

Innovation Center Transit Station Area

Multimodal District Plan

Phase 1 (3rd Submission)



A Fairfax County,
Virginia Publication

Table of Contents

Applying the Multimodal System Design Guidelines (Guidelines).....	4
Area Overview.....	5
Upper Potomac	5
Dulles Suburban Center	5
Innovation Center Transit Station Area (TSA).....	5
TOD/Redevelopment Options.....	6
Innovation Center Transit Station-South	6
Transportation Recommendations for the Innovation Center TSA.....	7
Fairfax County Transportation Plan and Policy Plan guidance	7
Transit, Pedestrian, and Bicycle Connectivity	8
Bicycle Connectivity	8
Pedestrian Mobility.....	9
Public Transportation.....	9
Metrorail	9
Bus Service-Existing.....	9
Fairfax County Transit Development Plan – Recommended Bus Routes	9
Road Network and Circulation.....	10
Existing and Future Transportation Network	10
Functional Classification	11
Modal Emphasis.....	11
Appendix A.....	12
Table 1: Activity Density Classification.....	12
Figure 1: Innovation Center TSA Multimodal District	14
Figure 2: Innovation Center TSA Existing Street Network	15
Figure 3: Innovation Center TSA Future Street Network	16
Figure 4: Innovation Center TSA Bicycle Network	17
Figure 5: Innovation Center TSA Pedestrian Network	18
Figure 6: Innovation Center TSA Transit Network	19
Figure 7: Innovation Center TSA Multimodal Transportation Network	20
Figure 8: Innovation Center TSA Multimodal Transportation Surrounding Network.....	21
Table 2: Innovation Center TSA Functional Classification and Modal Emphasis	22

Figure 9: Innovation Center TSA VDOT/FHWA Functional Classification 24

Figure 10: Innovation Center TSA DRPT Functional Classification..... 25

Appendix B 27

Attachment I: Multimodal District Classifications based on Comprehensive Plan Development
Potential..... 34

Attachment II: Countywide Trails Map 36

Attachment III: Countywide Bicycle Network Plan Map..... 37

Innovation Center TSA Multimodal District Plan

Phase 1, 2nd Submission

Applying the Multimodal System Design Guidelines (Guidelines)

Fairfax County implemented the steps described in the Virginia Department of Rail and Public Transportation (DRPT) Multimodal System Design Guidelines (Guidelines) final document dated March 2020 to analyze existing and future population and employment, designate Multimodal Districts and Centers, calculate the activity density, designate multimodal corridors, determine existing and future transportation modes, and define modal emphasis. Appendix B contains an outline which describes the methodology used by the county to apply the Guidelines for selected activity centers.

This document relates specifically to the Innovation Center Transit Station Area (TSA) Multimodal District. The activity density for the Innovation Center TSA is 93.6 people + jobs per acre, which correlates to a P6 Urban Core type. A map of the Innovation Center TSA is included as Figure 1 on page 13. This map distinguishes between the multimodal center, which is the transit station mixed use area, and the multimodal district, which consists of the entire Innovation Center transit-oriented development (TOD) district.

The data used to calculate the activity density is included in Appendix A, Table 1 on pages 11 and 12. As expressed in the Guidelines, Transect or “T-Zones” are also used to define the density and intensity of development, but through the application of a consistent scale of six different “T-Zones” ranging from T-1 (rural) to T-6 (dense urban core area).

Transect Zones will be considered in more detail during the implementation of Phase 2, when roadway sections will be compiled. In the case for the Innovation Center TSA, the P6 Urban Core translates to a T-6 level of intensity, mainly within the quarter-mile radius of the center. A T-5 designation is assigned outside of the center, primarily within the half-mile radius of the center and should include the entirety of the Innovation Center TSA. During Phase 2 submission for the Innovation Center TSA, the optimal values of each corridor element based upon the T-Zone designations as recommended by the Guidelines will be used for the development of the cross-sections.

