
| Freder | ick County, Town of Woodsboro | | | | | | | | | |
| 64 | 540 Walkersville – Woodsboro Corridor I | Monocacy River | Israel Creek | 0 | Frederick County, Frederick County Div. of Parks & Rec; MDOT; Woodsb | | | |] U | \$2,000 |
| 65 | 542 Walkersville – Woodsboro Corridor III | Monocacy River | Woodsboro - Railroad | 0 | Frederick County | | | |] U | \$5,500 |

| Pro | oject ID | Project/Facility Name | From | То | | Responsible Agencies | Bike Pat | Side h walk | Spot/ Area | In CLRP | In 7 TIP | Status | Cost |
|-------|----------|--|-----------------------------|--|----|-------------------------------|----------------------|----------------|---------------|------------|-------------|--------|-----------|
| Montg | gomer | y County | | | | | | | | | | | |
| 66 | 9 | ADA Compliance: Transportation | Countywide | | | MCDOT | | | S | | ✓ | F | \$450,000 |
| 67 | 41 | American Legion Bridge | Macarthur Blvd | Fairfax County Line | | MDOT, MCDOT, VDOT | | | | | | | \$0 |
| 68 | 234 | Bel Pre Road - east | Georgia Avenue (MD97) | Layhill Road (MD182) | | MCDOT | | | | | | | \$0 |
| 69 | 241 | Bethesda Bikeway and Pedestrian Facilities | Bethesda CBD | | | MCDOT | | | Ι | | ✓ | F | \$3,520 |
| 70 | 804 | Bethesda CBD Streetcape | Bethesda CBD | | | MCDOT | | | S | | | F | \$8,214 |
| 71 | 805 | Bethesda Metro Station South Entrance | | | | MCDOT | | | В | | | F | \$80,500 |
| 72 | 190 | Bethesda Trolley Trail | South Drive | Twinbrook Metrorail station | | MCDOT, MDOT | | | | | | UC | \$0 |
| 73 | 92 | Bethesda Trolley Trail | Twinbrook Metro Station | Norfolk/Rugby Ave. intersection (Bethesda) | | MCDOT | v v |] | | | ✓ | | \$0 |
| 74 | 33 | Bethesda Trolley Trail-NIH connector | Battery Lane | Cedar Lane | | MCDOT | | | | | | | \$0 |
| 75 | 153 | Bikeway Program – Minor Projects | Countywide | | 12 | MCDOT | | | | | ✓ | F | \$3,763 |
| 76 | 851 | Black Branch Stream Valley Trail - Oak Creek Club | | | 2 | M-NCPPC, Montgomery County | | | | | | С | |
| 77 | 848 | Black Hill Regional Park Trails | | | 5 | M-NCPPC, Montgomery County | |] | | | | С | |
| 78 | 17 | Bowie Mill Road | Muncaster Mill Road (MD115) | Olney-Laytonsville Road (MD108) |) | MCDOT | | | | | | | \$0 |
| 79 | 232 | Bradley Boulevard (MD191) | Persimmon Tree Road | Wisconsin Avenue (MD355) | 6 | MCDOT, MDOT | | | | | | Ρ | \$0 |
| 80 | 20 | Briggs Chaney Road East | Old Columbia Pike | Prince George's County line | | MCDOT | | | | | | | \$0 |
| 81 | 203 | Briggs Chaney Road West | New Hampshire Avenue | Old Columbia Pike | | MCDOT | | | | | | | \$0 |
| 82 | 806 | Capital Crescent Trail | | | | MCDOT | | | В | | | F | \$49,500 |
| 83 | 35 | CCT-Black Hill connector | Crystal Rock Drive | Black Hill Regional Park | | MCDOT | | | | | | | \$0 |
| 84 | 808 | Century Boulevard | Dorsey Mill Road | | 1 | MCDOT | | | | | | F | |
| 85 | 250 | Clarksburg Road (MD121)/ Stringtown Road | Clopper Road (MD117) | MidCounty Highway | 5 | MCDOT | |] | | | | | \$0 |
| 86 | 809 | Clarksburg Transportation Connections | | | | MCDOT | | | | | | Ρ | |
| 87 | 144 | Clopper Road/Diamond Avenue (MD117) | Summit Avenue | Clarksburg Road (MD121) | 3 | MCDOT, MDOT | |] | | | | | \$0 |

Page 9

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Path | Side Spot | In CLRP | In TIP Status | Cost |
|-----|------------|--|--|--|-------------------|-------------------------|--------------|--------------|------------|------------------|----------|
| 88 | 31 | Columbia Pike (US29) North | New Hampshire Avenue/ Lockwood Drive | Spencerville Road (MD198) | 7 | MDOT, MCDOT | | | | | \$0 |
| 89 | 57 | Corridor Cities Transitway bike path | Shady Grove Metrorail Station | Frederick Road (MD355) | | MCDOT, MTA | | | | | \$0 |
| 90 | 810 | County Service Park Infrastructure Improvements | Shady Grove Metro | | 1 | MDOT | | | | F | |
| 91 | 261 | Crabbs Branch Way | Gude Drive | Shady Grove Road | | MCDOT | | | | | \$0 |
| 92 | 630 | Dale Drive Sidewalk | Mansfield Road | Hartsford Avenue | 0.4 | MCDOT | | ✓ | | ✔ F | \$5,370 |
| 93 | 140 | Darnestown Road - south | Key West Avenue (MD28) | Wootton Parkway | | MCDOT | | | | | \$0 |
| 94 | 28 | Darnestown Road (MD28) - North | Seneca Road | Great Seneca Highway (MD119) | 5 | MCDOT, MDOT | ✓ ✓ | | | | \$0 |
| 95 | 158 | Democracy Boulevard | Falls Road (MD189) | Old Georgetown Road | | MCDOT | | | | | \$0 |
| 96 | 25 | Doctor Bird Road/Norwood Road (MD182) | Layhill Road (MD182) | Olney-Sandy Spring Road (MD108) | | MCDOT, MDOT | | | | | \$0 |
| 97 | 807 | East Gude Drive Roadway Improvements | Crabbs Branch Way | Southlawn Lane | 1 | MCDOT | | \checkmark | | P | |
| 98 | 174 | East Jefferson Street | Montrose Road | Rollins Avenue | | MCDOT | | | | | \$0 |
| 99 | 238 | Ednor Road/Layhill Road | Norbeck Road (MD28) | New Hampshire Avenue (MD650) |) | MCDOT | | | | | \$0 |
| 100 | 244 | Elm Street | Exeter Road | Wisconsin Avenue (MD355) | | MCDOT | | | | | \$0 |
| 101 | 165 | Executive Boulevard | Woodglen Road/North Bethesda Trail | Montrose Road | | MCDOT | | | | | \$0 |
| 102 | 67 | Fairland Road - West | Randolph Road | Columbia Pike (US 29) | | MCDOT, MDOT | | | | | \$0 |
| 103 | 107 | Fairland Road East | Columbia Pike (US29) | Prince George's County line | | MCDOT | | | | | \$0 |
| 104 | 223 | Falls Road East Side Hiker-Biker Path | River Road | Dunster Road | 4 | MCDOT, MDOT | | | | ✔ F | \$22,340 |
| 105 | 240 | Father Hurley Boulevard/Ridge Road | Germantown Road (MD118) | Brink Road | | MCDOT | | | | С | \$0 |
| 106 | 245 | Fieldcrest Road | Woodfield Road (MD124) | Olney-Laytonsville Road (MD108 |) | MCDOT | | | | | \$0 |
| 107 | 811 | Flower Avenue Sidewalk | Piney Branch Road | Carroll Avenue | 1 | MCDOT, Takoma Pa | rk 🗌 🗌 | \checkmark | | F | |
| 108 | 136 | Forest Glen Pedestrian Bridge | west side of Georgia Avenue at Locust Grove Road | west side of Georgia Avenue at Forest Glen Road | | MCDOT | | | | C | \$0 |
| 109 | 43 | Forest Glen Road - central | Belvedere Place | Sligo Creek Trail | | MCDOT, M-NCPPC | | | | | \$0 |
| 110 | 141 | Frederick Road (MD355) | Gude Drive | Watkins Mill Road | 5 | MCDOT, MDOT | | | | | \$0 |
| | Oct 14 | | | | | | | | | | Dogo 10 |

DRAFT Key to Codes

B=Bridge or Tunnel C = Complete F = Fully Funded I = Intersection Improvement O = Other P = Partially Funded PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

Page 10

| _ | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Path | Side Sp walk A | oot/ In rea CLRP | In TIP | Status | Cost |
|-----|------------|--|--|---------------------------------|-------------------|----------------------------|--------------|-------------------|---------------------|-----------|--------|-----------|
| 111 | 22 | Frederick Road (MD355)-Upcounty | Watkins Mill Road | Frederick County line | | MCDOT, MDOT, M- NCPPC | | | | | | \$0 |
| 112 | 812 | Frederick Road Bike Path | Stringtown Road | Milestone Manor Lane | 2.5 | MCDOT | | | | | F | \$5,536 |
| 113 | 204 | Georgetown Branch Trail | Bethesda CBD | Silver Spring Metrorail station | | MCDOT | | | | | С | \$0 |
| 114 | 94 | Georgia Avenue (MD97) - North | Olney-Laytonsville Road (MD108) | Glenmont Metrorail station | 6 | MCDOT, MDOT | | | | | | \$0 |
| 115 | 1 | Georgia Avenue (MD97) - Upcounty | Brookeville Bypass | Howard County line | | MCDOT, MDOT | | | | | | \$0 |
| 116 | 242 | Georgia Avenue (MD97)-Brookeville | Olney-Sandy Spring Road (MD108) | Brookeville Road | 2 | MCDOT, MDOT | | | | | | \$0 |
| 117 | 263 | Germantown Road (MD118) | Darnestown Road (MD28) | Frederick Road (MD355) | 7 | MCDOT, M-NCPPC | | | | | | \$0 |
| 118 | 127 | Glenallen Avenue | Randolph Road | Kemp Mill Road | | MCDOT | | | | | | \$0 |
| 119 | 813 | Gold Mine Road Bridge | | | | MCDOT | | | В | | F | |
| 120 | 151 | Goldboro Road (MD614) | MacArthur Boulevard | Bradley Boulevard (MD191) | 2 | MCDOT, MDOT | | | | | | \$0 |
| 121 | 66 | Goshen Road | Girard Street | Warfield Road | 4 | MCDOT | ✓ ✓ | | | | F | \$0 |
| 122 | 44 | Greencastle Road - east | Robey Road | Prince George's County line | | MCDOT, M-NCPPC | | | | | | \$0 |
| 123 | 814 | Greentree Road Sidewalk | Old Georgetown Road | Fernwood Road | 1 | MCDOT | | \checkmark | | | UC | \$3,486 |
| 124 | 122 | Grosvenor Connector | Beach Drive | Metro station | | MCDOT, MDOT | | | | | | \$0 |
| 125 | 113 | Hines Road-North Branch connector | Rock Creek's North Branch Trail | Cashell Road | | MCDOT | | | | | | \$0 |
| 126 | 736 | I-270 Watkins Mill Road Extended | Watkins Mill Road, MD 124 Great Seneca Crossing | | 1 | MDOT | ✓ ✓ | \checkmark | \checkmark | ✓ | Ρ | 2,000,000 |
| 127 | 12 | ICC bike path | I-370 terminus | Prince George's County line | | MDOT, M-NCPPC, MCDOT | | | | | | \$0 |
| 128 | 735 | Jones Bridge Rd | | | 1 | MDOT | | \checkmark | \checkmark | ✓ | F | 0,000,000 |
| 129 | 45 | Layhill Road (MD182) | Georgia Avenue (MD97) | Norbeck Road (MD28) | 2 | MDOT, Montgomery County | | | | | | \$0 |
| 130 | 128 | Lockwood Drive | Columbia Pike (US29) | New Hampshire Avenue (MD650) |) | MCDOT | | | | | | \$0 |
| 131 | 146 | Long Draft Road | Quince Orchard Road | Clopper Road (MD117) | | MCDOT | | | | | | \$0 |
| 132 | 39 | MacArthur Boulevard Bikeway Improvements | I-495 | Oberlin Avenue | 4 | MCDOT | | | | | F | \$8,710 |

Page 11

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike | | Side walk | | In CLRP | In TIP | Status | Cost |
|-----|------------|--|--|--|-------------------|-------------------------|------|---|--------------|---|------------|-----------|--------|-----------|
| 133 | 2 | Matthew Henson Trail | Rock Creek Trail (west of Viers Mill Rd.) | East of Georgia Ave. (Alderton Road) | | MCDOT, M-NCPPC | | ✓ | | | | ✓ | С | \$5,142 |
| 134 | 737 | MD 117, Clopper Road | Seneca Creek Park Entrance | Metropolitian Grove Road | 1.7 | MDOT | ✓ | ✓ | ✓ | | ✓ | ✓ | Ρ | 2,000,000 |
| 135 | 734 | MD 185 | | | 1 | MDOT | | | \checkmark | | ✓ | ✓ | UC | 1,000,000 |
| 136 | 733 | MD 355, RockvillePike | Randolph Road Maple/Chapman Ave. | Parklawn Drive | 0.6 | MDOT | ✓ | ✓ | ✓ | | ✓ | ✓ | Ρ | 7,370,000 |
| 137 | 732 | MD 9, Georgia Ave Wheaton to Onley | Wheaton | Onley | | MDOT | | | | | ✓ | ✓ | Ρ | 5,000,000 |
| 138 | 731 | MD 97 (Brookeville Bypass) | South of Brookeville | North of Brookeville | 0.7 | MDOT | ✓ | | | | ✓ | ✓ | Ρ | \$630,000 |
| 139 | 741 | MD 97, Georgia Ave (Forest Glen Road to 16th St) | 16th Street | Forest Glen Road | 0.7 | MDOT | ✓ | ✓ | | | ✓ | ✓ | Ρ | 2,000,000 |
| 140 | 789 | MD Georgia, Ave | Randolph Road | | 0.4 | MDOT, MCDOT | ✓ | ✓ | ✓ | 0 | ✓ | ✓ | F | \$63,000 |
| 141 | 743 | MD124, Woodfield Road | Midcounty Highway | Airpark Road | 1.6 | MCDOT | ✓ | | ✓ | | ✓ | ✓ | Ρ | 7,000,000 |
| 142 | 251 | MD198/MD28 shared use path | New Hampshire Avenue (MD 650) | Old Columbia Pike | 3 | MCDOT, MDOT | | ✓ | | | | | | \$0 |
| 143 | 42 | MD384 connector to Silver Spring Metro Station | 16th Street | East-West Highway | 1 | MCDOT, MDOT | | ✓ | | | | | | \$0 |
| 144 | 106 | Metropolitan Branch Trail | Silver Spring Metro Station | DC Line | | MCDOT | | ✓ | | | | | | \$0 |
| 145 | 15 | Metropolitan Branch Trail | Silver Spring Metro/Transit Center | Montgomery College Campus Takoma Park | 1 | MCDOT | | ✓ | | | | | F | \$0 |
| 146 | 72 | MidCounty Highway | ICC | Frederick Road (MD355) | | MCDOT, M-NCPPC | | ✓ | | | | | | \$0 |
| 147 | 172 | Middlebrook Road | Father Hurley Boulevard | MidCounty Highway | | MCDOT | | ✓ | | | | | | \$0 |
| 148 | 86 | Montrose Road/Parkway East | Falls Road | Veirs Mill Road (MD586) | 2 | MCDOT, M-NCPPC | | ✓ | | | ✓ | | F | \$119,890 |
| 149 | 90 | Muddy Branch Road | Darnestown Road (MD28) | Clopper Road (MD117) | | MCDOT | | ✓ | | | | | | \$0 |
| 150 | 104 | Muncaster Mill Road (MD115)/ Norbeck Road (MD28) | Woodfield Road | Georgia Avenue (MD97) | 5 | MCDOT, MDOT | | ✓ | | | | | | \$0 |
| 151 | 169 | Nebel Street - north | Old Georgetown Road | Randolph Road | | MCDOT | ✓ | | | | | | | \$0 |
| 152 | 160 | Nebel Street - south | Nicholson Lane | Old Georgetown Road | | MCDOT | ✓ | | | | | | | \$0 |
| 153 | 149 | Nebel Street extended | Randolph Road | Chapman Avenue | 1 | MCDOT | | ✓ | | | | | С | \$13,906 |

Page 12

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Path | Side Spo walk Are | t∕ In In a CLRP TIP | Status | Cost |
|-----|------------|---|------------------------------|---|-------------------|-------------------------|--------------|----------------------|------------------------|--------|---------|
| 154 | 154 | Needwood Road Bike Path | Deerlake Road | Muncaster Mill Road (MD115) | 2 | MCDOT | | | | F | \$4,200 |
| 155 | 816 | Neighborhood Traffic Calming | | | | MCDOT | | TC | | F | \$2,424 |
| 156 | 89 | New Hampshire Avenue | DC Line | 1-495 | 4 | MCDOT, MDOT | | | | | \$0 |
| 157 | 134 | New Hampshire Avenue (MD650) - Ashton | Ednor Road | Olney-Sandy Spring Road (MD108) | 2 | MCDOT, MDOT | | | | | \$0 |
| 158 | 207 | New Hampshire Avenue (MD650) - Colesville | Randolph Road | Spencerville Road (MD198) | 4 | MCDOT, MDOT | | | | | \$0 |
| 159 | 252 | New Hampshire Avenue (MD650) - Ednor | Spencerville Road (MD198) | Ednor Road | 2 | MCDOT, MDOT | | | | | \$0 |
| 160 | 120 | New Hampshire Avenue (MD650) - Hillandale | I-495 | Lockwood Drive | 1 | MCDOT, MDOT | | | | | \$0 |
| 161 | 47 | Nicholson Lane/Parklawn Drive | Nebel Street | Twinbrook Parkway | | MCDOT, M-NCPPC | | | | | \$0 |
| 162 | 87 | Norbeck Road (MD28) | Georgia Avenue (MD97) | Layhill Road | 3 | MCDOT, MDOT | | | | | \$0 |
| 163 | 205 | North Bethsda Trail Bridges | crossings of I-495 and I-270 | | | MCDOT | | | | С | \$0 |
| 164 | 79 | Norwood Road | Layhill Road (MD182) | New Hampshire Avenue (MD650) |) | MCDOT, M-NCPPC | | | | | \$0 |
| 165 | 208 | Observation Drive | Germantown Road (MD118) | Frederick Road (MD355) | | MCDOT | | | | | \$0 |
| 166 | 62 | Old Baltimore Road/New Cut Road | Clarksburg Road (MD121) | Frederick Road (MD355) | | MCDOT | | | | | \$0 |
| 167 | 257 | Old Columbia Pike | E. Randolph Road | MD 198 | | MCDOT | | | | | \$0 |
| 168 | 228 | Olney-Laytonsville Road (MD108) - Laytonsville | Laytonsville Town boundary | Olney Mill Road | | MCDOT, MDOT | | | | | \$0 |
| 169 | 236 | Olney-Sandy Spring Road (MD108) - Ashton | Layhill Road (MD182) | Howard County line | 2 | MCDOT, MDOT | | | | | \$0 |
| 170 | 194 | Pedestrian Safety Program | Countywide | | | MCDOT | | | | F | \$9,600 |
| 171 | 126 | Persimmon Tree Road | Oaklyn Drive | Falls Road (MD189) | | MCDOT | | | | | \$0 |
| 172 | 95 | Piney Meetinghouse Road | River Road (MD190) | Darnestown Road | | MCDOT | | | | | \$0 |
| 173 | 112 | Quince Orchard Road | Dufief Mill Road | Darnestown Road (MD28) | | MCDOT | | | | | \$0 |
| 174 | 150 | Randolph Road - central | Parklawn Drive | Veirs Mill Road (MD586) | | MCDOT | | | | | \$0 |
| 175 | 119 | Randolph Road - east | Veirs Mill Road (MD586) | Kemp Mill Road/ Northwest Branch Trail | | MCDOT | | | | | \$0 |
| 176 | 206 | Randolph Road - west | Rockville Pike (MD355) | Parklawn Drive | | MCDOT | | | | | \$0 |
| 177 | 183 | Redland Road - east | Needwood Road | Muncaster Mill Road (MD115) | | MCDOT | | | | | \$0 |