This document includes citations from the Fairfax County Comprehensive Plan (Plan). The Plan recommendations for the Innovation Center Transit Station Area is available online at:

Fairfax County Comprehensive Plan, 2017 Edition, Area III, Dulles Suburban Center Planning District <https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/compplan/area3/dulles.pdf#page=148> as amended through 09-24-2019,

Area Overview

Upper Potomac

The Upper Potomac Planning District is located in the northwest portion of Fairfax County. It is generally bounded on the north by the Potomac River, on the east by Difficult Run and Towlston Road, on the south by Lee Jackson Memorial Highway (Route 50) and on the west by Loudoun County and the Washington Dulles International Airport. The Upper Potomac Planning District encompasses approximately 47,500 acres which is about 18 percent of the county's land area. The character of this planning district varies widely, from the semi-rural area of Great Falls along the Potomac River to the urbanizing Reston Transit Station Areas and Dulles Suburban Center to suburban neighborhoods.

Dulles Suburban Center

The Dulles Suburban Center is located in western Fairfax County, adjacent to the eastern and southern boundaries of the Washington Dulles International Airport (Dulles Airport). The Dulles Suburban Center extends from just north of the Dulles Airport Access and Toll Road (DAAR) on the north to I-66 on the south (see Figure 1). The Dulles Suburban Center small area boundary encompasses the future Innovation Center Metrorail station and includes the Innovation Center Transit Station Area (TSA) located north and south of the DAAR. The southwestern edge of the Suburban Center is contiguous with Loudoun County and Dulles Airport property. With the exception of a small part of the Reston Transit Station Areas, the Dulles Suburban Center is bordered to the north, south and east by residential neighborhoods. Route 28, Centreville and Walney Roads are three major highways that provide north and south access through, to and from the Dulles Suburban Center. Route 50 bisects the area from east to west.

Innovation Center Transit Station Area (TSA)

The Innovation Center Transit Station Area (TSA) consists of nearly 800 acres, approximately 700 of which are located south of the Innovation Center Metrorail station and approximately 100 acres north of the station. It is bounded on the east by Centreville Road, on the south by Frying Pan Road, on the north by the Town of Herndon, and on the west by Route 28, Washington Dulles International Airport, and the Loudoun County boundary. The TSA is bisected by the Dulles Airport Access Road (DAAR). Areas within ½ mile of the center of the station platform area are planned for transit-oriented development (TOD) focused on the Innovation Center Metrorail Station.

Land Unit A consists of approximately 696 acres located south of the Innovation Center Metrorail station. It is bounded on the north by the Dulles Airport Access Road and Toll Road (DAAR, Route 267), on the east by Centreville Road, on the south by Frying Pan Road, and on the west by Route 28, Washington Dulles International Airport and the Loudoun County boundary.

Land Unit L consists of approximately 103 acres and is located east of the Loudoun County boundary, bounded on the south by the Dulles Airport Access Road (DAAR), on the east by the Reflection Lake community and on the north by the Town of Herndon. The Transit Station Area (TSA) includes area within ½ mile of the center of the station platform area.

The area around Innovation Center station in Loudoun County has been designated as an Urban Policy Area. The Loudoun County 2019 General Plan envisions areas around the Metrorail Stations as transit-oriented communities with a dense urban core.

Fairfax County Comprehensive Plan, 2017 Edition, Area III, Dulles Suburban Center Planning District as amended through 09-24-2019, page 2.

TOD/Redevelopment Options

The planned land use pattern in south of DAAR focuses most future growth within walking distance of the future Innovation Center Metrorail station which is generally considered to be within $\frac{1}{4}$ and $\frac{1}{2}$ mile from the station. Intensities will be highest in areas with the closest proximity to the station, tapering down to lower density areas farther from the station. This area is planned for a complementary mix of land uses including office, residential, hotel and support retail. Development should provide for the incorporation of future transit related facilities and pedestrian and vehicular access to transit.

Innovation Center Transit Station-South

The southern portion of the Innovation Center Transit Station Area is 332 acres and is developed with a mix of office, hotel, residential and support retail uses. This area is planned for transit-oriented development (TOD) which focuses growth within walking distance of the Metrorail station. Intensities should be highest in areas with the closest proximity to the station. To provide guidance on how intensity should gradually decrease with distance, the area is divided into three tiers as shown on the table below. For purposes of tiered planned intensity, the $\frac{1}{4}$ mile and $\frac{1}{2}$ mile radius is measured from the center of the platform where it meets the bridge.