Page 13

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike | Path | | Spot/ Area | In CLRP | In TIP | Status | Cost |
|-----|------------|--|-------------------------------|-------------------------------|-------------------|--------------------------------------|------|------|--------------|---------------|------------|-----------|--------|----------|
| 178 | 59 | Redland Road - west | Shady Grove Metrorail station | Needwood Road | 1 | MCDOT, M-NCPPC | | ✓ | | | | | | \$0 |
| 179 | 156 | Richter Farm Road | Great Seneca Highway (MD119) | Clopper Road (MD117) | | MCDOT | | ✓ | | | | | С | \$0 |
| 180 | 221 | Riffleford Road | Darnestown Road (MD28) | Germantown Road (MD118) | | MCDOT | ✓ | | | | | | | \$0 |
| 181 | 101 | River Road (MD190) | DC line | Seneca Road (MD112) | 13 | MCDOT, MDOT | | ✓ | | | | | | \$0 |
| 182 | 817 | Robey Road | Greencastle Road | Briggs Chaney Road | 1 | MCDOT | | ✓ | | | | | С | \$8,142 |
| 183 | 157 | Rock Creek Trail-Forest Glen Metro connector | Stoneybrook Road | Seminary Road | | MCDOT, Montgomery County, M-NCPPC | | ✓ | | | | | | \$0 |
| 184 | 138 | Rock Springs Connector | Democracy Boulevard | Tuckerman Lane | | MCDOT | | ✓ | | | | | | \$0 |
| 185 | 200 | Seneca Road | River Road (MD190) | Darnestown Road (MD28) | | MCDOT, MDOT | ✓ | | | | | | | \$0 |
| 186 | 10 | Seven Locks Road | Montrose Road | Bradley Blvd. | 5 | MCDOT | ✓ | ✓ | | | | | Ρ | \$27,000 |
| 187 | 152 | Shady Grove Road - east | Frederick Road (MD355) | Muncaster Mill Road (MD115) | | MCDOT | ✓ | | | | | | UC | \$0 |
| 188 | 170 | Shady Grove Road - west | Darnestown Road | Frederick Road (MD355) | | MCDOT | ✓ | ✓ | | | | | Ρ | \$0 |
| 189 | 819 | Sidewalk and Infrasturcture Revitalization | | | | MCDOT | | | | S | | | F | \$44,762 |
| 190 | 231 | Sidewalk Program - minor projects | countywide | | | MCDOT | | | | | | ✓ | F | \$10,027 |
| 191 | 209 | Silver Spring Green Trail | Silver Spring Metro Station | Sligo Creek Hiker-Biker Trail | | MCDOT | ✓ | | | | | ✓ | F | \$6,334 |
| 192 | 820 | Snouffer School Road | Sweet Autumn Drive | Centerway Road | 1 | MCDOT | ✓ | ✓ | ✓ | | | | Ρ | \$23,710 |
| 193 | 68 | Spencerville Road (MD198) - Fairland | Old Columbia Pike | Prince George's County line | 2 | MCDOT, MDOT | | ✓ | | | | | | \$0 |
| 194 | 823 | Street Tree Preservation | | | | MCDOT | | | | S | | | F | \$24,900 |
| 195 | 821 | Streetlight Enhancements - CBD/Town Center | | | | MCDOT | | | | 0 | | | F | \$3,430 |
| 196 | 117 | Tilden Lane | Nicholson Lane | Hounds Way | | MCDOT | ✓ | | | | | | | \$0 |
| 197 | 822 | Traffic Signals | | | | MCDOT | | | | 0 | | | F | \$35,106 |
| 198 | 824 | Transportation Improvements for Schools | | | | MCDOT | | | | S | | | F | \$1,796 |
| 199 | 825 | Travilah Road | Darnestown Road | Dufief Mill Road | 2 | MCDOT | | ✓ | \checkmark | | | | С | \$13,601 |
| 200 | 46 | Tuckerman Lane | Old Georgetown Road | Rockville Pike (MD355) | | MCDOT | ✓ | | | | | | | \$0 |
| 201 | 76 | Twinbrook Parkway | Frederick Road (MD355) | Veirs Mill Road (MD586) | | MCDOT | ✓ | | | | | | | \$0 |
| 202 | 88 | University Boulevard | Georgia Avenue | Prince George's County Line | | MCDOT, MDOT | | ✓ | | | | | | \$0 |

Page 14

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Side Path walk | Spot/ In In Area CLRP TIP Status | Cost |
|-----|------------|---|------------------------|----------------------|-------------------|-------------------------|------------------------|-------------------------------------|----------|
| 203 | 220 | Viers Mill Road (MD586) - west | Twinbrook Parkway | Matthew Henson Trail | 2 | MCDOT, MDOT | | | \$0 |
| 204 | 229 | Watkins Mill Road | Frederick Road (MD355) | MidCounty Highway | | MCDOT | | | \$0 |
| 205 | 81 | Wayne Avenue Green Trail | Spring Street | Sligo Creek Trail | | MCDOT, M-NCPPC | | | \$0 |
| 206 | 233 | West Cedar Lane | Old Georgetown Road | Beach Drive | | MCDOT | | □ □ P | \$0 |
| 207 | 40 | Western Avenue | River Road | Chevy Chase Circle | | MCDOT | | | \$0 |
| 208 | 185 | Westlake Drive | Westlake Terrace | Tuckerman Lane | | MCDOT | | C | \$0 |
| 209 | 230 | Westlake Terrage/Fernwood Road/Green Tree Road | Rockledge Drive | Old Georgetown Road | | MCDOT | | | \$0 |
| 210 | 826 | White Flint District East | | | | MCDOT | | B 🗌 🗌 F | \$29,400 |
| 211 | 827 | White Flint District West | | | | MCDOT | | F | \$98,642 |
| 212 | 84 | Willard Avenue Bike Lanes | Willard Avenue Park | Wisconsin Avenue | | MCDOT | | | \$0 |
| 213 | 121 | Wilson Lane (MD188) - west | MacArthur Boulevard | Elmore Lane | 2 | MCDOT, MDOT | | | \$0 |
| 214 | 260 | Wisconsin Avenue Path | Bradley Lane | Oliver Lane | | MCDOT, M-NCPPC | | | \$0 |
| 215 | 828 | Woodfield Road Extended | Main Street | Ridge Road | 1 | MCDOT | | □ □ C | \$13,842 |
| 216 | 83 | Woodmont Avenue | Bethesda Avenue | Battery Lane | | MCDOT | | | \$0 |

| Pr | roject ID | Project/Facility Name | From | То | | Responsible Agencies | Bike S Path v | ide Spot/ alk Area | In CLRP | In TIP S | Status | Cost |
|--------|-----------|--|-------------------------------|----------------------|---|---|------------------|-----------------------|------------|-------------|--------|---------|
| Prince | e Geor | ge's County | | | | | | | | | | |
| 217 | 188 | Addison Road | MD 214 | Walker Mill Road | | Prince Georges County | | ✓ | | | Ρ | \$2,343 |
| 218 | 581 | Adelphi Road Sidewalks and Bike Lanes | MD 193 | MD 410 | 0 | Prince Georges County, M-NCPPC | | | | | U | \$1,400 |
| 219 | 77 | Allentown Road | MD 5 | Old Fort Road | | Prince Georges County | | | | | U | |
| 220 | 111 | Anacostia River Trail | Bladensburg Marina | Wash. D.C. line | | M-NCPPC, Prince Georges County | | | | | С | \$500 |
| 221 | 247 | Auth Road | MD 337 (Allentown Road) | MD 5 (Branch Avenue) | | Prince Georges County | | | | | F | \$450 |
| 222 | 594 | Auth Road Sidewalks and Bike Lanes | MD 337 | Auth Way | 0 | Prince Georges County, M-NCPPC | | | | | U | \$1,000 |
| 223 | 155 | Bock Road | Livingston Road | Tucker Road | | Prince Georges County | | | | | | |
| 224 | 133 | Brinkley Road | Allentown Road | St. Barnabas road | | Prince Georges County | | | | | U | |
| 225 | 53 | Cabin Branch Trail | MD 214 | Cheverly Metro | | M-NCPPC, Prince Georges County | | | | | | \$260 |
| 226 | 108 | Cabin Branch Trail | Presidential Corporate Center | Western Branch | | M-NCPPC, Prince Georges County | | | | | | \$1,350 |
| 227 | 588 | Charles Branch Trail | Rosaryville Creek | Western Branch | 0 | M-NCPPC, Prince Georges County, M- NCPPC | | | | | U | \$4,000 |
| 228 | 125 | Chesapeake Beach Rail-Trail | MD 214 | Capital Beltway | | M-NCPPC, Prince Georges County | | | | | U | \$650 |
| 229 | 135 | Chesapeake Beach Rail-Trail | MD 704 | Addison Road Metro | | M-NCPPC, Prince Georges County, City of Seat Pleasant | | | | | U | \$200 |
| 230 | 124 | Chesapeake Beach Rail-Trail | Capital Beltway | Upper Marlboro | | M-NCPPC, Prince Georges County | | | | | U | \$1,080 |
| 231 | 573 | Chestnut Avenue/Highbridge Road Sidepath | MD 450 | MD 564 | 0 | Prince Georges County, M-NCPPC | | | | | U | \$1,512 |

Page 16

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike | Path | | Spot/ I Area CL | | In TIP 3 | Status | Cost |
|-----|------------|---|------------------------|------------------------------------|-------------------|--|------|------|--------------|--------------------|---|-------------|--------|-----------|
| 232 | 5 | Collington Branch Trail | MD 214 | Upper Marlboro | 6 | M-NCPPC, Prince Georges County | | ✓ | | | | | Ρ | \$2,000 |
| 233 | 23 | East Coast Greenway American Discovery Trail | Washington D.C. | Anne Arundel County | | MDOT, M-NCPPC, Prince Georges County | | ✓ | | | | | | \$0 |
| 234 | 833 | Edmonston Road Complete and Green Street | MD 201 | 51st Street | 0.5 | Prince Georges County | ✓ | | ✓ | | | | Ρ | \$4,379 |
| 235 | 839 | Evarts Street Bike Lanes | I-495 | Ruby Lockhart Boulevard | 0.2 | Prince Georges County | ✓ | | ✓ | | | | С | |
| 236 | 55 | Folly Branch Trail | Bald Hill Branch | Glenwood Park Neighborhood Park | | M-NCPPC, Prince Georges County | | ✓ | | | | | Ρ | \$1,000 |
| 237 | 218 | Fort Foote Road | Oxon Hill Road (north) | Oxon Hill Road (south) | | Prince Georges County | ✓ | | | | | | | |
| 238 | 163 | Fort Washington Road | MD 210 | Fort Washington National Park | | Prince Georges County | ✓ | | | | | | U | |
| 239 | 168 | Good Luck Road | MD 193 | MD 201 | | Prince Georges County | ✓ | | | | | | U | |
| 240 | 569 | Gunpowder Road Sidepath and Bike Lanes | MD 212 | MD 198 | 0 | Prince Georges County, M-NCPPC | ✓ | ✓ | | | | | Ρ | \$2,000 |
| 241 | 834 | Harry S Truman Drive Complete and Green Street | Mt. Lubentia Way | Lottsford Road | 1.6 | Prince Georges County | ✓ | | ✓ | | | | Ρ | \$15,075 |
| 242 | 52 | Henson Creek Trail extension | Brinkley Road | Branch Avenue Metro | | M-NCPPC, Prince Georges County | | ✓ | | | | | Ρ | \$1,367 |
| 243 | 739 | I-95/I-495 Capital Beltway | Auth Way | I-495/I-95 Phase 2 (Acces Road | 1 | MDOT | ✓ | ✓ | \checkmark | | / | ✓ | Р | 8,000,000 |
| 244 | 798 | Improve Ped Crossing at Suitland Pkwy Forestville | | | | National Park Service | | | | I [| | | | \$367 |
| 245 | 580 | Iverson Street Sidewalks and Bike Lanes | MD 5 | Iverson Place | 0 | Prince Georges County, M-NCPPC | ✓ | | | | | | U | \$700 |
| 246 | 582 | Jamestown Road Sidewalks and Bike Lanes | MD 500 | Ager Road | 0 | Prince Georges County, M-NCPPC | | | | | | | U | \$1,000 |
| 247 | 571 | Jericho Park Road Sidepath and Bike Lanes | MD 197 | Race Track Road | 0 | Prince Georges County, M-NCPPC | ✓ | ✓ | | | | | U | \$385 |

Page 17

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Side Spot/ In In COSt Path walk Area CLRP TIP Status |
|-----|------------|--|---------------------------------|---------------------|-------------------|---|--|
| 248 | 587 | Little Paint Branch Trail Extension | Cherry Hill Road | Sellman Road | 0 | M-NCPPC, Prince Georges County, DPW&T | ✓ ✓ □ P \$5,000 |
| 249 | 6 | Livingston Road | Oxon Hill Road | MD 210 | | Prince Georges County | |
| 250 | 726 | MD 117, Collington Road | Kenhill Dr. | MD 450 | 1.4 | MDOT | ✓ ✓ ✓ P 4,100,000 |
| 251 | 109 | MD 193 | MD 564 | Montgomery Co. line | | MDOT | |
| 252 | 592 | MD 197 Sidepath | MD 198 | Rockledge Drive | 0 | MDOT, M-NCPPC | ✓ ✓ □ U \$18,000 |
| 253 | 753 | MD 201 (Edmonston Road/US 1 Balimore Ave.) | 1-95 | Muirkirk Road | 18 | MDOT | ✓ □ ✓ ✓ P 5,000,000 |
| 254 | 729 | MD 210, Indian Head HWY | | | | MDOT | F 4,574,000 |
| 255 | 788 | MD 223 Piscataway Rd | Steed Rd | MD 4 | 8 | MDOT | □ □ ✓ ✓ F \$1,140 |
| 256 | 589 | MD 223 Sidepath | MD 4 | Livingston Road | 0 | MDOT, M-NCPPC | ✓ ✓ □ U \$15,000 |
| 257 | 728 | MD 28, Norbeck Rd/MD 198 Spencerville Road | MD 97 | I-95 | 11 | MDOT | □ □ □ ✓ ✓ U 5,000,000 |
| 258 | 727 | MD 3, Robert Crain HWY | US 50 | MD 32 | 8.9 | MDOT | V U 5,400,000 |
| 259 | 590 | MD 4 Sidepath | I-495 | Southern Avenue | 0 | MDOT, M-NCPPC | ✓ ✓ □ U \$4,000 |
| 260 | 723 | MD 4, Pennsylvania Ave (Suitland PKWY Interchange) | MD 4 Suitland PKWY | | | MDOT | ✓ ✓ ○ ○ ✓ ○ P 0,000,000 |
| 261 | 722 | MD 4, Pennsylvania Ave. | I-95/I-495 | MD 223 | 3.1 | MDOT | ✓ □ 0 ✓ P 7,300,000 |
| 262 | 730 | MD 450 Annapolis Road | Stoneybrook Dr. | West of MD | 1.7 | MDOT | □ ✔ ✔ 0 ✔ ✔ U 1,000,000 |
| 263 | 570 | MD 450 Sidepath and/or wide sidewalks | Seabrook Road | US 1 | 0 | MDOT, SHA | ✓ ✓ □ U \$3,000 |
| 264 | 740 | MD 5 Branch Ave (Interchange at MD 373/Brandywine) | At BrandyWine Road (MD 373/381) | | 0.9 | MDOT | □ ✔ ✔ ✔ ₽ 3,000,000 |
| 265 | 578 | MD 564 Sidepath and Bike Lanes | MD 197 | MD 450 | 0 | MDOT, M-NCPPC | ✓ ✓ □ U \$10,000 |
| 266 | 116 | MD 564 Sidepath and Bike Lanes | MD 197 | MD 450 | | Prince Georges County, M-NCPPC | ✓ ✓ □ □ U \$4,000 |
| 267 | 591 | MD 704 Sidepath and Bike Lanes | MD 450 | Eastern Avenue | 0 | MDOT, M-NCPPC | ✓ ✓ □ U \$60,000 |
| 268 | 721 | MD210, Indian Head HWY | I-95/I-495 | MD 228 | 10 | MDOT | □ □ O ✔ ✔ U 2,700,000 |

Page 18

DRAFT Key to Codes

| 2/0 | • | Project/Facility Name | From | To | (Miles) | Responsible Agencies Prince Georges | Path | Side Spot walk Area | t/ In a CLRP | In TIP | | Cost |
|-----|-----|---|---------------------------------------|---------------------------------|---------|---|------|------------------------|-----------------|-----------|----|---------|
| 269 | 574 | Mitchellville Road Sidepath | Mt. Oak Road | US 301 | 0 | County, M-NCPPC | | | | | U | \$768 |
| 270 | 838 | Montpelier Road Complete and Green Street | MD 197 | 200 feet south of Carland Place | 1.4 | Prince Georges County | | \checkmark | | | Ρ | |
| 271 | 577 | Old Chapel Road Sidewalk and Bikeway | MD 197 | Race Track Road | 0 | Prince Georges County, M-NCPPC | | | | | С | \$2,000 |
| 272 | 235 | Old Fort Road | MD 210 | Fort Washington Road | | Prince Georges County | | | | | | |
| 273 | 51 | Oxon Hill Road | MD 210 | Livingston Road | | Prince Georges County, DPW&T | | | | | UC | \$0 |
| 274 | 139 | Oxon Hill Road (MD 414) | MD 210 | St. Barnabas Road | | MDOT | | | | | | \$350 |
| 275 | 586 | Oxon Run Trail | Southern Avenue | Naylor Road | 0 | M-NCPPC, Prince Georges County, M- NCPPC | | | | | U | \$1,100 |
| 276 | 835 | Paint Branch Parkway Complete and Green Street | River Road | MD 201 | 0.9 | Prince William Co. DPW | | \checkmark | | | F | \$2,540 |
| 277 | 836 | Paint Branch Parkway Complete and Green Street | MD 201 | River Road | 0.8 | Prince Georges County | | \checkmark | | | Ρ | \$2,540 |
| 278 | 78 | Piscataway Creek Trail | Dower House Branch near Cheltenham | Potomac River | | M-NCPPC, Prince Georges County, National Park Service | | | | | Ρ | \$2,300 |
| 279 | 115 | Potomac Heritage On-Road Bicycle Route | Oxon Cove Park | Piscataway | | Prince Georges County, DPW&T | | | | | Ρ | \$0 |
| 280 | 198 | Prince George's Connector | Chillum Road | Gallatin Street | | M-NCPPC, Prince Georges County | | | | | Ρ | \$400 |
| 281 | 585 | Princess Garden Parkway Sidewalks and Bike Lanes | MD 450 | Good Luck Road | 0 | Prince Georges County, M-NCPPC | | | | | U | \$700 |
| 282 | 579 | Prospect Hill Sidewalks and Bike Lanes | Hillmeade Road | MD 953 | 0 | Prince Georges County, M-NCPPC | | | | | U | \$800 |
| 283 | 583 | Queen Chapel Road Sidewalks and Bike Lanes | MD 410 | Eastern Avenue | 0 | MDOT, M-NCPPC | | | | | U | \$5,000 |
| 284 | 572 | Race Track Road Sidepath and Bike Lanes | MD 450 | MD 197 | 0 | Prince Georges County, M-NCPPC | | | | | U | \$1,900 |

Page 19

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Pai | Side h walk | Spot/ Area | In CLRP | In TIP | Status | Cost |
|-----|------------|---|---------------------|-------------------------------|-------------------|--|-------------|----------------|---------------|------------|-----------|--------|-----------|
| 285 | 850 | Rhode Island Avenue Trolley Trail Ext. Phase I | Queensbury Road | US 1 | 1 | M-NCPPC, Prince Georges County | | | | | | С | |
| 286 | 553 | Rhode Island Avenue Trolley Trail Ext. Phase II | Farragut Street | Armentrout Drive | 0 | M-NCPPC, Prince Georges County | | | | | | Ρ | \$1,500 |
| 287 | 593 | Ritchie Branch Trail | Marlboro Pike | Walker Mill Road | 0 | M-NCPPC, Prince Georges County, M- NCPPC | |] | | | | U | \$2,000 |
| 288 | 186 | Ritchie Marlboro Road | Old Marlboro Pike | Capital Beltway | | Prince Georges County | |] | | | | | \$1,100 |
| 289 | 840 | Ruby Lockhart Boulevard | Evarts Street | St. Joseph's Drive | 0.6 | Prince Georges County | v v | | | | | С | |
| 290 | 575 | Silver Hill Road Sidewalks and Bike Lanes | MD 5 | Walker Mill Road | 0 | MDOT, DPW&T | | | | | | U | \$1,680 |
| 291 | 576 | St. Barnabas Road Sidewalks and Bike Lanes | Silver Hill Road | Livingston Road | 0 | Prince Georges County, M-NCPPC | | | | | | U | \$2,500 |
| 292 | 54 | Suitland Parkway Trail | Washington D.C. | MD 4 | 6 | National Park Service | |] | | | | | \$0 |
| 293 | 837 | Swan Road Complete and Green Street | MD 458 | 200 feet south of Swann Place | 0.7 | Prince Georges County | | | | | | Ρ | \$4,885 |
| 294 | 21 | Temple Hills Road | Saint Barnabas Road | Piscataway Road | | Prince Georges County | | | | | | U | |
| 295 | 213 | Tinkers Creek Trail | MD 5 | Piscataway Creek | | M-NCPPC, Prince Georges County | |] | | | | | \$1,600 |
| 296 | 253 | Tucker Road | Saint Barnabas Road | Allentown Road | | Prince Georges County | | | | | | | |
| 297 | 100 | US 1 | Sunnyside Avenue | Contee Road | | MDOT | | | | | | | \$1,000 |
| 298 | 118 | US 1 (College Park) | Sunnyside Avenue | Albion Road | | MDOT | | | | | | | \$0 |
| 299 | 724 | US 1, Baltimore Ave | College Ave | 1-95/1-495 | 4.6 | MDOT | | | | ✓ | ✓ | U | 0,000,000 |
| 300 | 725 | US 301, Crain Highway | Mount Oak Road | US 50 | 2 | MDOT | | | | ✓ | ✓ | U | 3,800,000 |
| 301 | 841 | Walker Mill Road bike lanes | Southwest Branch | Beechnut Road | 0.7 | M-NCPPC, Prince Georges County | | | | | | С | |
| 302 | 852 | WB&A Spur Trail | | | 1 | M-NCPPC, Prince Georges County | | | | | | С | |

Page 20

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Side Spot/ Path walk Area | | Cost |
|-----|------------|---|------------------------------|-------------------------|-------------------|---|-----------------------------------|--------------|---------|
| 303 | 201 | WB&A Spur Trail | WB&A Trail | Fran Uhler Natural Area | | M-NCPPC, Prince Georges County | | | |
| 304 | 249 | Western Branch Trail | Lottsford Road | Upper Marlboro | | M-NCPPC, Prince Georges County | | | \$3,100 |
| 305 | 584 | Whitfield Chapel Road Sidewalks and Bike Lanes | MD 704 | MD 450 | 0 | Prince Georges County, M-NCPPC | | | \$800 |
| 306 | 196 | Woodrow Wilson Bridge | Oxon Hill Road | Virginia | | M-NCPPC, Prince Georges County, MDOT | □ ∨ □ B | ✓ C | \$0 |
| Reg | ion-wid | 9 | | | | | | | |
| 307 | 751 | WMATA Maryland Metrorail Crossing Improvements | | | | WMATA | | P | \$1,363 |
| 308 | 748 | WMATA Maryland Metrorail Sharrows and Bike Lanes | | | 8 | WMATA | | <u> </u> | \$341 |
| 309 | 745 | WMATA Maryland Metrorail Sidewalk/ Pathway Project | | | 5 | WMATA | | □ □ P | \$2,073 |
| Roc | kville | | | | | | | | |
| 310 | 559 | Accessible Pedestrian Signals | Citywide project | | 0 | City of Rockville | | | \$1,129 |
| 311 | 24 | Bicycle Route System Improvements | Citywide project | | | City of Rockville | | C | \$1,057 |
| 312 | 167 | Millennium Trail South - Wootton Parkway | W. Edmonston Dr | Veirs Mill Rd | 1 | City of Rockville, Maryland State Highway Administration | | □ □ C | \$905 |
| 313 | 161 | Ped/Bike Bridge Over I-270 along MD 28 | Adclare Rd and Nelson Street | Darnestown Road | 2 | City of Rockville, Maryland State Highway Administration | □ ⊻ □ B | □ □ C | \$4,714 |
| 314 | 216 | Pedestrian Safety | Citywide project | | | City of Rockville | | | \$1,366 |
| 315 | 560 | Rockville Intermodal Access - Baltimore Road | Rockville Town Center | City limit | 0 | City of Rockville | | □ ∨ F | \$6,393 |
| 316 | 818 | Rockville Sidewalk Extensions | | | 1 | MCDOT | | □ □ F | \$532 |
| 317 | 143 | Sidewalks | Citywide project | | 2 | City of Rockville | | | \$1,422 |
| | | | | | | | | | |

Page 21

DRAFT Key to Codes

| Pro | oject ID Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Side Path walk | Spot/ In In Area CLRP TIP Status | Cost |
|-------|--------------------------------|------------|-------------------|-------------------|---|------------------------|-------------------------------------|---------|
| Takom | na Park | | | | | | | |
| 318 | 50 Carroll Avenue Bike Lanes | DC Line | Piney Branch Road | | MDOT, Takoma Park | | | \$0 |
| Town | of Emmitsburg | | | | | | | |
| 319 | 546 Emmitsburg Greenway Trail | Emmitsburg | Emmitsburg | 0 | Frederick County, Town of Emmitsburg | | | \$2,500 |

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Side walk | Spot/ Area C | In In CLRP TIP | Status | Cost |
|------|------------|---|----------|------------|-------------------|-------------------------------|--------------|-----------------|-------------------|--------|---------|
| VA | | | | | | | | | | | |
| _ | | | | | | | | | | | |
| 320 | 801 | Mt Vernon Trail Bridges | | | | National Park Service | | Β [| | | \$1,500 |
| 321 | 796 | North Park Trail Connection | | | | National Park Service VDOT | | [| | Ρ | \$1,200 |
| 322 | 799 | Re-alignment of Mt. Vernon Trail at Daingerfield I | | | | National Park Service | | 0 [| | | \$713 |
| 323 | 800 | Theodore Roosevelt Island Trailhead Improvements | | | | National Park Service | | [| | F | \$500 |
| Alex | kandria, | Fairfax County, Falls Church, Lo | udoun | | | | | | | | |
| 324 | 651 | VA 7 Trail | Leesburg | Alexandria | | NVTA | | ſ | | | |

| Р | roject ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Side Path walk | Spot/ Area | In CLRP | In TIP | Status | Cost |
|--------|-----------|--|----------------------|---|-------------------|---------------------------------------|------------------------|---------------|------------|-----------|--------|----------|
| Arling | gton C | ounty | | | | | | | | | | |
| 325 | 384 | ADA sidewalk upgrades | | | | Arlington County, VDOT | | Ι | | | UC | \$100 |
| 326 | 859 | Arlington Bicycle Network | | | | Arlington County, NVTA | | | | | U | \$10,000 |
| 327 | 609 | Arlington Blvd. Irving St. HSIP | Arlington Boulevard | Irving Street | | Arlington County, VDOT | | I | ✓ | ✓ | F | \$473 |
| 328 | 610 | Arlington Blvd. Park Drive HSIP | Arlington Boulevard | Park Drive | | Arlington County, VDOT | | Ι | ✓ | ✓ | F | \$495 |
| 329 | 601 | Arlington Blvd. Trail improvements | Pershing Drive | Washington Blvd. | 1 | Arlington County, VDOT | | | | ✓ | Ρ | \$800 |
| 330 | 123 | Arlington Boulevard Trail Improvements | 10th Street overpass | Washington Boulevard | 0.8 | Arlington County, Arlington County | | S | | | F | \$670 |
| 331 | 19 | Army Navy Country Club Emergency Access Drive | S. Queen St. | Army Navy Country Club (Private Drive) | e 0.2 | Arlington County | | 0 | | | U | \$5,000 |
| 332 | 599 | Army Navy Drive/Joyce St. bike facilities | S. Joyce Street | 12th Street South | 1 | Arlington County, FHWA, VDOT | | | | | U | \$1,000 |
| 333 | 611 | Arterial Street Safety improvements | | | | Arlington County | | S | | | F | \$800 |
| 334 | 618 | Capital Bikeshare - Arlington | | | | Arlington County, DDOT | | 0 | | | UC | \$5,423 |
| 335 | 604 | Carlin Spring Rd. bridge replacement | Carlin Springs Rd. | North George Mason Drive | 0 | Arlington County | | В | | | F | \$550 |
| 336 | 686 | Clarendon Blvd Trail | Wilson Blvd | Washington Blvd | | NVTA | | | | | | |
| 337 | 608 | Columbia Pike Complete Streets | Frederick St. | Fairfax County Line | 3 | Arlington County | | S | ✓ | ✓ | Ρ | \$2,000 |
| 338 | 612 | Complete Streets (R-B corridor) | | | | Arlington County | | S | | | F | \$300 |
| 339 | 865 | Crystal City Complete Streets | | | | NVTA | | S | | | Ρ | \$2,000 |
| 340 | 383 | CUSTIS TRAIL WESTOVER UNDERPASS @ I-66 | | | | Arlington County | | | | | С | \$75 |
| 341 | 605 | Doctor's Run Trail | South Quincy Street | South George Mason Drive | 0 | Arlington County | | | | | U | \$500 |
| 342 | 653 | Four Mile Run Trail | Shirlington Road | Glebe Road | | NVTA | | | | | | |
| 343 | 313 | General Trail Improvements | | | 0 | Arlington County | | | | | UC | \$100 |

Page 24

DRAFT Key to Codes

| Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Path | | | | | Status | Cost |
|------------|---|---|--|--|--|--|---|---|--|---|---|--|
| 698 | George Mason Drive Trail | Old Dominion Drive | Four Mile Run Drive | | NVTA | | | | | | U | |
| 514 | Glebe Road Bridge Replacement | 500' south of Route 50 | 500' north of route 50 | 0 | VDOT | | | | | | С | \$1,950 |
| 518 | Glebe Road Pedestrian Crossings | Fairfax Drive | North Carlin Springs Road | 0 | VDOT | | | | ✓ | ✓ | С | \$2,780 |
| 311 | I-395 Shirlington Underpass, Four Mile Run Trail | Shirlingotn Rd | West Glebe Rd | 0 | Arlington County, VDOT | | | | | | С | \$2,000 |
| 602 | Kirkwood Rd. sidewalks | Lee Highway | 14th Street North | 1 | Arlington County | | ✓ | | | ✓ | Ρ | \$400 |
| 598 | Long Bridge Park Esplanade Bridge | Boundary Drive | GW Parkway | 0 | Arlington County, FHWA, VDOT, NPS | | | В | | | U | \$2,000 |
| 644 | Metrorail Trail | Cameron Street | Cyrstal City | | NVTA | | | | | | | |
| 607 | Old Dominion Drive Complete Streets | N. Glebe Rd. | Fairfax Co. line | 1 | Arlington County, VDOT | | ✓ | S | ✓ | ✓ | Ρ | \$2,000 |
| 310 | Old Dominion Drive Complete Streets (phase I) | Lee Highway | N. Glebe Rd. | 0 | Arlington County, VDOT | | | S | | | С | \$1,000 |
| 219 | Old Jefferson Davis Highway/ Mount Vernon Trail CO | | | | National Park Service | | | | | | | |
| 147 | Potomac Yard/Four Mile Run Trail | Potomac Avenue | Four Mile Run Trail | 0.1 | Arlington County, City of Alexandria | | | 0 | | | Ρ | \$1,500 |
| 606 | Priority Bus Stop improvements | | | | Arlington County, WMATA | | | S | ✓ | ✓ | F | \$450 |
| 110 | Route 110 Trail | Memorial Dr | Pentagon North Parking Lot | 0.7 | Arlington County, National Park Service | | | 0 | | | F | \$734 |
| 603 | Shirlington Rd. bridge replacement | Shirlington Rd. | Four Mile Run | | Arlington County | | | В | | | U | \$1,000 |
| 692 | US 50 Trail | Wilson BLVD | Nottingham Street | | NVTA | | | | | | | |
| 179 | VA 120 (Glebe Road) | N. Randolph Street | Fairfax Drive | | Arlington County, VDOT | | | I | | ✓ | F | \$2,500 |
| 664 | VA 237 Trail | Glebe Road | Washington BLVD | | NVTA | | | | | | | |
| 699 | VA 27 Trail | Arlington Blvd | Columbia Pike | | NVTA | | | | | | | |
| 315 | Washington Blvd Trail Phase I | Arlington Blvd | Walter Reed | 0 | Arlington County, VDOT | | | | | | С | \$350 |
| 600 | Washington Blvd. Trail (phase II) | S. 2nd Street | Columbia Pike | 1 | Arlington County, | | | | | ✓ | F | \$1,500 |
| | 698 514 518 311 602 598 644 607 310 219 147 606 110 603 692 179 664 699 315 | 514Glebe Road Bridge Replacement518Glebe Road Pedestrian Crossings311I-395 Shirlington Underpass, Four Mile Run Trail602Kirkwood Rd. sidewalks598Long Bridge Park Esplanade Bridge644Metrorail Trail607Old Dominion Drive Complete Streets310Old Dominion Drive Complete Streets (phase I)219Old Jefferson Davis Highway/ Mount Vernon Trail CO147Potomac Yard/Four Mile Run Trail606Priority Bus Stop improvements110Route 110 Trail603Shirlington Rd. bridge replacement692US 50 Trail179VA 120 (Glebe Road)664VA 237 Trail699VA 27 Trail | 698George Mason Drive TrailOld Dominion Drive514Glebe Road Bridge Replacement500' south of Route 50518Glebe Road Pedestrian CrossingsFairfax Drive311I-395 Shirlington Underpass, Four Mile Run TrailShirlingotn Rd602Kirkwood Rd. sidewalksLee Highway598Long Bridge Park Esplanade BridgeBoundary Drive644Metrorail TrailCameron Street607Old Dominion Drive Complete Streets (phase I)Lee Highway310Old Dominion Drive Complete Streets (phase I)Lee Highway219Old Jefferson Davis Highway/ Mount Vernon Trail COPotomac Avenue606Priority Bus Stop improvementsPotomac Avenue603Shirlington Rd. bridge replacementShirlington Rd.604VA 237 TrailGlebe Road664VA 237 TrailGlebe Road664VA 237 TrailMernorial Dr664VA 27 TrailArlington Blvd315Washington Blvd Trail Phase IArlington Blvd | Finite Constraint NatureOld Dominion DriveFour Mile Run Drive514Glebe Road Bridge Replacement500' south of Route 50500' north of route 50518Glebe Road Pedestrian CrossingsFairfax DriveNorth Carlin Springs Road311I-395 Shirlington Underpass, Four Mile Run TrailShirlingotn RdWest Glebe Rd602Kirkwood Rd. sidewalksLee Highway14th Street North603Long Bridge Park Esplanade BridgeBoundary DriveGW Parkway644Metrorail TrailCameron StreetCyrstal City607Old Dominion Drive Complete StreetsN. Glebe Rd.Fairfax Co. line310Old Dominion Drive Complete Streets (phase I)Lee HighwayN. Glebe Rd.311Potomac Yard/Four Mile Run TrailPotomac AvenueFour Mile Run Trail666Priority Bus Stop improvementsFour Mile Run TrailPotomac Avenue607Vid Jofferson Davis Highway/ Mount Vernon Trail COFour Mile Run Trail606Priority Bus Stop improvementsFour Mile Run Trail607Vid Jofferson Davis HighwayMemorial DrPentagon North Parking Lot608Shirlington Rd. bridge replacementShirlington Rd.Four Mile Run609VA 120 (Glebe Road)N. Randolph StreetFour Mile Run644VA 237 TrailGlebe RoadWashington BLVD645VA 237 TrailArlington BlvdColumbia Pika646VA 237 TrailArlington BlvdColumbia Pika | Project/ IDProject/Facility NameFromTo(Miles)698George Mason Drive TrailOld Dominion DriveFour Mile Run Drive0514Glebe Road Bridge Replacement500' south of Route 50500' north of route 500518Glebe Road Pedestrian CrossingsFairfax DriveNorth Cartin Springs Road03111395 Shrilington Underpass, Four Mile Run TrailShirlington RdWest Glebe Rd0602Kirkwood Rd. sidewaliksLee Highway14th Street North1598Long Bridge Park Esplanade BridgeBoundary DriveGW Parkway0644Metrorall TrailCameron StreetCyrstal City1647Old Dominion Drive Complete StreetsN. Glebe Rd.Fairfax Co. line1310Old Dominion Drive Complete Streets (phase 1)Lee HighwayN. Glebe Rd.0147Potomac Yard/Four Mile Run TrailPotomac AvenueFour Mile Run Trail0.1606Priority Bus Stop improvementsShirlington Rd.Four Mile Run0.76103Shirlington Rd. bridge replacementShirlington Rd.Four Mile Run0.7603Shirlington Rd. bridge replacementShirlington Rd.Four Mile Run0.7604VA 237 TrailGlebe RoadWashington BLVD0605VA 217 TrailGlebe RoadWashington BLVD6606VA 237 TrailArlington BlvdColumbia Pike0607Washington Blvd Trail Phase IArlington Blvd | Hyper Service Hyper Service Hyper Service Hyper Service 698 George Mason Drive Trail Old Dominion Drive Four Mile Run Drive NVTA 514 Glebe Road Pedestrian Crossings Fairfax Drive North Carlin Springs Road VDOT 311 L395 Shirlington Underpass, Four Mile Run Shirlington Rd West Glebe Rd 0 Arlington County, VDOT 602 Kirkwood Rd. sidewalks Lee Highway 14th Street North 1 Arlington County, FWAA VOOT, NPS 644 Metrorail Trail Cameron Street Cyrstal City NVTA 607 Old Dominion Drive Complete Streets N. Glebe Rd. Fairfax Co. line 1 Arlington County, VDOT 719 Old Jefferson Davis Highway/ Mount Vernon Trail Old Jefferson Davis Highway/ Mount Vernon Trail CO N. Glebe Rd. 0 Arlington County, VDOT 110 Route 110 Trail Memorial Dr Potomac Avenue Four Mile Run Trail 0.1 Arlington County, Natoral Park Service 1147 Potomac Yard/Four Mile Run Trail Memorial Dr Pentagon North Parking Lot 0.7 Arlington County, Natoral Park Service 1147 Potomac Yard/Four Mile Run Trail | Project/Facility Name From To (Miles) Agencies Pairs Pairs 698 George Mason Drive Trail Old Dominion Drive Four Mile Run Drive NVTA □ 514 Glebe Road Bridge Replacement 500° south of Route 50 500° north of route 50 0 VDOT □ 518 Glebe Road Pedestrian Crossings Fairfax Drive North Carlin Springs Road 0 VDOT □ 610 Kirkwood Rd. Sidewaiks Lee Highway 14th Street North 1 Arlington County, VDOT □ 627 Kirkwood Rd. Sidewaiks Lee Highway 14th Street North 1 Arlington County, VDOT □ 644 Metorall Trail Cameron Street Cyrstal City NTA □ 644 Metorall Trail Cameron Street Cyrstal City NTA □ 647 Old Dominion Drive Complete Streets (phase) Lee Highway N. Glebe Rd. 0 Arlington County, VDOT □ 648 Old Dominion Drive Complete Streets (phase) Lee Highway N. Glebe Rd. 0 Arlington County, VDOT □ 719 Old Jefferson Davis Highway/ Mount | Project/Facility Name From To (Mites) Agencies Nov Pail 698 George Mason Drive Trail Old Dominion Drive Four Mile Run Drive NVTA Image: Comparison of the Trail 514 Glebe Road Bridge Replacement 500' south of Route 50 500' north of route 50 0 VDOT Image: Comparison of the Trail 518 Glebe Road Pedestrian Crossings Fairfax Drive North Carlin Springs Road 0 VDOT Image: Comparison of the Trail 600 Kirkwood Rd. sidewalks Lee Highway 14th Street North 1 Artington County Image: Comparison of the Trail 644 Kerkwood Rd. sidewalks Cameron Street Cyrstal City NTA Image: County Image: Co | Project ID Project Washington From To (Mites) Agencies Prove Pace Set Set Set Set Set Set Set Set Set Se | Project ID Product/Facility Name From To Male Agencies Bits Bits </td <td>Project ID Project Facility Name From To (Miles) Agencies No. No.</td> <td>Project Pacificatility Name From To Mille Number Agencies Project Pacification ProjectPac</td> | Project ID Project Facility Name From To (Miles) Agencies No. No. | Project Pacificatility Name From To Mille Number Agencies Project Pacification ProjectPac |

DRAFT Key to Codes

B=Bridge or Tunnel C = Complete F = Fully Funded I = Intersection Improvement O = Other P = Partially Funded PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