Innovation Center Transit Station-South Tiered Planned Intensity	
Distance From Metrorail Station	Range of Intensity (FAR)
Tier 1: Within $\frac{1}{4}$ Mile	2 to 3 FAR
Tier 2: $\frac{1}{4}$ to $\frac{1}{2}$ Mile	1 to 2 FAR
Beyond $\frac{1}{2}$ Mile	0.75 to 1.5 FAR

Innovation Center Transit Station-North

Development should be guided by the TOD guidance set forth in the Policy Plan volume of the Comprehensive Plan. Consistent with that guidance, appropriate intensity should be governed by the distance from the rail transit platform based on same tiered approach south of the Metrorail station:

Innovation Center Transit Station-North Tiered Planned Intensity	
Distance From Metrorail Station	Range of Intensity (FAR)

Tier 1: Within ¼ Mile	Up to 2.8 FAR
Tier 2: ¼ to ½ Mile	Up to 1.6 FAR
Beyond ½ Mile	0.5 FAR

Tier 1 within ¼ mile of a Metrorail station should include a mix of uses including office, research and development, hotel, retail, and residential uses at an intensity up to 2.8 FAR. Tier 2 within ¼ to ½ mile of a Metrorail station should include a mix of uses including office, hotel, retail, and residential uses at an intensity up to 1.6 FAR. Beyond ½ mile of a Metrorail station should include residential uses at 16-20 dwelling units per acre, at an overall intensity up to .50 FAR.

The proposed development in Tier 1 and Tier 2 should be oriented toward the transit station area. Although phasing of the ultimate development should be flexible, establishment of the pedestrian-scaled, mixed-use character of the area should be established in the initial phase of development. This phase should include a grid street pattern, plazas, usable open space, vertically-integrated land uses with ground-floor retail, and other activity generating uses located along the street creating a place where people want to walk.

Transportation Recommendations for the Innovation Center TSA

Fairfax County Transportation Plan and Policy Plan guidance

The Countywide Transportation Plan Map is a component of the Comprehensive Plan and depicts the County's recommendations for transportation improvements, including adding HOV/HOT lanes, widening roads, constructing interchanges, extending existing roads, and constructing new roads. These recommendations are included into the Innovation Center TSA multimodal district maps. The plan recommends constructing Davis Drive as a new four-lane bridge over DAAR connecting Sunrise Valley Drive to Innovation Avenue in neighboring Loudoun County. The Countywide Trails Plan Map delineates the planned trail network throughout the county. Future walkways and bike paths along with the existing network are shown on the maps included in this document.

Appendix 1 of the Transportation section of the Policy Plan contains the County's roadway functional classification, which varies slightly from the FHWA/VDOT functional classification. The county divides the "Minor Arterial" classification into two categories: Minor Arterials - A and Minor Arterials – B. This information was used to compare the classification between FHWA/VDOT and the county to determine if there were any issues before moving to the DRPT classification step.

Transit, Pedestrian, and Bicycle Connectivity

Bicycle Connectivity

Transit, pedestrian, and bicycle connectivity improvements are major elements in the TSA. Transportation modes, other than single- occupancy vehicles, are preferred to support the increased density and mix of uses. Transit, pedestrian, and bicycle connectivity will achieve the objectives of increasing transit usage and creating a walkable and bike-able area.

Multi-jurisdictional cooperation is encouraged to identify and provide dedicated and direct bicycle facilities, within the public right-of-way, similar to the Washington & Old Dominion Trail. Facility design should protect users and provide low-stress conditions appropriate to the planned traffic volume and speed of the adjacent roadway.

Bicycling is an important component of transportation and provides additional mobility options. Improving bike connectivity in the Dulles Suburban Center is crucial to making the bicycle a more viable mode of transportation. A robust bicycle network is planned for the area and can be seen in the County's Bicycle Master Plan. These connections will allow for the movement in and around the Dulles Suburban Center, connecting the residential neighborhoods with the more concentrated mixed-use areas. Consideration should be given to the safety of bicyclists in new projects, including the separation of bike facilities from vehicular traffic where desirable.

Fairfax County adopted its Bicycle Master Plan in October 2014. The plan includes recommendations for different types of bicycle facilities throughout the county, including signage, sharrows, bike lanes and protected bike lanes. The current Fairfax County Bicycle Network Map is located: <https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/documents/maps/bicyclenetworkmap.pdf>

The Active Fairfax Plan is in progress and will update the 2014 Bicycle Master Plan. The Reston Plan guidance includes the Bicycle Master Plan recommendations. The Bicycle Network Map in Figure 4 shows the existing and future bicycle network. When the cross-sections are being developed during Phase II, the specific bicycle facility recommendation will also be finalized.