Page 25

| | Project ID Project/Facility Name | From | То | Length (Miles) | Responsible Agencies FHWA, VDOT | Bike Pa | Side ath walk | Spot/ In Area CLR | In P TIP : | Status | Cost |
|------|--|-------------|---------------------------|-------------------|---|------------|------------------|----------------------|---------------|--------|---------|
| 364 | 685 Wilson blvd Trail | Wilson Blvd | Key Bridge | | NVTA | | | | | | |
| Arli | ington County, District of Columbia | | | | | | | | | | |
| 365 | 27 Rosslyn Circle & Lynn Street improvements | N. Lynn St | Ft. Myer Dr | 0.3 | Arlington County, VDOT | | | I 🗌 | | F | \$5,500 |
| Arli | ington County, Fairfax County | | | | | | | | | | |
| 366 | 192 Mount Vernon Trail Extension | Beltway | Theodore Roosevelt Island | | National Park Service Fairfax County | e, 🗌 💽 | | | | | |

| 68633Alexandria Local TrailElsenhowerRahkorsNUTA $\bodycel parking and Racks on Busesvariousvarious\bodycel parking and Racks on Busesvarious\bodycel parking and Racks on Busesvarious\bodycel parking and Racks on Busesvarious\bodycel parking and Racks on Buses\bodycel parking and Racks on Busesvariousvarious\bodycel parking and Racks on Buses\bodycel parking and Racks on Busesvariousvariousvarious\bodycel parking and Racks on Buses\bodycel parking and Racks on Busesvarious\bodycel parking and Racks on Busesvarious\bydycel parking and Racks on Busesvarious\bydycel parking and Racks on Busesvarious\bydycel parking and Racks on Buses\bydycel parking and Racks on Busesvarious\bydycel parking and Racks on Busesvarious\bydycel parking and Racks on Buses\bydycel parking and Racks on Buses\bydycel parking and Racks on Busesvarious\bydycel parking and Racks on Buses\bydycel par$ | Р | roject ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike | Si Path wa | de alk | Spot/ Area | In CLRP | | Status | Cost |
|---|--------|-----------|--|----------------------------|--------------------------------|-------------------|-------------------------|------|---------------|-----------|---------------|------------|---|--------|----------|
| 368 6.33 Alexandria Local Irail Eisenhower Reinkers N/TA U U C S2300 369 564 Bicycle Parking and Racks on Buses various 0 City of Alexandria U C \$23.00 370 B47 Bcycle Parking and Racks on Buses various City of Alexandria U P U C \$23.00 371 759 Capital Bikeshare Citywide Citywide Citywide Citywide U VDOT U \$1.000 372 761 Cystal City to Cameron Street Trail Cystal City Cameron Street 4 NVTA U U \$1.000 373 100 Duke Street Pedestrian Bridge cameron Station Ben Brennman Park 1 City of Alexandria U U \$1.000 374 640 Duke Street Pedestrian Improvements Duke Street Pedestrian Bridge Cameron Street 1 City of Alexandria U U \$1.100 375 <th>City c</th> <th>of Alexa</th> <th>andria</th> <th></th> | City c | of Alexa | andria | | | | | | | | | | | | |
| 364 Bicycle Parking and Racks on Buses various various 0 Clty of Alexandria C S 2,300 370 B47 Bicycle Parking and Racks on Buses various various Clty of Alexandria P F S 400 371 759 Capital Bikeshare Cltywide Clty of Alexandria P F S 400 372 761 Crystal Clty to Cameron Street Trail Crystal Clty Cameron Street 4 NVTA, WAATA P U \$ 1,000 373 129 Duke Street Pedestrian Bridge Cameron Stated Ben Brennman Park 1 Clty of Alexandria P C \$ 5750 374 0 Duke Street Pedestrian Improvements Duke Street Cathyle Avenue 1 Clty of Alexandria P C \$ \$ \$ 5750 375 64 Duke Street Pedestrian Improvements Duke Street Cathyle Avenue 1 Clty of Alexandria P C \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | 367 | 844 | Access to Transit | King Street | Callahan Drive | 0 | City of Alexandria | | | | Ι | | | F | \$1,200 |
| B47 Bicycle Parking at Major Transit Stops various City of Alexandria, WDOT P F \$400 371 759 Capital Bikeshare Citywide Citywide City of Alexandria, WDOT P \$33 372 761 Grystal City to Cameron Street Trail Crystal City Cameron Street 4 NVTA, WMATA Image: City of Alexandria Image: | 368 | 633 | Alexandria Local Trail | Eisenhower | Reinkers | | NVTA | | | | | | | U | |
| vbor | 369 | 564 | Bicycle Parking and Racks-on-Buses | various | various | 0 | City of Alexandria | | | | | ✓ | | С | \$2,300 |
| 372 7.61 Crystal City to Cameron Street Trail Crystal City Cameron Street 4 NVTA, WMATA U \$1.000 373 129 Duke Street Pedestrian Bridge Cameron Station Ben Brennman Park 1 City of Alexandria U \$1.000 374 800 Duke Street Pedestrian Improvements Duke Street Carryto Avenue 1 City of Alexandria U C \$1.500 376 64 Duke Street Sidewalk Improvements at I-395 Oasis Drive Walker Street City of Alexandria | 370 | 847 | Bicycle Parking at Major Transit Stops | various | various | | | | | | Ρ | | | F | \$400 |
| 129 Duke Street Pedestrian Bridge Cameron Station Ben Brennman Park 1 City of Alexandria . . C \$750 374 80 Duke Street Pedestrian Improvements Duke Street Cart/le Avenue 1 City of Alexandria . . C \$150 375 64 Duke Street Stdewalk Improvements at 1.395 Oasis Drive Walker Street 0.5 City of Alexandria, DO te Alex | 371 | 759 | Capital Bikeshare | Citywide | Citywide | | | | | | | | ✓ | Ρ | \$3 |
| 1 0 Duke Street Pedestrian Improvements Duke Street Cartyle Avenue 1 City of Alexandria 0 0 C \$195 64 Duke Street Sidewalk Improvements at I-395 Oasis Drive Walker Street 0.5 City of Alexandria, UDOT 0 0 C \$195 376 64 Duke Street Sidewalk Improvements at I-395 Oasis Drive Walker Street 0.5 City of Alexandria, VDOT 0 0 F \$1.210 376 845 Edsall Rd and S Picket St Pedestrian Improvements Edsall Road South Picket Street City of Alexandria, VDOT 1 1 F \$14.000 377 561 Elsenhower Ave Complete Street Stovall Holland 0 City of Alexandria, VDOT V F \$14.000 378 34 Elsenhower Multi-Use Trail Cameron Run East Telegraph Road 2 City of Alexandria V V V S5.000 379 860 Holland Avenue Trail Cameron Run East Telegraph Road 1 City of Alexandria V V F \$14.600 370 860 </td <td>372</td> <td>761</td> <td>Crystal City to Cameron Street Trail</td> <td>Crystal City</td> <td>Cameron Street</td> <td>4</td> <td>NVTA, WMATA</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>U</td> <td>\$1,000</td> | 372 | 761 | Crystal City to Cameron Street Trail | Crystal City | Cameron Street | 4 | NVTA, WMATA | | | | | | | U | \$1,000 |
| 375 64 Duke Street Sidewalk Improvements at I-395 Oasis Drive Walker Street 0.5 City of Alexandria, ODOT I I I F \$1,210 376 845 Edsall Rd and S Picket St Pedestrian Improvements Edsall Road South Pickett Street City of Alexandria, ODOT I I I F \$400 377 561 Elsenhower Ave Complete Street Stovall Holland 0 City of Alexandria, ODOT I I I F \$14,000 378 34 Elsenhower Ave Complete Street Stovall Holland 0 City of Alexandria, ODOT I <td< td=""><td>373</td><td>129</td><td>Duke Street Pedestrian Bridge</td><td>Cameron Station</td><td>Ben Brennman Park</td><td>1</td><td>City of Alexandria</td><td></td><td></td><td></td><td></td><td>✓</td><td>✓</td><td>С</td><td>\$750</td></td<> | 373 | 129 | Duke Street Pedestrian Bridge | Cameron Station | Ben Brennman Park | 1 | City of Alexandria | | | | | ✓ | ✓ | С | \$750 |
| VDÓT | 374 | 80 | Duke Street Pedestrian Improvements | Duke Street | Carlyle Avenue | 1 | City of Alexandria | | | | | | | С | \$195 |
| ImprovementsVÚOTImprovementsVÍOTImprovementsImproveme | 375 | 64 | Duke Street Sidewalk Improvements at I-395 | Oasis Drive | Walker Street | 0.5 | | | | | | ✓ | ✓ | F | \$1,210 |
| 378 34 Eisenhower Multi-Use Trail Cameron Run East Telegraph Road 2 City of Alexandria I <td>376</td> <td>845</td> <td></td> <td>Edsall Road</td> <td>South Pickett Street</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Ι</td> <td></td> <td></td> <td>F</td> <td>\$400</td> | 376 | 845 | | Edsall Road | South Pickett Street | | | | | | Ι | | | F | \$400 |
| 379 860 Holland Avenue Trail NVTA Image: Constraint of the straint of the strain | 377 | 561 | Eisenhower Ave Complete Street | Stovall | Holland | 0 | | ✓ | | | | ✓ | ✓ | F | \$14,000 |
| 380 98 Holmes Run Greenway Tunnels/Grade Separation N Ripley Beauregard 1 City of Alexandria I <t< td=""><td>378</td><td>34</td><td>Eisenhower Multi-Use Trail</td><td>Cameron Run East</td><td>Telegraph Road</td><td>2</td><td>City of Alexandria</td><td></td><td></td><td></td><td></td><td>✓</td><td>✓</td><td>С</td><td>\$1,600</td></t<> | 378 | 34 | Eisenhower Multi-Use Trail | Cameron Run East | Telegraph Road | 2 | City of Alexandria | | | | | ✓ | ✓ | С | \$1,600 |
| Separation Separation Separation Separation Separation 381 777 I-395 Seminary Road HOV Ramp and Ped bridge I-395 Seminary Road HOV Ramp and Ped I | 379 | 860 | Holland Avenue Trail | | | | NVTA | | | | | | | U | \$5,000 |
| bridge C \$24,400 383 37 1-95/I-495 Woodrow Wilson Memorial Bridge - Trail Prince George's County, MD Mount Vernon Trail, Alexandria 2 City of Alexandria Image: C \$24,400 383 217 King Street/Beauregard Intersection Beauregard/Walter Reed Dr. 28th Street 1 City of Alexandria, VDOT Image: C F \$11,000 384 758 Mount Vernon Trail at Abingdon Slater's Lane Pendleton Street 1 City of Alexandria, VDOT Image: C F \$750 | 380 | 98 | | N Ripley | Beauregard | 1 | City of Alexandria | | | | | ✓ | ✓ | F | \$4 |
| Trail Trail Trail F \$11,000 383 217 King Street/Beauregard Intersection Beauregard/Walter Reed Dr. 28th Street 1 City of Alexandria, VDOT Image: Constraint of the street F \$11,000 384 758 Mount Vernon Trail at Abingdon Slater's Lane Pendleton Street 1 City of Alexandria, VDOT Image: Constraint of the street F \$750 | 381 | 777 | | | | 0.4 | VDOT | | | | В | ✓ | ✓ | F | |
| 384 758 Mount Vernon Trail at Abingdon Slater's Lane Pendleton Street 1 City of Alexandria, Discret Discret F \$750 VDOT VDOT VDOT VDOT VDOT VDOT VDOT | 382 | 37 | 8 | Prince George's County, MD | Mount Vernon Trail, Alexandria | 2 | City of Alexandria | ✓ | ✓ [| | | ✓ | ✓ | С | \$24,400 |
| VDOT | 383 | 217 | King Street/Beauregard Intersection | Beauregard/Walter Reed Dr. | 28th Street | 1 | | | | | | ✓ | ✓ | F | \$11,000 |
| 385 565 Old Cameron Run Channel Trail Mill Road South Payne Street 0 City of Alexandria ✓ ✓ ✓ ۸ | 384 | 758 | Mount Vernon Trail at Abingdon | Slater's Lane | Pendleton Street | 1 | | | | | | | | F | \$750 |
| | 385 | 565 | Old Cameron Run Channel Trail | Mill Road | South Payne Street | 0 | City of Alexandria | | | | | ✓ | ✓ | F | \$1,000 |

Page 27

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike F | Sio Path wa | | Spot/ Area | In CLRP | In TIP | Status | Cost |
|------|------------|--|--------------------------------------|----------------------------------|-------------------|-------------------------------|-----------|----------------|---|---------------|--------------|-----------|--------|----------|
| 386 | 563 | On-Street Bikeways | various | various | 0 | City of Alexandria | | | | | \checkmark | | Ρ | \$1,000 |
| 387 | 130 | Pedestrian Improvements on Mount Vernon | Reed | Reed | 0 | City of Alexandria | | | | | ✓ | | С | \$500 |
| 388 | 26 | Potomac Yard Park/Landbay K | Braddock Road Metro | Four Mile Run | 2 | City of Alexandria, VDOT | | ✓ [| | | | | UC | \$9,000 |
| 389 | 862 | Reconstruct Holmes Run Trail | North Ripley Street | I-395 | 1 | NVTA, City of Alexandria | | ✓ [| | | | | F | \$5,000 |
| 390 | 780 | Rt. 7/King Street bridge over I-395 | 0.3 miles East | 0.3 miles West | 0.6 | VDOT | | ✓ | | В | | ✓ | Ρ | |
| 391 | 773 | Rt. 95 Jones Point Reforestation - w/ trails | 0.4 miles east of Rt. 1 | 0.8 miles east of Rt. 1 | 0.9 | VDOT | | ✓ [| | S | | ✓ | С | |
| 392 | 562 | Safe Routes to School | Charles Barrett Elementary School | Charles Barrett Elementary Schoo | ol O | City of Alexandria, VDOT | | | | | ✓ | ✓ | С | \$4,300 |
| 393 | 757 | Safe Routes to Schools | Citywide | Citywide | | City of Alexandria | | | | Ι | | | F | \$275 |
| 394 | 99 | Sidewalk/Trail Construction- Holmes Run/Chambliss | Citywide | Citywide | 1 | City of Alexandria, VDOT | | | ✓ | | ✓ | ✓ | UC | \$750 |
| 395 | 691 | VA 236 Trail | Wakefeild Drive | Van Dorn Street | | NVTA | | | | | | | | |
| 396 | 756 | Wilkes Street Bikeway | Royal Street | N Fayette Street | 1 | City of Alexandria | | | | | | | F | \$180 |
| 397 | 131 | Wilkes Street Tunnel | South Royal | South Union | 0 | City of Alexandria | | | | | | | С | \$770 |
| City | of Alex | andria, Arlington County | | | | | | | | | | | | |
| 398 | 566 | Four Mile Run Pedestrian and Bicycle Bridge | S Eads | Commonwealth Ave | 0 | Arlington County, VDOT | | | | | ✓ | ✓ | Ρ | \$6,000 |
| City | of Alex | andria, Fairfax County | | | | | | | | | | | | |
| 399 | 71 | Woodrow Wilson Bridge Project | Md State Line | Telegraph Road | 2 | VDOT | | ✓ [| | В | ✓ | ✓ | С | |
| City | of Fairf | ax | | | | | | | | | | | | |
| 400 | 58 | Accotink Gateway Connector Trail | Daniel's Run | Pickett Road | 1 | VDOT, City of Fairfax | | ✓ [| | | ✓ | ✓ | С | \$1,762 |
| 401 | 521 | Route 29 Spot Improvements | | | 0 | VDOT | | | | | ✓ | ✓ | F | \$6,677 |
| 402 | 175 | US 29 (Lee Highway) Fairfax Circle | @ US 50 | | | VDOT, City of Fairfax | | | | Ι | ✓ | ✓ | F | \$11,586 |
| City | of Falls | Church | | | | | | | | | | | | |
| 403 | 858 | Falls Church Complete Streets | | | | City of Falls Church, NVTA | | | | S | | | U | \$2,000 |

DRAFT Key to Codes

| Pr | oject ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike | Sic Path wa | le Sp lk Ar | ot/ ea C | In LRP | In TIP | Status | Cost |
|---------|----------|---|--|---------------------------------------|-------------------|--------------------------------|------|----------------|----------------|-------------|-----------|-----------|--------|---------|
| City o | f Man | assas | | | | | | | | | | | | |
| 404 | 262 | Old Town Manassas City Square, Walkways, & Crosswa | Phase I and Phase II | | | VDOT | | |] | | | ✓ | С | \$557 |
| City o | f Man | assas Park | | | | | | | | | | | | |
| 405 | 63 | Manassas Drive Sidewalk | Andrew Drive | Euclid Avenue | | VDOT, City of Manassas Park | | |] | 5 | | ✓ | С | \$195 |
| Distric | ct-wid | le | | | | | | | | | | | | |
| 406 | 8 | Bicycle Parking (M-70A) | District-wide | | | VDOT | | | _ F | | | | С | |
| 407 | 180 | Interstate Bicycle Route 1 | 14th street bridge Arlington County | Southern Prince William County border | 54 | VDOT | | |] (|) [| | | F | \$100 |
| 408 | 225 | NOVA signal Program | District-wide | | | VDOT | | | ין | 1 [| | | С | \$9,000 |
| Fairfa | х Со | unty | | | | | | | | | | | | |
| 409 | 674 | Old Ox Road Trail | Old Ox Road | Herndon Parkway | | NVTA | | |] | [| | | | |
| Fairfa | x and | Arlington Counties, City oFalls C | Church | | | | | | | | | | | |
| 410 | 778 | I-66 Corridor Multimodal study | I-495 | Theodore Roosevelt Bridge | 17 | VDOT | | |] (|) [| | ✓ | С | |

| Pr | oject ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Path | Side S walk A | pot/ Area | In CLRP | In TIP S | Status | Cost |
|--------|----------|--|------------------------------|-------------------------------|-------------------|----------------------------------|--------------|------------------|--------------|------------|-------------|--------|----------|
| Fairfa | x Cou | nty | | | | | | | | | | | |
| 411 | 103 | Accotink Gateway Connector Trail | King Arthur Drive | Wakefield Park | 1 | VDOT, Fairfax County | | | | | ✓ | С | \$2,619 |
| 412 | 264 | Accotink Stream Valley Trail - Dam to Hunter Villa | Lake Accotink Park | Hunter Village Drive | 0 | Fairfax County Park Authority | | | | | | С | \$400 |
| 413 | 386 | Arlington Boulevard | Patrick Henry Drive | | 0 | Fairfax County | | | I | | | С | |
| 414 | 267 | Arlington Boulevard | Graham Road | | 0 | Fairfax County | | | I | | | F | |
| 415 | 268 | Arlington Boulevard (US 50) | Jaguar Trail | Seven Corners | 0 | VDOT | | | I | | ✓ | F | \$3,000 |
| 416 | 387 | Arlington Boulevard Pedestrian Bridge | Peyton Randolph Drive | Seven Corners Shopping Center | 0 | Fairfax County, VDOT | | | В | | | С | \$5,200 |
| 417 | 785 | ARRA-C, Fairfax County Parkway(with 95549) | 0.64 miles north of exit 166 |).16 miles west of exit 166 | 3.1 | VDOT | | | 0 | | ✓ | F | |
| 418 | 648 | Backlick Road Trail | Lee Highway | Capital Beltway | | NVTA | | | | | | U | \$9,900 |
| 419 | 640 | Backlick Run Trail | Backlick Road | Clermont Ave | 5 | NVTA | | | | | | U | \$15,900 |
| 420 | 638 | Beltway Trail | Dolley Madison Boulevard | Live Oak Drive | | NVTA | | | | | | U | \$11,900 |
| 421 | 918 | Beulah Road Walkway | | | 1.0 | Fairfax County | | | | | | F | \$2,650 |
| 422 | 166 | Beulah Street | Franconia Road | Franconia-Springfield Parkway | 1 | VDOT | | | | | | С | \$15,094 |
| 423 | 946 | Bobann Drive Bikeway | | | 0.9 | Fairfax County | | | | | | С | \$1,400 |
| 424 | 392 | Braddock Road | Wakefield Chapel Road | | 0 | Fairfax County | | | I | | | F | |
| 425 | 391 | Braddock Road | Rolling Road | | 0 | Fairfax County | | | I | | | F | |
| 426 | 389 | Braddock Road | Guinea Road | | 0 | Fairfax County | | | I | | | F | |
| 427 | 639 | Braddock Road Trail | Guinea Road | Little River Turnpike | | NVTA | | | | | | | |
| 428 | 114 | Burke Center Parkway | Marshall Pond Road | Burke Lake Road | 1 | VDOT | | | | | | С | \$1,900 |
| 429 | 191 | Burke Lake Road Widening | Fairfax County Parkway | Lee Chapel Road | 1 | VDOT | | | | | | С | \$7,000 |
| 430 | 965 | Burke Road Lane Diet and On-Road Bike Lanes | | | 1.3 | Fairfax County | | | | | | F | \$40 |
| 431 | 646 | Capital Beltway Ramp Trail | I-95 | US 1 | | NVTA | | | | | | | |
| 432 | 394 | Centreville Road | Compton Road | | 0 | Fairfax County Park Authority | | | Ι | | | С | |
| 433 | 395 | Centreville Road | Green Trails Boulevard | | 0 | Fairfax County | | | I | | | С | |
| | | | | | | | | | | | | | |

DRAFT Key to Codes

B=Bridge or Tunnel C = Complete F = Fully Funded I = Intersection Improvement O = Other P = Partially Funded PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

Page 30

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike | Rath v | Spot/ Area | In CLRP | In TIP | Status | Cost |
|-----|------------|---|--|--|-------------------|----------------------------------|------|--------|---------------|------------|-----------|--------|-----------|
| 434 | 397 | Centreville Road | Sunrise Valley Drive | | 0 | Fairfax County | | | | | | С | |
| 435 | 396 | Centreville Road | New Braddock Road | | 0 | Fairfax County | | | | | | С | |
| 436 | 867 | Cinderbed Bikeway | Fort Belvoir | Franconia-Springfield Metrorail Station. | 3 | Fairfax County | | ✓ | | | | U | |
| 437 | 557 | Clarks Branch Bridge at Riverbend Park | Clarks Branch | | 0 | Fairfax County Park Authority | | | | | | С | \$500 |
| 438 | 402 | Columbia Pike | Powell Lane | Homes Run | 0 | Fairfax County, VDOT | | | S | | | С | \$1,106 |
| 439 | 30 | Cross County Trail | Great Falls Park to Alban Road | Lake Accotink Dam to Hunter Village Drive segment | 5 | VDOT, Fairfax County | | ✓ | | ✓ | | С | \$1,060 |
| 440 | 403 | Cross County Trail | | | 0 | Fairfax County Park Authority | | | | | | | |
| 441 | 960 | Cross County Trail (CCT) Pavement Upgrades | | | 2 | Fairfax County | | | | | | F | \$876 |
| 442 | 404 | Cub Run Valley Stream Connections | Samuels Pine Rd | Cub Run Rec Center / Schneider's Branch | 0 | Fairfax County Park Authority | | | | | | С | \$625 |
| 443 | 405 | Danbury Forest | Lake Accotink Park | Danbury Forest Dr | 0 | Fairfax County Park Authority | | | | | | С | \$376 |
| 444 | 407 | Dolley Madison Boulevard | Great Falls Street/Lewinsville Road | | 0 | Fairfax County | | | I | | | С | |
| 445 | 212 | Dranesville Road Widening | Herndon | Route 7 | 2 | VDOT | ✓ | | | ✓ | ✓ | С | \$18,000 |
| 446 | 176 | Fairfax County Parkway | 123 | 7 | 10 | VDOT, Fairfax County | | ✓ | | ✓ | ✓ | Ρ | \$122,000 |
| 447 | 408 | Fairfax County Parkway | Old Keene Mill Road | | 0 | Fairfax County | | | Ι | | | С | |
| 448 | 595 | Fairfax County Pedestrian Program | | | 0 | Fairfax County | | | Ι | | | F | \$58,000 |
| 449 | 666 | Fairview Avenue Trail | Center Street | Oakview Dr | | NVTA | | | | | | | |
| 450 | 967 | Fox Mill Road Walkway from Fairfax County Parkway | | | 1.1 | Fairfax County | | | | | | F | \$2,400 |
| 451 | 636 | Franconia-Springfield Parkway Trail | Loisdale Road | Beulah | | NVTA | | | | | | | |
| 452 | 516 | Gallows Road On Road Bicycle Facility | Lee hwy | Old Courthouse Road | 0 | VDOT | ✓ | | | ✓ | ✓ | С | \$1,099 |
| 453 | 304 | Georgetown Pike Multi-Use Path | I-495 | Route 7 | 2 | VDOT | | ✓ | | | | F | \$845 |
| 454 | 955 | GMU-Fairfax City-Vienna Metrorail Bike Route | | | 5.1 | Fairfax County | | | | | | F | \$10 |
| | | | | | | | | | | | | | |

Page 31

DRAFT Key to Codes

| Р | roject ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Path | Side s walk | Spot/ Area | n TPS | Status | Cost |
|-----|-----------|---|------------------------------------|-------------------------------|-------------------|---------------------------------------|--------------|----------------|---------------|----------|--------|---------|
| 455 | 966 | Government Center Area Bicycle Demonstration Proje | | | 3.1 | Fairfax County | | | | | F | \$180 |
| 456 | 49 | Great Falls Street Trail | Crutchfeild Street | Hutchinson Street | | Fairfax County, VDOT | | | | | С | \$596 |
| 457 | 655 | Haycock Road Trail | Broad Street | I-66 | | NVTA | | | | | | |
| 458 | 637 | Hayfield Road Trail | Manchester Road | Telegraph Road | | NVTA | | | | | | |
| 459 | 421 | Holmes Run Stream Valley | Columbia Pike | Glenn Hills Park / Alexandria | 0 | Fairfax County Park Authority | | | | | С | \$1,268 |
| 460 | 954 | Hunter Village Drive Shoulder Widening | | | 0.9 | Fairfax County | | | | | F | \$1,600 |
| 461 | 18 | Huntington Metro Station Vicinity | Pedestrian Improvements | | | VDOT, Coalition for Smarter Growth | | | S | | С | \$174 |
| 462 | 947 | I-495 Express Lanes Ped/Bike at Chain Bridge Road | | | 1.3 | VDOT | | | | | F | \$1,750 |
| 463 | 548 | I-495 HOT Lanes | Hemming Avenue | Old Dominion Road | 0 | VDOT | | | В | | С | |
| 464 | 689 | I-66 Trail | Sully Road | Paddington Lane | 3 | NVTA | | | | | U | \$6,000 |
| 465 | 779 | I-95NB directional off ramp to NB Ffx Co. Pkway | Exit 166 | 0.6 miles from Exit 166 | 0.6 | VDOT | | | В | | Ρ | |
| 466 | 948 | Idylwood Road Trail (TMSAMS) | | | 0.7 | Fairfax County | | | | | F | \$1,050 |
| 467 | 951 | Lake Braddock Drive Road Diet | | | 2.3 | Fairfax County | | | | | F | \$40 |
| 468 | 428 | Lee Highway | Monument Drive | | 0 | Fairfax County | | | | | С | |
| 469 | 443 | Leesburg Pike | Tyco Road/Westwood Center Drive | | 0 | Fairfax County, WMATA | | | | | F | |
| 470 | 442 | Leesburg Pike | South Jefferson Street | | 0 | Fairfax County | | | Ι | | С | |
| 471 | 439 | Leesburg Pike | Magarity Road | | 0 | Fairfax County | | | Ι | | С | |
| 472 | 444 | Leesburg Pike | Tysons Square Center Entrance | | 0 | Fairfax County | | | Ι | | F | |
| 473 | 445 | Lewinsville Road | Balls Hill Road | | 0 | Fairfax County | | | Ι | | С | |
| 474 | 449 | Little River Turnpike | Oasis Drive | Beauregard | 0 | VDOT, Fairfax County | | | Ι | | С | \$933 |
| 475 | 448 | Little River Turnpike | Braddock Road | | 0 | Fairfax County | | | Ι | | С | |
| 476 | 255 | Lorton Road Widening | US 1 | Route 748 | 1 | VDOT | ✓ ✓ | | | | С | \$9,000 |

Page 32

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Pat | Side h walk | Spot/ Area | | In TIP | Status | Cost |
|-----|------------|--|--|---|-------------------|---|-------------|----------------|---------------|--------------|-----------|--------|-----------|
| 477 | 682 | Manassas Clifton Trail | Park Center Ct | South County East West Trail | | NVTA | | | | | | | |
| 478 | 337 | Manchester Road Trail | Beulah Street | Hayfield | | NVTA | | | | | | U | |
| 479 | 957 | Mason Neck Trail 2B | | | 1.9 | Fairfax County | | | | | | F | \$2,290 |
| 480 | 681 | Mt Vernon Trail Ext. | Potomac Heritage Trail | GW Parkway | | NVTA | | | | | | | |
| 481 | 455 | North Kings Highway | Huntington Metro | | 0 | Fairfax County | | | Ι | | | F | |
| 482 | 193 | NoVi (Northern Vienna) Trail | Phase I | | | VDOT, Fairfax County | | | | ✓ | ✓ | С | \$303 |
| 483 | 460 | Old Keene Mill Road | Shiplett Boulevard | | 0 | Fairfax County | | | Ι | | | С | |
| 484 | 461 | Old Keene Mill Road | Sydenstricker Road | | 0 | Fairfax County | | | Ι | | | С | |
| 485 | 774 | Phase 1 - Maintenance of FFx County Parkway Trail | | | | VDOT | | | | | | F | \$350,000 |
| 486 | 775 | Phase 2 - Maintenance of Ffx County Pkwy Trail | | | | VDOT | | | 0 | | | F | \$350,000 |
| 487 | 554 | Pohick Stream Valley CCT reroute | Dominion Powerline Easement | Forest View | 0 | Fairfax County Park Authority | | | | | | С | \$650 |
| 488 | 555 | Pohick VRE Trail (Pohick Stream Valley Rail- Trail) | Burke Station VRE | Burke Village Shopping Center | 1 | Fairfax County Park Authority, Fairfax County | | | | | | С | \$1,270 |
| 489 | 642 | Potomac Heritage Trail | Northern End fo Beltway Trail | american legion bridge | | NVTA | | | | | | U | \$235,100 |
| 490 | 484 | Richmond Highway | Old Mill Road/Mt. Vernon Memorial Highway | | 0 | Fairfax County | |] | Ι | | | С | |
| 491 | 945 | Richmond Highway from Old Mill Road/Jeff Todd Way | | | 3.4 | Eastern Federal Lands Highway Division | | | | | | UC | \$180,000 |
| 492 | 479 | Richmond Highway Pedestrian Safety Improvements | Ladson Ln, Lukens Ln, Backlick Rd, Kings, | Belford Drive S., Frye Road, Mohawk Lane | 0 | Fairfax County | | | Ι | | | Ρ | |
| 493 | 280 | Roberts Road | Braddock Road | Shenandoah Lane | 0.3 | Fairfax County | | | | | | Ρ | |
| 494 | 214 | Route 1 widening | Telegraph Road | Lorton Road | 1 | VDOT | | | | \checkmark | ✓ | С | \$23,326 |
| 495 | 524 | Route 29 Bridge Replacement over Rocky Run | | | 0 | VDOT | | | | \checkmark | ✓ | UC | \$15,000 |
| 496 | 527 | Route 50 Intersection Improvements @ Patrick Henry | | | 0 | VDOT | | | | | | С | \$786 |

Page 33

DRAFT Key to Codes

| 497 Radia SD Talforn Weet Ox Raad to East of Lee Ro 49 Fairfax County 1 <t< th=""><th></th><th>Project ID</th><th>Project/Facility Name</th><th>From</th><th>То</th><th>Length (Miles)</th><th>Responsible Agencies</th><th>Bike Path</th><th></th><th>pot/ In Area CLRF</th><th>In > TIP</th><th>Status</th><th>Cost</th></t<> | | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Path | | pot/ In Area CLRF | In > TIP | Status | Cost |
|---|-----|------------|--|-------------------------------|----------------------|-------------------|-------------------------|--------------|--------------|----------------------|-------------|--------|----------|
| 499 106 Route 7 Widening Rolling Holly Drive Tyco Road 1 VDOT V | 497 | 959 | | | | 4.9 | Fairfax County | | | | | F | \$1,400 |
| 776 R17 widen to 6 lanes - PE only Reston Ave Jarrelt Valley 6.9 VDOT V V V P 501 952 Scotts Run Walkway (IMSAMS) 0.6 farlfax County Park Authonty 0 F \$52,300 502 961 Sherwood Hall Lanes Marking Plans 1.8 Fairlax County Park Authonty 0 F \$560 503 963 Shipplett Boulevard On-Road Bike Lanes 1.2 Fairlax County 0 F \$400 504 960 Sulvetonok Road Walkway from Hooes Road 1.1 Fairlax County 0 F \$2300 505 Solong Hill Rec Center Connector Spring Hill Recreation Center Spring Hill Recrea | 498 | 949 | Route 7 Walkway (TMSAMS) | | | 4.4 | Fairfax County | | | | | F | \$5,375 |
| 501 952 Scotts Run Walkway (IMSAMS) 0.6 Fairfax County Park 0.1 0.6 Fairfax County 0.1 0 | 499 | 105 | Route 7 Widening | Rolling Holly Drive | Tyco Road | 1 | VDOT | | | | | F | \$37,263 |
| Suthority Authority Image: Construction from the start of the | 500 | 776 | Rt.7 widen to 6 lanes - PE only | Reston Ave | Jarrett Valley | 6.9 | VDOT | | | \checkmark | ✓ | Ρ | |
| 963 Shipplett Boulevard On-Road Bike Lances 1.2 Fairfax County Image: | 501 | 952 | Scotts Run Walkway (TMSAMS) | | | 0.6 | | | | | | F | \$2,300 |
| 950 Silverbrook Road Walkway from Hooes Road 1.1 Fairfax County Image: County County East West Trail Manassas Ciliton Trail 1-395 NVTA Image: County County East West Trail Manassas Ciliton Trail 1-395 NVTA Image: County County East West Trail Image: County County East West Trail Manassas Ciliton Trail 1-395 NVTA Image: County County East West Trail Image: County County East West Trail Image: County County East West Trail Spring field Tysons NVTA Image: County Co | 502 | 961 | Sherwood Hall Lanes Marking Plans | | | 1.8 | Fairfax County | | | | | F | \$50 |
| Io South | 503 | 963 | Shipplett Boulevard On-Road Bike Lanes | | | 1.2 | Fairfax County | | | | | F | \$40 |
| 56 Spring Hill Rec Center Connector Spring Hill Recreation Center Spring Hill Farm HOA 0 Fairfax County Park Authority 0 Fairfax County Park Authority 0 \$120 507 861 Springfield to Tysons Corner Trail Springfield Tysons NVTA 0 P \$1,900 508 284 Stringfellow Road Fair Lakes Boulevard Route 50 2 VDOT, Fairfax County 0 F \$4,284 509 958 Sunrise Valley Drive Sidewalk (RMAG) 1.0 Fairfax County 0 F \$4,284 510 953 Sunrise Valley Drive Walkway (DCBPA) 1.0 Fairfax County 0 F \$1,200 511 956 Sunrise Valley Drive Walkway (DCBPA) 1.0 Fairfax County 0 F \$2,000 512 285 Sunset Hills Road Plaza America 0 Fairfax County 0 F \$2,100 513 645 Telegraph Road Walkway from Huntington Avenue to R Richmond Highway King Highway 2 NVTA 0 F \$2,100 514 962 Telegraph Road Wild | 504 | 950 | | | | 1.1 | Fairfax County | | | | | F | \$2,300 |
| AuthorityAuthorityAuthorityAuthorityP\$1,900507861Springfield to Tysons Corner TrailSpringfieldTysonsNVTA | 505 | 650 | South County East West Trail | Manassas Clifton Trail | I-395 | | NVTA | | | | | | |
| 508 284 Stringfellow Road Fair Lakes Boulevard Route 50 2 VDOT, Fairfax County | 506 | 556 | Spring Hill Rec Center Connector | Spring Hill Recreation Center | Spring Hill Farm HOA | 0 | | | | | | | \$120 |
| 509 958 Sunrise Valley Drive Sidewalk (RMAG) 1.9 Fairfax County 1.9 F. \$4.284 510 953 Sunrise Valley Drive Walkway (DCBPA) 1.0 Fairfax County 1.0 F. \$1.750 511 956 Sunrise Valley Drive Walkway (DCBPA) 1.0 Fairfax County 1.0 F. \$2.000 512 285 Sunset Hills Road Plaza America 0 Fairfax County 1.0 F. \$2.000 513 645 Telegraph Road Trail Richmond Highway King Highway 2 NVTA 1.0 F. \$2.000 514 962 Telegraph Road Walkway from Huntington King Highway 2 NVTA 1.0 F. \$2.100 515 Telegraph Road Widening Leaf Road South Kings Hwy 0 VDOT V V P \$97.000 516 515 Telegraph Road Widening Leaf Road South Kings Hwy 0 VDOT, Fairfax County S V P \$97.000 516 517 Telegraph Road Widening Fairfax County wide VDOT, Fairfax County | 507 | 861 | Springfield to Tysons Corner Trail | Springfield | Tysons | | NVTA | | | | | Ρ | \$1,900 |
| 510953Sunrise Valley Drive Walkway (DCBPA)1.0Fairfax CountyIFairfax CountyF\$1,750511956Sunrise Valley Drive Walkway (DCBPA)1.0Fairfax CountyIF\$2,000512285Sunset Hills RoadPlaza America0Fairfax CountyIII | 508 | 284 | Stringfellow Road | Fair Lakes Boulevard | Route 50 | 2 | VDOT, Fairfax County | | ✓ | | | UC | \$46,000 |
| 511 956 Sunrise Valley Drive Walkway (DCBPA) 1.0 Fairfax County I F \$2,000 512 285 Sunset Hills Road Plaza America 0 Fairfax County I I UC 513 645 Telegraph Road Trail Richmond Highway King Highway 2 NVTA I I I F \$2,100 514 962 Telegraph Road Walkway from Huntington Avenue to R Leaf Road South Kings Hwy 0 VDOT I I F \$2,100 515 515 Telegraph Road Widening Leaf Road South Kings Hwy 0 VDOT I I I F \$2,100 516 199 Trail and Pedestrian Improvements Fairfax County wide VDOT, Fairfax County I S I F \$1,600 517 29 Trail Construction/Linway Terrace Safety 6330 Linway Terrace 6332 Linway Terrace Fairfax County I S I F \$1,600 517 29 Trail Construction/Linway Terrace Safety 6330 Linway Terrace 6332 Linway Terrace Fai | 509 | 958 | Sunrise Valley Drive Sidewalk (RMAG) | | | 1.9 | Fairfax County | | | | | F | \$4,284 |
| 512 285 Sunset Hills Road Plaza America 0 Fairfax County 0 0 Curty Curty 0 F \$2,100 515 Telegraph Road Widening Leaf Road South Kings Hwy 0 VDOT V V V V P \$97,000 516 199 Trail and Pedestrian Improvements Fairfax County wide VDOT, Fairfax County Curty S V F \$1,600 | 510 | 953 | Sunrise Valley Drive Walkway (DCBPA) | | | 1.0 | Fairfax County | | | | | F | \$1,750 |
| 645 Telegraph Road Trail Richmond Highway King Highway 2 NVTA Image: Construction Construle Construction Construction Construction | 511 | 956 | Sunrise Valley Drive Walkway (DCBPA) | | | 1.0 | Fairfax County | | | | | F | \$2,000 |
| 514 962 Telegraph Road Walkway from Huntington Avenue to R 515 515 Telegraph Road Widening Leaf Road South Kings Hwy 0 VDOT Image: Control of the state of t | 512 | 285 | Sunset Hills Road | Plaza America | | 0 | Fairfax County | | | | | UC | |
| Avenue to R Avenue to R 515 515 Telegraph Road Widening Leaf Road South Kings Hwy 0 VDOT V <td>513</td> <td>645</td> <td>Telegraph Road Trail</td> <td>Richmond Highway</td> <td>King Highway</td> <td>2</td> <td>NVTA</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | 513 | 645 | Telegraph Road Trail | Richmond Highway | King Highway | 2 | NVTA | | | | | | |
| 516 199 Trail and Pedestrian Improvements Fairfax County wide VDOT, Fairfax County S Image: C \$1,600 517 29 Trail Construction/Linway Terrace Safety 6330 Linway Terrace 6332 linway Terrace Fairfax County Image: C \$43 | 514 | 962 | | | | 2.4 | Fairfax County | | | | | F | \$2,100 |
| 517 29 Trail Construction/Linway Terrace Safety 6330 Linway Terrace 6332 linway Terrace Fairfax County C C \$43 | 515 | 515 | Telegraph Road Widening | Leaf Road | South Kings Hwy | 0 | VDOT | | | | | Ρ | \$97,000 |
| Upgrade | 516 | 199 | Trail and Pedestrian Improvements | Fairfax County wide | | | VDOT, Fairfax County | | | S 🗸 | ✓ | F | \$1,600 |
| 518 290 Trap Road Wolf Trap Farm Park Beulah Road 1 VDOT Image: Constraint of the second s | 517 | 29 | | 6330 Linway Terrace | 6332 linway Terrace | | Fairfax County | | | | | С | \$43 |
| | 518 | 290 | Trap Road | Wolf Trap Farm Park | Beulah Road | 1 | VDOT | | \checkmark | ✓ | ✓ | С | \$2,242 |

DRAFT

Key to Codes

B=Bridge or Tunnel C = Complete F = Fully Funded I = Intersection Improvement O = Other P = Partially Funded PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

Page 34

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Pa | Side | | / In a CLRP | In > TIP | Status | Cost |
|------|------------|---|--|-----------------------|-------------------|-------------------------|------------|------|-----|----------------|--------------|--------|-----------|
| 519 | 177 | Tysons Corner | Pedestrian Improvements Identified by | the HJR 276 Committee | | VDOT, Fairfax Co | unty 🗌 🗌 | | I | ✓ | ✓ | С | \$123 |
| 520 | 292 | Tysons Priority Access Improvement Projects | | | 0 | Fairfax County | | |] | | | | |
| 521 | 687 | US 29 Trail | Dixie Hill Road | Vietch Street | | NVTA | | | | | | | \$1,900 |
| 522 | 305 | US 29 Widening | WEST MERRILEE DRIVE | ROUTE I-495 | 1 | VDOT, Fairfax | | | J | ✓ | ✓ | С | \$119,000 |
| 523 | 137 | US 50 install median barrier & fence | VA 7 | Patrick Henry Drive | 0 | VDOT, Fairfax Co | unty 🗌 🗌 | |] S | ✓ | ✓ | С | \$601 |
| 524 | 256 | US 50 Pedestrian Bridge | Vicinity of the Seven Corners Shopping Center | | | VDOT, Fairfax Co | unty 🗌 🗌 | | I | ✓ | ✓ | С | \$5,353 |
| 525 | 85 | US 50 Pedestrian Improvements | Jaguar Trail | Seven Corners | | VDOT, Fairfax Co | unty 🗌 🗌 | |] S | ✓ | ✓ | Ρ | \$3,000 |
| 526 | 688 | US 50 Trail | Nutley Street | Arlington Blvd | | NVTA | | |] | | | U | \$19,900 |
| 527 | 669 | US Bike 1 Trail | US 1 | VA 123 | | NVTA | | |] | | | | |
| 528 | 189 | VA 193 - Georgetown Pike Trail | Innsbruck Road | River Bend Road | 4 | VDOT, Fairfax Co | unty 🗌 🕟 | | J | \checkmark | \checkmark | С | \$1,468 |
| 529 | 663 | VA 28 Trail | Walney Road | Dulles Toll Road | | NVTA | | |] | | | | |
| 530 | 694 | VA 638 Trail | South County East West Trail | I-95 | | NVTA | | |] | | | | |
| 531 | 635 | VA 7100 Trail | Monument Drive | Lee Chapel | | NVTA | | |] | | | | |
| 532 | 14 | Walker Road Trail | Columbine Street | Colvin Run Road | 2 | VDOT, Fairfax Co | unty 🗌 💽 | |] | ✓ | ✓ | С | \$447 |
| 533 | 772 | Walney Road Bridge Replacement/widening | | | 0.6 | VDOT | | |] | | ✓ | F | |
| 534 | 239 | West Ox Road (route 608) | Ox Trail Road | Lawyers Road | 2 | VDOT | | | J | ✓ | ✓ | С | \$11,300 |
| 535 | 964 | Westmoreland Street On-Road Bike Lanes | | | 1.1 | Fairfax County | | |] | | | F | \$40 |
| 536 | 755 | Widen Rt. 7 w/ paths on both sides | Reston Ave | Reston Pakway | 0.5 | VDOT | | | JI | | | U | |
| Fair | fax Cou | nty, Prince William County | | | | | | | | | | | |
| 537 | 863 | US 1 Bike Trail | Stafford County | I-495 | 30 | NVTA | | | j | | | U | \$75,500 |
| Fair | fax, Lou | doun, Prince William County | | | | | | | | | | | |
| 538 | 659 | Tri-County Parkway Trail | Braddock Road | Sudley Road | 6 | NVTA | | | J | | | U | \$1,300 |