Rock Hill Road should be improved with a bi-directional separated bicycle facility and a continuous and connected sidewalk on the west side. Innovation Avenue should have either a bi-directional separated bicycle facility on the south side of the road or bike lanes. Coordination with Loudoun County is encouraged to determine an appropriate and seamless facility for Innovation Avenue.

Secure and convenient bicycle parking should be provided to encourage bicycling to the Innovation Center Metrorail Station and other destinations. The Fairfax County Bicycle Parking Guidelines provide information on the quantity and design of bicycle parking facilities.

Pedestrian Mobility

Within the TSA, sidewalks should be provided on both sides of the road and be a minimum of eight feet wide. If a sidewalk is on the same side as a bi-directional separated bicycle facility, a narrower facility could be considered if it abuts residential uses. Pedestrian connections to Innovation Avenue and Rock Hill Road from neighborhoods to the east should be studied and, if feasible, implemented.

Other pedestrian and bicycle enhancements relating to streets might include delineated crosswalks, signal re-timings, intersection sidewalk extensions (bulb-outs), mid-block crossings, street medians, reduced turning radii and other features designed into the street section with the goal of reducing conflicts with vehicles and improving safety.

In addition, direct paths, such as trails or walkways, should be provided for pedestrians where additional street connections cannot be made or where a more enhanced pedestrian network is desirable. The Pedestrian Network Map is Figure 5.

The Fairfax County Countywide Trails Plan Maps is available: <https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/documents/maps/trails-plan-map.pdf>

Public Transportation

Metrorail

The introduction of Metrorail service along the Dulles Airport Access Road and Toll Road is an integral factor to providing increased mobility and reducing vehicle dependency for employees and residents in this area. Focusing the densest development around the Innovation Center Metrorail station is vital to promote the use of public transportation. The station will include a pedestrian bridge as well as entrances and bus bays on both sides or DAAR.

Bus Service-Existing

There is existing Fairfax Connector bus service that serves both local riders and people commuting through. These routes will be modified to provide convenient and reliable feeder service to the surrounding area from the Innovation Center Station.

Fairfax County Transit Development Plan – Recommended Bus Routes

In 2016, Fairfax County Department of Transportation completed a comprehensive Transit Development Plan (TDP) for all bus service in the County. The TDP serves as a 10-year plan for the expansion and enhancement of bus service in Fairfax County. The routes recommended in the TDP have been integrated into the transportation network maps and are shown as “Future Fairfax Connector” routes and “Future Metrobus” routes. The County is currently undertaking a planning study to extend the life of the TDP from 2020 to 2025.

A restructured Route 983 would originate at the Innovation Center Metrorail Station and serve Sunrise Valley Drive to reach Sully Road (VA 28). Rather than running directly to the museum, the route would use McLearn Road, EDS Drive, and Air & Space Museum Parkway to serve Dulles Discovery and then the museum. It would return north to the Metrorail station along the same alignment. An optional

alignment for Route 983 would be to have the northern terminal be at the future Dulles Airport Metrorail Station, providing connections to the museum for travelers and coming from both the airport and Silver Line.

The entire Transit Development Plan can be found online at:

<https://www.fairfaxcounty.gov/transportation/tdp>

Road Network and Circulation

The road network and circulation recommendations provide additional transportation guidance for development around the Innovation Center TSA. As new streets are constructed, right-of-way should be provided for their ultimate configuration including pedestrian and bicycle facilities as identified in the Plan. The streets should provide a high level of connectivity and accommodate all modes of transportation to the fullest extent possible.

Balancing the competing needs of numerous stakeholders will be necessary from the earliest stages in the planning and design of transportation projects. The design of a facility should ensure safety and function appropriately for all users regardless of the mode of travel they choose. Flexibility in design may be considered to achieve Plan objectives. The Transportation element of the Policy Plan can be found online at: <https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/compplan/policy/transportation.pdf>

The amount of new development planned for the Innovation Center TSA will require significant transportation improvements and changes in travel patterns. Planned roadway improvements are necessary to enhance circulation and access in the area and help relieve congestion at key intersections. Improvements to transit and to pedestrian and bicycle networks are also needed to encourage travel by these modes. The provision of such infrastructure and the achievement of vehicular trip reduction objectives should occur in concert with future growth.