DRAFT Key to Codes

| Pr | roject ID | Project/Facility Name | From | То | | Responsible Agencies | Bike Side Spot/ In In Cost Path walk Area CLRP TIP Status |
|-------|-----------|---|------------------------------|---------------------------|-----|-------------------------|---|
| Loudo | oun Co | ounty | | | | | |
| 539 | 678 | Algonkian Parkway Trail | Harry Bird Highway | Unnamed 5 | | NVTA | |
| 540 | 528 | Atlantic Blvd | Church Road (Rt. 625) | Magnolia Road (Rt. 1525) | 0 | VDOT | C \$24,000 |
| 541 | 715 | Atlantic Blvd & Warp Dr Signal | | | | Loudoun County | I F |
| 542 | 709 | Atlantic Boulevard Bike & Ped Improvements | VA Route 7 | Magnolia Road | | Loudoun County | □ □ □ S □ □ P |
| 543 | 641 | Atlantic Boulevard Trail | Harry Bird Highway | Church Road | | NVTA | |
| 544 | 269 | BATTLEFIELD PARKWAY - 4 LANES ON 6 LANE R/W | KINCAID BOULEVARD | ROUTE 7 | 1 | VDOT | □ ✔ ✔ ✔ C \$30,000 |
| 545 | 857 | Belmont Ridge Road Trail | VA 7 | Ryan Road | 5 | NVTA | U \$4,400 |
| 546 | 672 | Berlin turnpike Trail | Harpers Ferry Bridge WV | Charles Town Pike | | NVTA | |
| 547 | 719 | Cascades Parkway Trails | Old Vestals Gap road | Loudoun Park Lane | | Loudoun County | □ □ □ S □ □ F |
| 548 | 705 | Claiborne Parkway | Ryan Road | Croson Lane | | Loudoun County | F |
| 549 | 661 | Claiborne Parkway Trail | Loudoun County Parkway Trail | Ryan Road | | NVTA | □ ∨ □ □ U \$300 |
| 550 | 519 | Clarks Gap Ped Signals | | | 0 | VDOT | C \$1,500 |
| 551 | 703 | Crosstrail Boulevard | Sycolin Road | Kincaid Boulevard | | Loudoun County | F |
| 552 | 652 | Dulles Toll Road Trail | Sully Road | Memorial Highway | | NVTA | |
| 553 | 270 | Loudoun Cnty Pkwy WIDEN UNPVD 2 LN TO 4 LNS DIV ON | 1.9 MILES SOUTH ROUTE | 0.5 MILE SOUTH ROUTE 7 | 1 | VDOT | □ ✔ ✔ ✔ ✔ C \$12,000 |
| 554 | 671 | Loudoun County Parkway Trail | Ryan Road | W&OD Trail | | NVTA | |
| 555 | 657 | Loudoun County Parkway Trail | Mosby highway | Ryan Road | | NVTA | |
| 556 | 714 | Loudoun County Pkwy & Center St Signal | | | | Loudoun County | □ □ □ I □ □ P |
| 557 | 700 | Old Ashburn Sidewalks | Partlow Road | W&OD Trail | | Loudoun County | □ □ □ S □ □ F |
| 558 | 717 | Old Ox Road & US Route 50 Interchange | | | | Loudoun County | O - F |
| 559 | 309 | Old Ox Road Widening (Rt. 606) | Mills Road (Rt. 621) | Dulles Greenway (Rt. 267) | 5 | VDOT, | □ ✓ □ □ C \$49,450 |
| 560 | 768 | Pacific Blvd 4 lane reconstrnew alignment | | | 0.7 | VDOT | |
| 561 | 769 | Pacific Blvd Loudoun 1036 widen to 4 lanes | | | 0.4 | VDOT | |

Page 36

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Side Spot/ In In COSt Path walk Area CLRP TIP Status |
|-----|------------|--|--|--------------------------------------|-------------------|-------------------------|---|
| 562 | 271 | PACIFIC BOULEVARD (MPO PROJECT | AUTOWORLD DRIVE (NORTHERN TERMINUS | SEVERN WAY | 1 | VDOT | □ ✔ □ ✔ ✔ C \$10,000 |
| 563 | 710 | Potomac View Road Pedestrian Improvements | S. Cottage Road | Business driveway | | Loudoun County | □ □ □ S □ □ F |
| 564 | 711 | River Creek Parkway Pedestrian Improvements | Fort Evans Road | Potomac Station Drive | | Loudoun County | □ □ □ S □ □ P |
| 565 | 704 | Riverside Parkway | River Creek Parkway | Upper Meadow Riverlook Drive | | Loudoun County | □ □ □ □ F |
| 566 | 526 | Route 7 Sidewalk | NORTH SIDE OF WEST MAIN STREET; NORTH 28TH STREET; | NORTH 33RD STREET | 0 | VDOT | □ □ ✓ ✓ C \$845 |
| 567 | 771 | Rt. 606 Loudoun County Parkway/Old Ox Rd. | 1.6 miles west of Rt. 267 | Rt. 267 | 1.8 | VDOT | □ 🔽 □ I 🔽 🗹 F |
| 568 | 770 | Rt. 606 Loudoun County Parkway/Old Ox Rd. | Rt. 621 | Rt. 267 | 5.2 | VDOT | □ 🔽 □ I 🔽 🗹 F |
| 569 | 786 | Rt. 659 - Reconstruct (Belmont) to 4 lanes w/ path | 0.26 M south of Portsmount | 0.23 M North ofGloucester Parkway | 1.4 | VDOT | |
| 570 | 701 | Rural Splitter at Rt 659 & W&OD Trail | | | | Loudoun County | □ □ □ 0 □ □ P |
| 571 | 702 | Russell Branch Parkway | Ashburn Village Boulvard | Ashburn Road | | Loudoun County | □ □ □ O □ □ F |
| 572 | 658 | Shaw Road Trail | W&OD Trail | Dulles Toll Road | | NVTA | |
| 573 | 708 | Sterling Boulevard | W&OD Trail | Chase Heritage Circle | | Loudoun County | <u> </u> |
| 574 | 712 | Sycolin Road & Loudoun Center Place Signal | | | | Loudoun County | I F |
| 575 | 706 | Tall Cedars Parkway | Pinebrook Road | Gum Springs Road | | Loudoun County | F |
| 576 | 713 | Tall Cedars Pkwy & Poland Rd Signal | | | | Loudoun County | I F |
| 577 | 690 | US 15 Trail | Braddock Road | James Monroe Highway | | NVTA | |
| 578 | 684 | US 50 Trail | Fauquier County Line | Pleasant Valley Drive | | NVTA | |
| 579 | 654 | VA 690 Trail | Main Street | W&OD Trail | | NVTA | |
| 580 | 670 | VA 734 Trail | US 50 | Harry Byrd Highway | | NVTA | |
| 581 | 662 | VA 772 Trail | Belmont Ridge Road | Ryan Road | 1 | NVTA | □ ∨ □ □ U \$500 |
| 582 | 224 | VA 846 (Sterling Boulevard Landscaping) | VA 28 | US 7 | | VDOT, Loudoun County | □ □ S ✔ ✔ C \$53 |
| 583 | 668 | VA 9 Trail | Harpers Ferry Road | Harry Byrd Highway | | NVTA | |

Page 37

DRAFT Key to Codes

| | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Side Path walk | Spot/ In Area CLRP | In TIP S | tatus | Cost |
|------|------------|---|-------------------------------|--------------------------------|-------------------|---|------------------------|-----------------------|--------------|-------|----------|
| 584 | 716 | VA Route 7 & Belmont Ridge Rd Interchange | | | | Loudoun County | | 0 | | F | |
| 585 | 718 | VA Route 7 & Hillsboro Road Interchange | | | | Loudoun County | | S 🗌 | | U | |
| 586 | 720 | VA Route 7 Pedestrian Overpass | | | | Loudoun County | | В | | U | |
| 587 | 259 | W&OD Trail Extension | W&OD Trail End (Purcellville) | Round Hill | 3 | VDOT, Loudoun County | | ✓ | ✓ | F | \$1,700 |
| 588 | 69 | W&OD/White's Ferry Connection to C&O | W&OD | Potomac River at White's Ferry | | VDOT, Northern Virginia Regional Par | k | | | | |
| 589 | 707 | Waxpool Road Intersection Improvements | Pacific Boulevard | Broderick Drive | | Loudoun County | | S | | F | |
| Lou | idoun Co | ounty, Fairfax County | | | | | | | | | |
| 590 | 854 | VA 7 Trail from Leesburg to Alexandria | Leesburg | Alexandria | 38 | NVTA | | | | U | \$87,000 |
| 591 | 16 | US 50 widening | Pleasant valley Drive | Lee Road | 1 | VDOT | | \checkmark | \checkmark | F | \$70,900 |
| Prir | nce Willia | am and Fairfax Counties | | | | | | | | | |
| 592 | 211 | 123 Widnening | Davis Road | South Burke Lake Road | 9 | VDOT | | | | С | \$6,181 |

| Pro | oject ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike Patł | Side walk | Spot/ Area (| In CLRP | | Status | Cost |
|--------|----------|--|-------------------------------|---|-------------------|--------------------------------|--------------|--------------|-----------------|------------|---|--------|---------|
| Prince | Willia | am County | | | | | | | | | | | |
| 593 | 675 | 234 BYPASS trail | Braddock Road | Lee Highway | | NVTA | | | | | | U | |
| 594 | 308 | 234 Off-Road Multi Use Trail | Lake Jackson Drive | PW Parkway | 1 | VDOT | | | | ✓ | ✓ | С | \$662 |
| 595 | 525 | Balls Ford Road Widening | Bus 234 | 234 | 0 | VDOT | | | | ✓ | ✓ | С | |
| 596 | 677 | Bike Route 1 | Fleetwood Drive | Dumfries Road | | NVTA | | | | | | U | |
| 597 | 306 | Bus 234 Add Signalized Crosswalks | All Major Intersections | All Major Intersections | | VDOT | | | Ι | | | С | \$650 |
| 598 | 307 | Bus 234 Sidewalk/Ramps Improvments | Balls Ford Road | Godwin Drive | | VDOT | | | Ι | | ✓ | С | \$1,000 |
| 599 | 660 | Godwin Drive Trail | Sudley Road | Nokesville Road | 2 | NVTA | | | | | | U | \$600 |
| 600 | 695 | Gordon Blvd Trail | US 1 | Commerce | | NVTA | | | | | | | |
| 601 | 781 | I66/Rt.15 interchange reconst. w/ paths & sdwlks | | | 0.8 | VDOT | | | В | | ✓ | F | |
| 602 | 787 | Install asphalt path and crosswalks on Rt. 3000, P | 0.03 M East of Cato Hill road | 0.017 M East of Honer Corner commuter lot | | VDOT | | | 0 | | | | \$450 |
| 603 | 866 | John Marshall Highway Trail | I-66 | Lee Highway | 2 | NVTA, Prince William County | | | | | | U | \$500 |
| 604 | 656 | Liberia Avenue Trail | Old Bridge Road | Jefferson Davis Highway | | NVTA | | | | | | U | |
| 605 | 673 | Linton Hall Road Trail | Lee Highway | Nokesville Road | | NVTA | | | | | | | |
| 606 | 171 | Linton Hall Road Widening | Glenkirk Road | Devlin Road | 3 | VDOT | | | | ✓ | ✓ | UC | \$8,000 |
| 607 | 697 | Minnieville Road Trail | Dumfries Road | Old Bridge Road | | NVTA | | | | | | U | |
| 608 | 676 | New Cherry Hill Road | Potomac Heritage Trail | Potomac Parkway Trail | | NVTA | | | | | | | |
| 609 | 523 | Old Bridge Road Sidewalk | Mohican | Oakwood Drive | 0 | VDOT | | | | | | UC | \$749 |
| 610 | 522 | Old Bridge Road Sidewalk | Titania | Crickett | 0 | VDOT | | | | | ✓ | С | \$1,800 |
| 611 | 679 | Old Bridge Road Trail | Prince William Parkway | Poplar Lane | 4 | NVTA | | | | | | U | |
| 612 | 82 | Pedestrian Bridge over CSX Railroad | Veterans Memorial Park | DOT #860626C | | VDOT | | | S | ✓ | ✓ | С | \$3,119 |
| 613 | 647 | Potomac Heritage Trail | Wharton Drive | Jefferson Davis Highway | | NVTA | | | | | | U | |
| 614 | 667 | Potomac Parkway trail | Old Stage Coach Road | New Cherry Hill Road | | NVTA | | | | | | | |
| 615 | 634 | Prince William Parkway Trail | Prince William Parkway | Signal Hill Road | 8 | NVTA | | | | | | С | |

Page 39

DRAFT Key to Codes

| F | Project ID | Project/Facility Name | From | То | Length (Miles) | Responsible Agencies | Bike | | Spot/ Area | In CLRP | In TIP | Status | Cost |
|-------|------------------|---|---------------------------------|----------------------------|-------------------|---------------------------|------|---|---------------|--------------|-----------|--------|----------|
| 616 | 649 | Prince William Parkway trail | Nokesville Road | Dumfries Road | 4 | NVTA | | ✓ | | | | U | \$900 |
| 617 | 517 | Route 234 and Rotue 1 Interchange | .4 miles east of route 1 | .4 Miles west of Route 1 | 0 | VDOT | | ✓ | | \checkmark | ✓ | С | \$87,000 |
| 618 | 164 | Route 28 Trail Extension | Fauquier Co. Line | Vint Hill Road | 7 | VDOT | | ✓ | | ✓ | ✓ | Ρ | \$6,500 |
| 619 | 864 | South County East-West Trail | Manassas | I-395 | | NVTA | | ✓ | | | | U | \$51,600 |
| 620 | 680 | Spriggs Road Trail | Hoadly Road | Dumfries Road | | NVTA | | | | | | | |
| 621 | 643 | US 1 Trail | Stafford County | I-495 | | NVTA | | | | | | | |
| 622 | 102 | VA 234 Bike Trail | US 1 to I-95 & | Montclair to vic. Manassas | 9 | VDOT, NVTA | | ✓ | | ✓ | ✓ | Ρ | \$1,200 |
| 623 | 665 | VA 234 Trail | Dumfries Road | Jefferson Davis Highway | | NVTA | | | | | | | |
| 624 | 693 | VA 784 Trail | Delaney Blvd | US 1 | | NVTA | | | | | | | |
| Princ | e Willia | am County, Fairfax County | | | | | | | | | | | |
| 625 | 683 | VA 123 Trail | Clifton Road | Gordon Boulevard | | NVTA | | | | | | | |
| Purc | ellville | | | | | | | | | | | | |
| 626 | 226 | Multiple Sidewalk Enhancements | Purcellville | | | VDOT | | | S | | | С | \$500 |
| 627 | 254 | PURCELLVILLE - BICYCLE ACCESS TO HIGH SCHOOL & W&O | Main Street | W&OD Trail | 1 | VDOT | | ✓ | | | | С | \$460 |
| Regi | on-wid | e | | | | | | | | | | | |
| 628 | 752 | WMATA Virginia Metrorail Crossing Improvements | | | | WMATA | | | | | | Ρ | \$510 |
| 629 | 749 | WMATA Virginia Metrorail Sharrow and Bike Lanes | | | 3 | WMATA | | | | | | Ρ | \$79 |
| 630 | 746 | WMATA Virginia Metrorail Sidewalk/ Pathway Project | | | 2 | WMATA | | | | | | Ρ | \$753 |
| Tow | Town of Clifton | | | | | | | | | | | | |
| 631 | 248 | Pedestrian/Bicycle Plaza & Pathways | Town of Clifton | - Phase II | | VDOT | | | S | ✓ | ✓ | С | \$70 |
| Tow | Town of Hamilton | | | | | | | | | | | | |
| 632 | 11 | Main Street | Town of Hamilton (Improvements) | | | VDOT, Town of Hamilton | | | S | ✓ | | С | \$47 |

DRAFT Key to Codes

| Р | roject ID | Project/Facility Name | From | То | | Responsible Agencies | Bike Path | Side walk | Spot/ Area | In CLRP | In 9 TIP | Status | Cost |
|-------------------|-----------|--|--|---|-----|---|--------------|--------------|---------------|------------|-------------|--------|----------|
| Town of Haymarket | | | | | | | | | | | | | |
| 633 | 210 | Town of Haymarket (Streetscaping) | Phase 1 | | | VDOT, Town of Haymarket | | | S | | | С | \$1,008 |
| 634 | 4 | Town of Haymarket Streetscaping | Washington Street | Phase II | | VDOT, Town of Haymarket | | | S | ✓ | ✓ | F | \$2,026 |
| Town | of He | rndon | | | | | | | | | | | |
| 635 | 549 | Van Buren Street Trail to Dulles Metrorail | North of Herndon Pkwy at existing Folly Lick Trail | Herndon Monroe Metrorail station | 0 | Town of Herndon, Fairfax County | | | | ✓ | | Ρ | \$600 |
| 636 | 631 | Herndon Downtown Elden Streetscape | Elden St / Center St intersection | Elden St / Monroe St intersection | 0.8 | VDOT, Town of Herndon | | ✓ | S | | | С | \$2,100 |
| 637 | 856 | Herndon Metro Access Trail | Van Buren Street | Herndon Metrorail | 1 | Town of Herndon | | | | | | Ρ | \$400 |
| 638 | 60 | Sugarland Run Trail | W&OD Trail | Fairfax County's Sugarland Run Trail | 1 | VDOT, Town of Herndon | | | | ✓ | ✓ | С | \$531 |
| 639 | 855 | Sugarland Run Trail Extension | Sugarland Run Trail Terminus | Herndon Metrorail | 1 | NVTA | | | | | | U | \$1,000 |
| 640 | 550 | W&OD Trail Crossing at Crestview Drive | W&OD Trail at Crestview Drive | W&OD Trail at Crestview Drive | 0 | Town of Herndon, Northern Virginia Regional Park Authority | | | I | | | Ρ | \$300 |
| Town | of Hil | Isboro | | | | | | | | | | | |
| 641 | 70 | PEDESTRIAN STUDY & IMPROVEMENTS | Town of Hillsboro | On 704 | | VDOT | | | S | | | Р | \$15,348 |
| Town | of Lo | vettsville | | | | | | | | | | | |
| 642 | 184 | Ped & Bike Path Network | Town of Lovettsville | | 6 | VDOT, Town of Lovettsville | | | S | ✓ | ✓ | Ρ | \$450 |
| Town | of Oc | coquan | | | | | | | | | | | |
| 643 | 7 | Riverfront Boardwalk | on the Occoquan River | in the Town of Occoquan | | VDOT, Town of Occoquan | | | S | ✓ | ✓ | С | \$296 |
| Town | of Qu | antico | | | | | | | | | | | |
| 644 | 227 | Potomac Avenue | CSX Railroad | Potomac River | | VDOT, Town of Quantico | | | S | ✓ | ✓ | С | \$871 |
| 645 | 61 | Potomac Transportation Facility | AMTRAK / VRE Station | Potomac River | | VDOT, Town of Quantico | | | S | ✓ | ✓ | С | \$512 |
| | | | | | | | | | | | | | |

Page 41

DRAFT Key to Codes

Appendix B

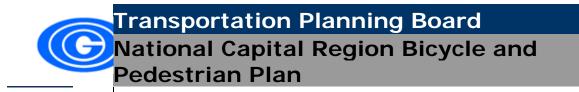
Data Dictionary and Sample Database Entry Form For the Regional Database of Bicycle and Pedestrian Projects in the Long-Range Bicycle and Pedestrian Plan for the National Capital Region

| FIELD | EXPLANATION |
|--------------------------|---|
| COG Project ID | COG's internal identifying number for the project in this |
| 5 | database |
| Agency Project ID | The responsible agency's project identifying number |
| Project Name | Descriptive name provided by the sponsoring agency |
| From | Project Limits |
| То | Project Limits |
| Length of Project | Length of the project from start to finish. Example: if a |
| | project consists of four miles of road with a continuous bike |
| | lane and sidewalk, the project length is four miles. |
| Jurisdiction(s) | Jurisdiction(s) in which the project is located |
| State | State or States in which the project is located. |
| Agency | Lead agency that is responsible for implementing the project |
| Secondary Agency | Other agency involved in the project |
| Cost | In thousands of dollars. As many projects in the plan may not |
| | be built for many years, and have not been fully scoped, this |
| | can be a very rough estimate. If a project is part of a larger |
| | project the total project cost is <i>not</i> listed, only that portion of |
| | the cost which is attributable to the bicycle or pedestrian |
| | facility. Use of a rule of thumb for such estimates was |
| | acceptable, i.e. 3% of total project cost. Many projects do not |
| | have a cost estimate available. |
| URL for more project | If the project has a web site, or if the agency has more detail |
| information | on its web site, the URL may be listed. |
| Project Manager Name | If the project has a project manager, his or her name may be |
| | listed. |
| Project Manager's Phone | |
| Project Manager's E-mail | |
| Project is in the CLRP | Project is in the Financially Constrained Long-Range |
| | Transportation Plan for the National Capital Region, and |
| | therefore is officially considered to have funding available to |
| | support project completion. |
| Project is in the TIP | Project is in the most recent National Capital Region |
| | Transportation Improvement Program with specific funding |
| | amounts identified for program completion. |

| Ducient in Dout of a Lougan | Is the music of most of a langer music of it a line | hurren huidee en |
|-----------------------------|---|------------------|
| Project is Part of a Larger | Is the project part of a larger project, i.e. a hig | nway, bridge, or |
| Project | transit project? | (1 11' ' 1 (|
| Length of Bike Lane | Bike lanes are striped lanes at least 4' wide in | |
| | of-way, marked for the exclusive use of bicyc | |
| | lane is found on both sides of the street for for | , |
| | should be reported as four miles of bike lane, | - |
| Length of Multi-Use Path | A paved or hard-surface path separated from t | • |
| | designated for bicycles and other non-motoriz | zed users. |
| | Should be at least 8' wide. | |
| Length of Sidewalk | Sidewalks are usually concrete, less than 8' w | |
| | other design characteristics (street furniture, li | imited sight- |
| | lines) that render them unsuitable for all but the | ne slowest |
| | bicyclists. | |
| Type of Spot/Area | For non-linear projects. The pull-down menu | gives the |
| Improvement | following options: | |
| _ | Type of Improvement | Code Letter |
| | 1. Pedestrian Intersection Improvement | Ι |
| | 2. Pedestrian/Bicycle Bridge or Tunnel | В |
| | 3. Traffic Calming | TC |
| | 4. Streetscape/Pedestrian Improvements | S |
| | 5. Bicycle Parking | Р |
| | 6. Bicycle Route Marking | BR |
| | 7. Other | 0 |
| Path Alignment | Is the multi-use path along a road, or is it on i | ts own right-of- |
| _ | way? This field is meant to distinguish betwee | |
| | which are built adjacent to a road and cross nu | - |
| | ways and intersections, and a multi-use path of | |
| | of way, such as an old railroad, canal tow-path | U |
| | valley. Paths built along limited-access highv | vays and |
| | parkways such at the Mount Vernon Trail sho | |
| | being built on an independent route, since the | |
| | intersection or driveway conflicts, and are set | |
| | distance from the roadway for most of their le | |
| Status | The pull-down menu offers the following opti | - |
| | | Code Letter |
| | 1. Fully Funded ¹ | F |
| | 2. Partially Funded | Р |
| | 3. Unfunded | Ū |
| | 4. Under Construction | UC |
| | | C |
| | L | |
| | 5. Complete | С |

¹ "Funded" indicates that the sponsoring agency has considered funding for completion of this project to be reasonably available within projected funding sources. "Unfunded" indicates, that while the project has been identified, there is no projected funding to support its completion at this time.

| | This database is meant to list planned facilities rather than existing facilities, but since 2006 many of the projects in the plan have been completed. |
|---|---|
| Year of Completion or Implementation | If the project has been completed or implemented, in what year did that happen? |
| Project Within a Regional Activity Center | Is the project located with in a regional activity center or cluster? See the link for on-line information on activity centers and clusters. A paper map of centers and clusters, which is easier to read than the one on the web, will be sent to anyone who requests one. |
| Project is Between Regional Activity Centers | Project connects one regional activity center or cluster with another |
| Maintenance | Project is primarily maintenance or reconstruction of an existing facility |
| Project Connects to a Transit Facility | Project connects to a metrorail station, commuter rail station, or transit center |
| BikeNetConnect | Bicycle Network Connectivity. Does the project improve the connectivity of the regional bicycle network? Does it connect to any existing bicycle facilities? |
| Pedestrian Safety Project | Is the primary purpose of this project to improve pedestrian safety? |
| Project Identified as a Regional Priority* | Is the project one of the regional priority unfunded bicycle and pedestrian projects recommended by the Transportation Planning Board for consideration in the TIP? |



Search

| - <u>Search</u> | Bike Pe | d Plan | Search Last Results View List All |
|--|----------------------|--|---|
| - <u>Results</u> <u>List</u> <u>All</u> | Related Recor | ds: <u>Agency</u> | |
| <u>Log Out</u> | COG Project ID | 167967369 | |
| | Agency Project ID | | |
| | Project Name | Metropolitan Branch Trail | |
| | From | Union Station | |
| | То | Takoma Park | |
| | Length of Project | 7 (miles) | |
| | Description | Construct a 7 mile trail along the red line from | |
| | Jurisdiction (s) | Washington | |
| | State | DC 💌 | |
| | Agency | DDOT | |
| | Secondary Agency | | |

| Cost | \$ 20000 (In Thousands) |
|---|----------------------------------|
| URL for More Project Informatio n | w w w .metbranchtrail.com |
| Project Manager's Name | Chris Holben |
| Project Manager's Phone | 202 671 2638 |
| Project Manager's Email | chris.holben@dc.gov |
| Project Is In the CLRP | C _{Yes} C _{No} |
| Correspond ing CLRP Project ID | |
| Project Is In the TIP | C _{Yes} C _{No} |
| Correspond ing TIP Project ID | |
| Project Is Part of a Larger Project | C _{Yes} C _{No} |
| Length of Bike Lane | 2 (miles) |
| Length of Multi-Use Path | 5 (miles) |
| Length of Sidewalk | (miles) |
| Type of Spot/Area Improveme | |

| nt | |
|---|--|
| Path Alignment | |
| Status | Partially Funded |
| Year of Completion or Implement ation | 2009 |
| Project Within a Regional Activity Center | Yes No Information on Regional Activity Centers |
| Project Is Between Regional Activity Centers | E _{Yes} E _{No} |
| Maintenanc e | C _{Yes} C _{No} |
| Project Connects To a Transit Facility | E _{Yes} E _{No} |
| BikeNetCon nect | E _{Yes} E _{No} |
| Pedestrian Safety Project | C _{Yes} C _{No} |
| Project Is In Local Plan | E _{Yes} E _{No} |
| Project I dentified as a 2005 Regional Priority | E _{Yes} E _{No} |

| Comments | I |
|----------------------------------|--|
| Record Last Modified On | |
| | Fir <u>s</u> t Previou <u>s</u> Next La <u>s</u> t |
| Update Delete | Back To Results |

Appendix C

Completed Projects from the 2010 Bicycle and Pedestrian Plan

| COG ID | Project Name | From | From | Description |
|--------|---|---|---|--|
| 11 | Main Street | Town of Hamilton (Improvement s) | Town of Hamilton (Improvement s) | Construct curb ramps, perform pavement striping, landscape, and erect gateway signage on Main Street in the Town of Hamilton. Pedestrian and Bicycle Facilities. |
| 14 | Walker Road Trail | Columbine Street | Columbine Street | Construct a 4' natural surface path from Columbine Street to Colvin Run Road and a 6' stone dust path from the G.F. School to Beach Mill Road. |
| 34 | Eisenhower Multi- Use Trail | Cameron Run East | Cameron Run East | Enhancement and expansion of a 2-mile segment of the existing Eisenhower Avenue Shared Use Trail, including an underpass at Eisenhower Avenue. |
| 71 | Woodrow Wilson Bridge Project | Md State Line | Md State Line | Bicycle Pedestrian Facility on the bridge connecting VA and MD bicycle networks. Pedestrian Improvements to Route 1 and Telegraph road interchanges. Pedestrian Bridge included in Telegraph Road Interchange |
| 111 | Anacostia River Trail | Bladensburg Marina | Bladensburg Marina | The segment of the Anacostia River Trail has been completed by the M-NCPPC Department of Parks and Recreation from Bladensburg Waterfront Park to the vicinity of New York Avenue, where it will connect to the DC Riverwalk Project. |
| 130 | Pedestrian Improvements on Mount Vernon | Reed | Reed | Pedestrian improvements to high crash area along Mount Vernon Avenue. |
| 149 | Nebel Street extended | Randolph Road | Randolph Road | This project provides a 1,300-foot extension of Nebel Street from its existing terminus at Randolph Road to a terminus at the Target store site. The proposed roadway improvements include: a 4-lane closed section roadway with a typical cross section that includes four 12-foot travel lanes; a 5-foot concrete sidewalk adjacent to a 7-foot tree panel along the west side of the road; an 8-foot asphalt bike path adjacent to a 7-foot wide tree panel along the east side of the road, streetlighting and landscape trees provided on both sides of the roadway; improvements at the intersection of Nebel Street and Randolph Road; and modification of the existing traffic signal at the intersection of Chapman and Bou Avenues |
| 189 | VA 193 - Georgetown Pike Trail | Innsbruck Road | Innsbruck Road | Construct a 4.5 mile trail from Innsbruck Road to River Bend Road and Applewood Lane to Seneca Road. |
| 193 | NoVi (Northern Vienna) Trail | Phase I | Phase I | Engineering & design for Phase I of Northern Vienna Trail. Study being conducted by Fairfax County |

| 197 | Metropolitan Branch Trail Phase I | Union Station | Union Station | Construct a 4 mile trail along the red line from Union Station to Bates Road NE |
|-----|---|---|---|---|
| 215 | Bicycle Lanes Phase I | | | 20 miles of bicycle lanes |
| 226 | Multiple Sidewalk Enhancements | Purcellville | Purcellville | Various Location (6) |
| 248 | Pedestrian/Bicycle Plaza & Pathways | Town of Clifton | Town of Clifton | Pedestrian/Bicycle Plaza & Pathways - Phase II in Town of Clifton |
| 254 | PURCELLVILLE - BICYCLE ACCESS TO HIGH SCHOOL & W&O | Main Street | Main Street | Access to Loudoun Valley High School |
| 271 | PACIFIC BOULEVARD (MPO PROJECT | AUTOWORLD DRIVE (NORTHERN TERMINUS | AUTOWORLD DRIVE (NORTHERN TERMINUS | |
| 305 | US 29 Widening | WEST MERRILEE DRIVE | WEST MERRILEE DRIVE | US 29 widening |
| 306 | Bus 234 Add Signalized Crosswalks | All Major Intersections | All Major Intersections | Add signalized crosswalks to all major intersections of Business Route 234 in Prince William County |
| 307 | Bus 234 Sidewalk/Ramps Improvments | Balls Ford Road | Balls Ford Road | Spot inprovements to all intersections(curb ramps, crosswalks, etc.) |
| 308 | 234 Off-Road Multi Use Trail | Lake Jackson Drive | Lake Jackson Drive | |
| 310 | Old Dominion Drive Complete Streets (phase I) | Lee Highway | Lee Highway | CONSTRUCT CURB & GUTTER & SIDEWALKS ON THE WEST SIDE OF OLD DOM. DR. WITH POSSIBLE REALIGNMENT & RECONSTRUCTION OF EAST SIDE TO PROVIDE CONFORMING STREET SECTION TO VDOT REQUIREMENTS WITHIN AVIALBLE R.O.W., ALSO INCLUDES ADDITIONAL PAVEMENT WIDTH FOR ON STREET BIKEWAY. CHANGED TO T2 ON 4/11/03. |
| 386 | Arlington | Patrick Henry | Patrick Henry | Intersection improvement, add ped heads, relocate ped heads, block existing |

| | Boulevard | Drive | Drive | crosswalks. |
|-----|---|--|--|---|
| 514 | Glebe Road Bridge Replacement | 500' south of Route 50 | 500' south of Route 50 | Replace bridge with new structure that will include shared use path and sidewalk |
| 516 | Gallows Road On Road Bicycle Facility | Lee hwy | Lee hwy | retro fitting of bike lanes on existing pavement |
| 518 | Glebe Road Pedestrian Crossings | Fairfax Drive | Fairfax Drive | |
| 522 | Old Bridge Road Sidewalk | Titania | Titania | curb ramps, crosswalks, etc. |
| 525 | Balls Ford Road Widening | Bus 234 | Bus 234 | |
| 526 | Route 7 Sidewalk | NORTH SIDE OF WEST MAIN STREET; NORTH 28TH STREET; | NORTH SIDE OF WEST MAIN STREET; NORTH 28TH STREET; | |
| 527 | Route 50 Intersection Improvements @ Patrick Henry | | | |
| 528 | Atlantic Blvd | Church Road (Rt. 625) | Church Road (Rt. 625) | |
| 548 | I-495 HOT Lanes | Hemming Avenue | Hemming Avenue | High Ocupancy Toll Lanes with the reconstruction of several bridges. 10 bridge crossings with new or widened bike/ped facilities. One overpass with space for path and bike lanes underneath. |
| 555 | Pohick VRE Trail (Pohick Stream Valley Rail-Trail) | Burke Station VRE | Burke Station VRE | One mile asphalt trail and 1 bridge in the Pohick Stream Valley connecting Burke Village Shopping Center and Burke Lake Road to the Burke Station VRE. |
| 562 | Safe Routes to School | Charles Barrett Elementary School | Charles Barrett Elementary School | Pedestrian and bicycle safety improvements at Charles Barrett Elementary School |

| Bicycle Parking and Racks-on- Buses | various | various | Improve integration of bicycling and transit by improve bicycle commuter parking, and adding bicycle racks at all transit vehicles. |
|--|------------------------|--|--|
| Capital Bikeshare - District of Columbia | | | The District Department of Transportation (DDOT) and Arlington County have selected "Capital Bikeshare" as the name for the new regional bike sharing program. Capital Bikeshare will launch later this year with roughly 1100 bikes at 114 stations in the District and Arlington, and will be the largest of its kind in the US. Building on the success of DDOT's SmartBikeDC program, launched in 2008 and concentrated in the downtown DC area, Capital Bikeshare will now make it possible for residents and visitors to conveniently pick up a bike and traverse throughout all 8 wards in the city and Arlington. With 100 stations in DC and 14 in Arlington the bike share program will now become a true regional transportation system. Plans are already underway to expand the network further in Virginia as well as Maryland. The new system will be similar to the one the Public Bike System Company (PBSC), based in Montreal, produced, commonly known as BIXI. The BIXI system has been running in Montreal since 2009 and will be arriving soon in Minneapolis, London, and Melbourne, Australia. BIXI bike sharing stations are solar powered and use wireless technology to allow for easy installation and adjustments. It may look different, but the BIXI bicycle has many of the same features as the Smartbike: 3-speed, internal hub gears, fenders, chain guard, lights, and a front rack. Annual, monthly, and daily memberships will be available for area residents and visitors. Alta Bicycle Share will operate the system. Alta Bicycle Share is a US-based company focused on management and operation of bicycle share systems globally. Its sister company, Alta Planning + Design, is the largest bicycle and pedestrian consulting company in the United States. Alta Bicycle Share is implementing or consulting on |
| Capital Bikeshare | | | similar programs in Australia, Europe, China, and other locations in the United States. The proposed regional system would expand the DC and Arlington planned Capital Bikeshare system from 1,117 bikes to almost 3,600 bikes and would connect to the extensive transit and bicycle networks throughout the region. The planned DC and |
| | and Racks-on- Buses | and Racks-on- BusesvariousCapital Bikeshare - District of ColumbiaImage: Capital Bikeshare - District of ColumbiaCapital Bikeshare - District of ColumbiaImage: Capital Bikeshare - District of ColumbiaCapital Bikeshare - District of ColumbiaImage: Capital Bikeshare - District of Columbia | and Racks-on- BusesvariousvariousCapital Bikeshare - District of ColumbiaImage: Capital Bikeshare - District of ColumbiaImage: Capital Bikeshare - District of ColumbiaCapital Bikeshare - District of ColumbiaImage: Capital Bikeshare - District of ColumbiaImage: Capital Bikeshare - District of ColumbiaCapital Bikeshare - District of ColumbiaImage: Capital Bikeshare - District of ColumbiaImage: Capital Bikeshare - District of ColumbiaCapital BikeshareImage: Capital BikeshareImage: Capital Bikeshare |

| | | | | Arlington bike-sharing systems have already gone forward with a joint decision to use Montreal's Bixi system and have contracts that include opportunities for regional expansion. This joint planning effort strengthens our ability to formulate and implement a regional bike-sharing system. |
|-----|--|---|---|--|
| 620 | Great Streets - H Street NE Streetscape | 3rd Street NE | 3rd Street NE | This is a Great Street Initiative Project Reconstruction of H St road surface with composite pavements new brick gutters and granite curbs adjacent to the sidewalks. New streetlights, traffic signals, and manholes. Safety improvements including bulb-outs. |
| 631 | Herndon Downtown Elden Streetscape | Elden St / Center St intersection | Elden St / Center St intersection | The project consists of streetscape, sidewalk, and Washington and Old Dominion(W&OD)trail bike/ped enhancements, landscaping, traffic-calming, roadway median and turning lane improvements, intersection realignment and intermodal circulation improvements within downtown Herndon's heritage district. Streetscape improvements in the form of underground/relocated utilities, ADA accessible curbing, brick sidewalks and paver crosswalks, bike/ped signalization, improved drainage, landscaped planters, street trees, benches, bus shelter/bus stops, and heritage-street lighting/traffic signalization will greatly enhance the safety and physical environment of downtown. The purpose of this downtown revitalization project is to facilitate access, improve intermodal circulation and bike/pedestrian safety along the W&OD regional park trail, while retaining the historic and small town attributes within the downtown through surface transportation improvements as well as landscaping and streetscape enhancements. |
| 634 | Prince William Parkway Trail | Prince William Parkway | Prince William Parkway | Multi Use Path from NVTA 2030 Plan |
| 768 | Pacific Blvd 4 lane reconstrnew alignment | | | reconstruction to 4 lanes with a 5' sidewalk and a 10' path |
| 769 | Pacific Blvd Loudoun 1036 widen to 4 lanes | | | Widen road to 4 lanes, add 5' sidewalk, add 10 trail |
| 773 | Rt. 95 Jones Point Reforestation - w/ | 0.4 miles east of Rt. 1 | 0.4 miles east of Rt. 1 | re-construction of park paths to and around ball fields, gardens, fishing pier, historic site and woods. Landscaping and beautification. |

| | trails | | | |
|-----|-----------------------------------|----------------------------|----------------------------|--|
| 778 | I-66 Corridor Multimodal study | I-495 | I-495 | A review of how to increase capacity in this corridor via bus on shoulders, expand HOV, improve adjacent bike volumes with physical improvements on Custis TRail or on trails feeding into the W&OD. Adding some connecting trails were considered. |
| 803 | L Street Cycle Track | New Hampshire Avenue | New Hampshire Avenue | Separated cycle track. |
| 817 | Robey Road | Greencastle Road | Greencastle Road | This project provides for design and reconstruction of Robey Road from the north end of the Greencastle Elementary School site to Greencastle Road (approximately 3,400 feet). The right-of-way will be 70 feet wide from the school site to Ballinger Drive and 60 feet wide from Ballinger Drive to Greencastle Road. The improved roadway will be a two-lane residential roadway with concrete curb and gutter. The roadway will be 36 feet wide from Briggs Chaney Road to Ballinger Drive and 26 feet wide from Ballinger Drive to Greencastle Road. An 8- foot wide bikeway will be constructed along the west side of Robey Road and a 5- foot wide concrete sidewalk will be constructed along the east side of the road. Approximately 620 feet of Greencastle Road, east of the Robey Road intersection, will be widened to provide a leftturn lane onto Robey Road. Appropriate landscaping and stormwater management facilities are included. |
| 825 | Travilah Road | Darnestown Road | Darnestown Road | Road with side path and sidewalk |
| 828 | Woodfield Road Extended | Main Street | Main Street | This project provides a 3,000-foot extension of Woodfield Road from 1,200 feet north of Main Street, (MD 108), to Ridge Road, (MD 27). The scope of work includes the design, land acquisition, and construction of a 1,450 foot segment of Ridge Road from 450 feet south of the existing Ridge Road / Faith Lane intersection to 300 feet north of the Ridge Road / Gue Road intersection. The roadway improvements include: extension of Woodfield Road as a 28-foot wide closed-section roadway with two 14-foot wide traffic lanes; provision of auxiliary leftturn lanes on Woodfield Road at Faith Lane and Ridge Road; realignment of Faith Lane to intersect Woodfield Road at a point 350 feet south of Ridge Road; construction of a separated 8-foot wide bikeway along the |

| | | | | eastern side of Woodfield Road Extended from Main Street to Ridge Road; widening Ridge Road to provide two 12-foot wide travel lanes, two 4-foot wide paved shoulders, an auxiliary left turn lane at the proposed intersection with Woodfield Road; streetlighting; and landscaping. Woodfield Road Extended and Ridge Road improvements will be constructed within an 80-foot wide right-of-way. |
|-----|---|--------------------|--------------------|---|
| 839 | Evarts Street Bike Lanes | I-495 | I-495 | Designated bike lanes and continuous sidewalks were provided as part of the road construction for Woodmore Town Center. These bike lanes connect to longer bike lanes along Ruby Lockhart Boulevard. |
| 840 | Ruby Lockhart Boulevard | Evarts Street | Evarts Street | Designated bike lanes, wide sidewalks, traffic calming, and decorative crosswalks were provided as part of the road construction for Woodmore Town Center. |
| 848 | Black Hill Regional Park Trails | | | Since 2010, M-NCPPC Montgomery Parks has built just over 5 miles of new hard surface park trails, all within Black Hill Regional Park. |
| 849 | City of Frederick Bike Lanes | | | City-wide bike lanes |
| 850 | Rhode Island Avenue Trolley Trail Ext. Phase I | Queensbury Road | Queensbury Road | Hyattsville, Riverdale Park |
| 851 | Black Branch Stream Valley Trail - Oak Creek Club | | | (Oak Creek Club development) – 1.74 miles (developer built) |
| 852 | WB&A Spur Trail | | | |

Appendix D 2013 Cordon Counts

Cordon DDOT Cordon DDOT Other trails and streets in Potomac River Bridges Count Count Count Count D.C. Volumes Volumes Volumes Volumes Capital Crescent and C&O 229 14th Street (Inbound to D.C.) 592 Canal Towpath 14th Street (outbound from D.C.) 172 Rock Creek 130 Arlington Memorial (inbound to D.C.) 160 Connecticut Avenue, N.W. 197 Arlington Memorial (outbound from D.C.) 274 64 14th Street, N.W. Key (Inbound to D.C.) 103 337 11th Street, N.W. 161 Eckington Place, N.E. Key (outbound from D.C.) 99 222 235 (Metropolitan Branch) 15 East Capitol Street 275 Anacostia Trail (M Street, S.E.) 12 Other trails and streets in 11th Street Bridge, S.E. (local Arlington County, Va. span) 12 Mount Vernon Trail 332 Custis Trail 349

Notes:

(1) Cordon Count Volumes taken any day between March and June

2013

(2) DDOT Count Volumes taken in late May

or June 2013

(3) One day count at each location

| Potomac River Bridges | Cordon Count Volumes | DDOT Count Volumes | Other trails and streets in D.C. |
|---|--------------------------------------|--------------------------|---|
| 14th Street (Inbound to D.C.) 14th Street (outbound from D.C.) Arlington Memorial (inbound to D.C.) Arlington Memorial (outbound from D.C.) Key (Inbound to D.C.) Key (outbound from D.C.) | 592 172 160 64 103 99 | | Capital Crescent and C&O Canal Towpath Rock Creek Connecticut Avenue, N.W. 14th Street, N.W. 11th Street, N.W. Eckington Place, N.E. (Metropolitan Branch) |
| Other trails and streets in Arlington County, Va. Mount Vernon Trail Custis Trail | 332 349 | | East Capitol Street Anacostia Trail (M Street, S.E.) 11th Street Bridge, S.E. (local span) |

Notes:

(1) Cordon Count Volumes taken any day between March and June 2013

(2) DDOT Count Volumes taken in late May or June 2013

(3) One day count at each location

Appendix E Metrorail Origin Station by All Day Walk and Bike Mode of Access

| | Bicycle (all | Walked (all |
|--|--------------|-------------|
| | day) | day) |
| | | |
| 2013 WMATA Passenger Survey | | |
| Capitol South | 0.6% | 95.0% |
| Federal Center SW | 0.2% | |
| Judiciary Square | 0.2% | |
| Waterfront-SEU | 0.0% | |
| U Street/African-Amer Civil War Memorial/Cardozo | 1.0% | |
| Navy Yard | 0.1% | 90.2% |
| Mt. Vernon Square 7th St-Convention Center | 0.8% | 90.0% |
| Farragut North | 0.3% | 89.9% |
| Metro Center | 0.3% | 89.7% |
| Court House | 0.6% | 89.5% |
| Federal Triangle | 0.1% | 89.3% |
| Archives-Navy Memorial-Penn Quarter | 0.1% | 89.2% |
| Smithsonian | 0.3% | 88.2% |
| Gallery Place-Chinatown | 0.2% | 87.9% |
| Farragut West | 0.1% | 87.6% |
| Foggy Bottom-GWU | 0.5% | 87.4% |
| Shaw-Howard University | 0.2% | 86.9% |
| Virginia Square-GMU | 0.4% | 86.6% |
| McPherson Square | 0.6% | 86.3% |
| Woodley Park-Zoo/Adams Morgan | 1.5% | 85.9% |
| New York Ave-Florida Ave-Gallaudet U | 1.6% | 85.9% |
| Cleveland Park | 0.7% | 85.8% |
| Dupont Circle | 0.8% | 84.4% |
| Eastern Market | 2.5% | 84.2% |
| Van Ness-UDC | 0.3% | 83.8% |
| Clarendon | 1.1% | 81.3% |
| L'Enfant Plaza | 0.3% | 77.7% |
| Columbia Heights | 1.6% | 76.8% |
| Crystal City | 0.7% | 76.3% |
| Bethesda | 1.3% | 72.2% |
| Arlington Cemetery | 0.0% | 71.5% |
| Medical Center | 1.6% | |
| Rosslyn | 0.4% | 70.8% |
| Friendship Heights | 0.6% | |
| Stadium-Armory | 0.0% | |
| Georgia Avenue-Petworth | 0.3% | |
| Eisenhower Avenue | 0.5% | |
| King Street | 0.5% | |
| Ballston-MU | 1.0% | |
| Ronald Reagan Washington National Airport | 0.6% | |
| Grand Total | 0.7% | |
| White Flint | 1.8% | |
| Tenleytown-AU | 0.7% | 60.9% |

| | - | |
|----------------------------|------|-------|
| Union Station | 0.8% | 60.0% |
| Silver Spring | 0.5% | 59.9% |
| Potomac Avenue | 0.3% | 59.6% |
| Braddock Road | 3.2% | 58.0% |
| Benning Road | 0.0% | 55.3% |
| Takoma | 1.9% | 55.3% |
| Pentagon City | 0.6% | 55.2% |
| Brookland-CUA | 0.7% | 53.1% |
| Twinbrook | 2.3% | 50.4% |
| Deanwood | 0.0% | 48.2% |
| Congress Heights | 0.9% | 43.1% |
| Forest Glen | 2.2% | 42.1% |
| Prince George's Plaza | 2.3% | 42.1% |
| West Hyattsville | 1.5% | 41.6% |
| Minnesota Avenue | 0.0% | 39.4% |
| East Falls Church | 3.6% | 39.3% |
| Rhode Island Ave-Brentwood | 0.0% | 38.2% |
| Pentagon | 0.2% | 37.5% |
| Suitland | 0.0% | 37.5% |
| Rockville | 0.9% | 35.4% |
| Grosvenor-Strathmore | 0.8% | 35.1% |
| Wheaton | 0.9% | 33.9% |
| Capitol Heights | 0.0% | 32.9% |
| Dunn Loring-Merrifield | 2.6% | 31.1% |
| Fort Totten | 0.0% | 29.3% |
| Morgan Boulevard | 0.0% | 24.9% |
| Huntington | 0.2% | 23.1% |
| Anacostia | 0.0% | 19.6% |
| College Park-U of MD | 2.0% | 19.0% |
| Cheverly | 1.6% | 18.2% |
| Naylor Road | 0.5% | 18.2% |
| Van Dorn Street | 0.3% | 14.4% |
| Glenmont | 0.4% | 12.9% |
| Southern Avenue | 0.0% | 12.9% |
| Vienna/Fairfax-GMU | 0.8% | 11.4% |
| Largo Town Center | 0.0% | 10.8% |
| Addison Road-Seat Pleasant | 0.0% | 9.7% |
| New Carrollton | 0.2% | 8.2% |
| Greenbelt | 2.0% | 7.7% |
| Branch Ave | 0.3% | 7.6% |
| West Falls Church-VT/UVA | 0.7% | 6.9% |
| Shady Grove | 0.4% | 6.2% |
| Landover | 0.0% | 5.8% |
| Franconia-Springfield | 1.2% | 5.7% |

Appendix F Links and Resources

ADC Regional Bicycle Map www.adcmap.com

Alexandria Rideshare www.alexride.org

BikeArlington www.bikearlington.com

Arlington bicycle information.

BikeWashington www.bikewashington.org

Bike trails and routes in the Washington region, clubs, and organized rides.

Capital Bikeshare www.capitalbikeshare.com/

Regional self-service bicycle rental.

Coalition for Smarter Growth www.smartergrowth.net

An advocacy group for transit-oriented development in the Washington region.

College Park Area Bicycle Coalition www.cpabc.org

Advocacy group for bicycling in the College Park, MD area.

Fairfax Advocates for Better Bicycling http://www.fabb-bikes.org/

Advocacy Group for bicycling in Fairfax County, VA. '

League of American Bicyclists 1612 K Street NW, Suite 800 Washington, D.C. 20006 (202) 822-1333 www.bikeleague.org LAB is a national cycling advocacy group founded in 1880.

National Center for Bicycling and Walking www.bikewalk.org

A national advocacy group for walking and bicycling.

Metropolitan Washington Council of Governments 777 North Capitol Street NE, Suite 300 Washington, D.C. 20002 (202) 962-3200 www.mwcog.org www.commuterconnections.org

Metropolitan planning organization. Offers ridematching and Guaranteed Ride Home services through its Commuter Connections program, publishes a Bike to Work Guide.

National Association of City Transportation Officials

www.nacto.org/

An association of big city transportation officials oriented towards "smart growth" principles.

National Complete Streets Coalition www.completestreets.org/

Advocacy group for "complete streets", or provision of pedestrian and bicycle facilities as part of all transportation projects.

Pedestrian and Bicycle Information Center www.bicyclinginfo.org www.walkinginfo.org

National clearinghouse for information on walking and bicycling.

Ride the City

www.ridethecity.com/dc

A bicycle route finding web site.

Safe Routes to School

www.saferoutesinfo.org

The Safe Routes to School programs enables community leaders, schools and parents across the United States to improve safety and encourage more children, including children with disabilities, to safely walk and bicycle to school.

United States Access Board

www.access-board.gov

A federal agency dedicated to design that is accessible to persons with disabilities.

Virginia Bicycling Federation

www.vabike.org

Advocacy group for Virginia bicycling.

WalkArlington www.walkarlington.com

Arlington walking information.

Washington Area Bicyclist Association

2599 Ontario Rd. NW Washington, DC 20009 (202) 518-0524 www.waba.org

Advocacy group for cycling in the Washington region. Runs a pedestrian and bicycle safety education program.

Appendix G Glossary of Terms

| BIKE-ON-RAIL PERMIT | Permit issued by the Washington Metropolitan Area Transit |
|---------------------|--|
| | Authority permitting transportation of bicycles on Metrorail |
| | trains during night and weekend service periods. (no |
| | longer required) |
| | |

BICYCLE LANE (BIKE LANE) A portion of a roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists. Consists of a 4'-6' lane in each direction, with bicycle traffic moving in the same direction as motorized traffic.

BICYCLE PATH (BIKE PATH) A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right of way or within an independent right of way.

BICYCLE PARKING An area dedicated and designed specifically for storing and locking a bicycle. Includes bicycle racks and bicycle lockers.

BICYCLE ROUTE (BIKE ROUTE) A segment of a system of bikeways designated by the jurisdiction with appropriate directional and informational markers, with or without specific bicycle route numbers.

BIKE CORRAL A bike corral transforms a standard parking lane or curbside zone into bike parking, typically by placing bike racks in the space, and using with flexiwands and curb stops to discourage conflicts with automobiles. Often used in areas with narrow and/or busy sidewalks.

BIKE SHARING Short-term bicycle rental available at a network of unattended locations.

BIKE STATION A staffed, enclosed bicycle parking facility, usually located at a transit center, which may offer such services as bicycle repair, rental, lockers, and showers.

| BIKEWAY | Any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless or whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes. | | |
|----------------------------------|--|--|--|
| BUFFERED BIKE LANE | Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. | | |
| COMPLETE STREETS | Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street | | |
| CYCLE TRACK (Protected | Bike Lane) A bicycle-only facility that provides physical separation within the right of way from vehicle travel lanes. | | |
| CLASS I, II or III BIKEWA | Y Terms sometimes used to describe different types of bicycle facilities. Class I is a shared-use path, Class II a bicycle lane, and Class III a shared roadway. However, Since there is some disagreement on the exact meaning of these terms, the AASHTO terms (listed above) should be used. | | |
| GREENWAY | A linear park or recreation facility of limited width, located along the length of an existing or former public utility or railroad right-of-way, or along a stream bed. | | |
| HIKER-BIKER TRAIL | A paved path designed for use by both pedestrians and bicyclists, which is completely separated from vehicular traffic. | | |
| METROPOLITAN STATISTICAL AREA | A core area containing a substantial population nucleus, together with adjacent communities having a high degree of social and economic integration with that core. Metropolitan statistical areas comprise one or more entire counties. They are used by the United States Census for the purpose of tabulating, enumerating and publishing data. | | |
| RAILS-TO-TRAILS CONSERVANCY | A national membership organization that works to facilitate the acquisition of abandoned railroad lines for use in creating bicycle and pedestrian trails and linear | | |

parks.

RAIL-TRAIL A Shared-Use Path, either paved or unpaved, built within the right-of-way of an existing or former railroad.

REGIONAL ACTIVITY CENTER A set of locations within the National Capital Region Transportation Planning Board planning area identified by the Council of Government's Planning Director's Technical Advisory Committee as employment centers of regional significance. Five types of Regional Activity Center have been designated, with different employment and residential density criteria for each.

REGIONAL ACTIVITY CLUSTER An employment center adjacent to a Regional Activity Center, with a lower density than a Regional Activity Center

ROAD DIET A road diet is a technique whereby a road is reduced in number of travel lanes and/or effective width in order to achieve systemic improvements. An example of a road diet would be the conversion of two travel lanes in each direction to a 3-lane section with one travel lane in each direction, optional bicycle lanes, and a two-way turn lane in the middle.

SHARED ROADWAY A roadway which is open to both bicycle and motor vehicle travel. This may be an existing roadway, street with wide curb lanes, or road with paved shoulders.

SHARED-USE PATH A bikeway, at least 8' in width, physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared-Use Paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. Also called a multi-use path.

SHARROW A shared-lane marking or sharrow is a street marking used to indicate the recommended position and direction of travel for the bicyclist.

SIDE-PATHA shared-used path built within the right-of-way of a non
limited-access highway.

SIDEWALK The portion of a street or highway right-of-way, at least 4' in width, designed for preferential or exclusive use by pedestrians.

| SIGNED SHARED ROADWAY | A shared roadway that has been designated as a preferred route for bicycle use using warning, directional, and informational signage. |
|--|---|
| TRAFFIC CALMING | Traffic calming is a way to design streets, using physical measures, to encourage people to drive more slowly. |
| TRAVELED WAY | The portion of a roadway for the movement of vehicles, exclusive of shoulders. |
| UNIFORM VEHICLE CODI | E The standards for traffic regulations recommended for adoption by state and local jurisdictions, as prepared by the National Committee on Uniform Traffic Laws and Ordinances. |
| WASHINGTON AREA BICYCLIST ASSOCIATION | A regional membership organization devoted to improving bicycling opportunities and promoting bicycle usage in the metropolitan Washington area. |

Appendix H

Glossary of Acronyms

| AASHTO | American Association of Highway Transportation Officials |
|------------|---|
| ADA | Americans with Disabilities Act |
| AFA | Access for All Advisory Committee |
| CLRP | Financially Constrained Long-Range Transportation Plan |
| CMAQ | Congestion Mitigation and Air Quality Improvement Program |
| COG | Metropolitan Washington Council of Governments |
| DDOT | District of Columbia Department of Transportation |
| FHWA | Federal Highway Administration |
| FTA | Federal Transit Administration |
| ISTEA | Intermodal Surface Transportation Efficiency Act of 1991 |
| MAP-21 | Moving Ahead for Progress in the 21st Century Act |
| MDOT | Maryland Department of Transportation |
| MPO | Metropolitan Planning Organization |
| MSA | Metropolitan Statistical Area |
| MTA | Maryland Transit Administration |
| MUTCD | Manual on Uniform Traffic Control Devices |
| NACTO | National Association of City Transportation Officials |
| NCPC | National Capital Planning Commission |
| NVTC | Northern Virginia Transportation Commission |
| SAFETEA-LU | Safe, Accountable, Flexible, Efficient Transportation Equity Act: |
| | Legacy for Users |
| MDSHA | Maryland State Highway Administration |
| SOV | Single-Occupant Vehicle |
| SRTS | Safe Routes to School |
| TCSP | Transportation and Community and System Preservation Pilot |
| | Program |
| TEA-21 | Transportation Equity Act for the 21st Century |
| TIP | Transportation Improvement Program |
| TPB | National Capital Region Transportation Planning Board |
| US DOT | U.S. Department of Transportation |
| VDOT | Virginia Department of Transportation |
| VMT | Vehicle-Miles Traveled |
| WABA | Washington Area Bicyclist Association |
| WMATA | Washington Metropolitan Area Transit Authority |

Appendix I Bibliography

Alliance for Bicycling and Walking, *Bicycling and Walking in the United States: 2014* Benchmarking Report

American Council for the Blind. A Handbook for Advocates. April, 2000.

Denmark Ministry of Transport. Safety of Cyclists in Urban Areas: Danish Experiences. 1994.

District of Columbia Department of Transportation. *District of Columbia Bicycle Master Plan*. April, 2005.

District of Columbia Department of Transportation. MoveDC. October, 2014.

Maryland-National Capital Plark and Planning Commission. *Countywide Bikeways Functional Master Plan.* March, 2005.

Maryland Department of Transportation. *Twenty Year Bicycle and Pedestrian Access Master Plan.* January, 2014.

Metropolitan Washington Council of Governments, 2013 Bike to Work Day Survey-Summary of Results, January 2014.

Northern Virginia Injury Prevention Center, INOVA Regional Trauma Center. *Pedestrian Injury in the Washington, D.C. Metropolitan Region.* September, 2005.

National Capital Region Transportation Planning Board. 2004 Bike to Work Day Survey – Summary of Results. June, 2005.

National Capital Region Transportation Planning Board. 2013 State of the Commute Survey Report. 2014.

National Capital Region Transportation Planning Board. 1994 COG/TPB Household Travel Survey: Summary of Major Findings. January, 1998.

National Capital Region Transportation Planning Board. 2003 Update to the Financially Constrained Long-Range Transportation Plan for the National Capital Region. October, 2004.

National Capital Region Transportation Planning Board. *The Bicycle Element of the Long-Range Transportation Plan for the National Capital Region*. July, 1995.

National Capital Region Transportation Planning Board. *Biking to Work in the Washington Area: A Guide for Employers and A Guide for Employees.* April, 2006.

National Capital Region Transportation Planning Board. *Growth Trends to 2030: Cooperative Forecasting in the Washington Region*. October, 2005.

National Capital Region Transportation Planning Board. *Lessons Learned*. October, 2004. A fact sheet prepared by the Access for All Committee for Disability Awareness Day.

National Capital Region Transportation Planning Board. *Priorities 2002: Metropolitan Washington Circulation Systems*. February, 2001.

National Capital Region Transportation Planning Board. *Priorities 2000: Metropolitan Washington Greenways*. February, 2001.

National Capital Region Transportation Planning Board. Street Smart: Pedestrian and Bicycle Safety Campaign. April, 2006.

National Capital Region Transportation Planning Board. *The TPB Vision*. October, 1998.

National Capital Region Transportation Planning Board. *Regional Transportation Priorities Plan.* January, 2014.

New York City Department of Transportation. Street Design Manual, 2009.

Pucher, John. "Making Walking and Bicycling Safer: Lessons from Europe." *Transportation Quarterly*. Summer, 2000.

Pucher, John. "Socioeconomics of Urban Travel: Evidence from the 2001 NHTS". *Transportation Quarterly.* Vol. 57, No. 3, Summer 2003, pp. 49-77.

Raford, Noah. "Space Syntax: An Innovative Pedestrian Volume Modeling Tool for Pedestrian Safety." TRB Conference, January, 2004. (TRB2004-000977)

Smart Growth America. Dangerous by Design 2014. 2014.

Virginia Department of Transportation, Northern District Office. *Northern Virginia Regional Bikeway and Trail Network Study*. November, 2003.

Virginia Department of Transportation, Northern District Office. *Virginia State Bicycle Policy Plan.* September, 2011.

Washington Metropolitan Area Transit Authority. 2002Passenger Survey: Final Report. November, 2002.

Washington Metropolitan Area Transit Authority. *Bicycle Locker and Rack Survey: Existing Conditions and Planning for the Future.* Powerpoint presentation, May, 2006.