A fundamental purpose of the grid of streets is to increase connectivity in the TSA. One benefit is the availability of alternative routes for vehicles, thereby reducing congestion. A conceptual enhanced street network for the Innovation Center Transit Station Area is represented in Figure 3. In planning the grid of streets, consideration should be given to avoiding intersections with acute or awkward angles; minimizing exclusive turn lanes; and having block sizes generally within a 400 foot to 600 foot range. Any block longer than 600 feet should contain a mid-block pedestrian connection where possible.

Existing and Future Transportation Network

Fairfax County staff combined the recommendations from the various transportation plans, studies, and maps as mentioned above to create an all-inclusive transportation network map. This map includes the current and future pedestrian network, current and future bicycle network, and current and future transit network, which can be found in Figure 7.

Functional Classification

Fairfax County used the VDOT 2013 Draft Functional Classification GIS layer to identify the functional classification of each street within the Herndon TSA Multimodal District. This VDOT functional classification was then used in coordination with the VDOT/DRPT Translation Matrix to classify each street in the Multimodal District with a DRPT street typology. The list of streets included in the Herndon TSA Multimodal District and defined as a multimodal street can be found in Table 2. An associated map with the VDOT functional classification system is shown in Figure 8.

Fairfax County staff reviewed each street in the district and used Comprehensive Plan text and transportation plan recommendations on widening and improvements to derive the DRPT based street typology. The Fairfax County recommended DRPT Functional Classification can be found in Table 2 on page 20. The accompanying map can be found in Figure 9.

Modal Emphasis

All roads in the Innovation Center TSA were evaluated to determine the modal emphasis, or which modes are to be accommodated on each roadway. This chart is shown in Table 2 on page 20.

The Comprehensive Plan provides guidance in terms of cross-sections for certain roadways in the Innovation Center TSA Multimodal District. Where the Comprehensive Plan does not provide guidance, Fairfax County DOT will use the DRPT Guidelines to develop cross-sections based on modal priority and optimal values for each transportation element included on the street. Recommended cross-sections using the multimodal design standards will be included in the Phase II submission, after the county receives approval from VDOT on Phase I.

Appendix A

Table 1: Activity Density Classification

Area	Within 1/4 mile from Metrorail station (2.0-3.0 FAR)	1/4 mi- 1/2 mi from station (1.0-2.0 FAR)	Beyond 1/2 mile from station (0.75-1.5 FAR)
Office (2019 potential, gross square feet (GSF))	3,002,796	4,382,035	1,763,104
Employment Factor (gsf/employee)	300	300	300
Office JOBS	10,009	14,607	5,877
Retail (GSF)	142,551	139,375	163,725
Employment Factor	400	400	400
Retail JOBS	356	348	409
Hotel (GSF)	87,750	934,336	33,471
Employment Factor	1,300	1,300	1,300
Hotel JOBS	68	719	26
Industrial (GSF)	246,205	0	0
Employment Factor	450	450	450
Industrial JOBS	547	0	0
Govt/Institutional (GSF)	0	0	0
Employment Factor	500	500	500
Govt/Institutional JOBS	0	0	0
Single-Family Detached Units	0	0	0
Residential Occupancy Factor (people/unit)	3.17	3.17	3.17
PEOPLE (SF Detached)	0	0	0
Single-Family Attached (townhouse) units	0	90	0
Residential Occupancy Factor (people/unit)	2.82	2.82	2.82
PEOPLE (SF Attached)	0	254	0
Multifamily Units	2,697	7,089	1,363
Residential Occupancy Factor (people/unit)	1.96	1.96	1.96
PEOPLE (Multifamily)	5,286	13,894	2,671

Subtotal – JOBS	971	1,067	435
Subtotal – PEOPLE	5,286	14,148	2,671
Total – PEOPLE AND JOBS	6,257	15,215	3,107
Total Land Area (acres)	58	232	94
Density (people + jobs/acres)	108	66	33
Density Classification	P-6 Urban Core	P5- Urban Center	P4 - Large Town or Suburban Center

Notes for Table 1:

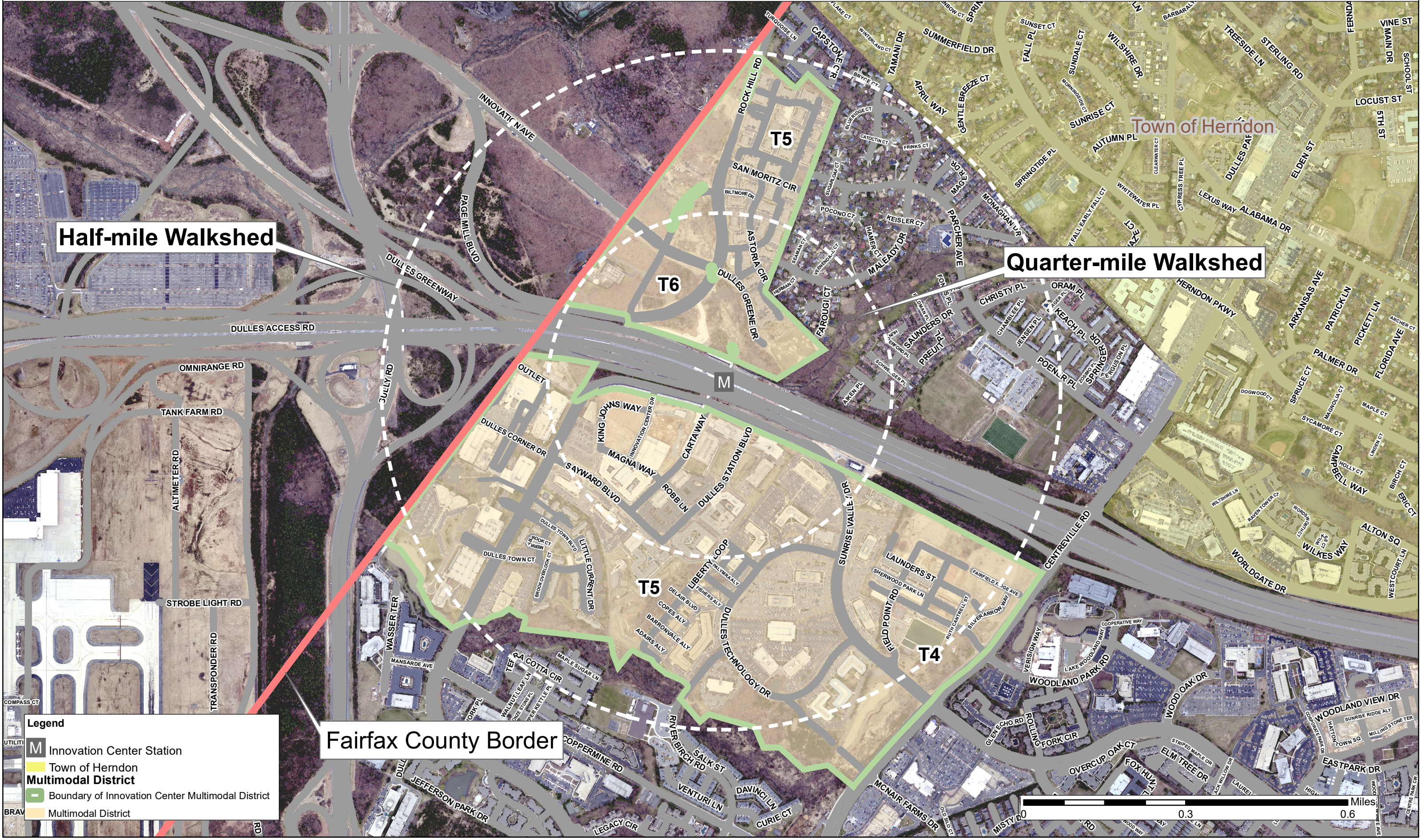
^Activity densities for the areas designated as "transit station mixed use" and "residential mixed use" in the Upper Potomac Planning District, as recommended in the Fairfax County Comprehensive Plan, 2017 Edition, Area III, Upper Potomac Planning District, amended through 10-16-2018, Reston Transit Station Areas.

*Activity densities for the areas designated as "transit station mixed use". These areas generally include the parcels within a safe, comfortable and reasonably direct 1/4 mile walk from the stations.

A range of development potential is recommended by the Plan; the mid-point was applied for the transit station mixed use areas. This mid-point was used for the impacts analysis and takes into account that not all parcels will develop at the planned maximum intensity/FAR.



Figure 1: Innovation Center TSA Multimodal District



Half-mile Walkshed

Quarter-mile Walkshed

Fairfax County Border

Legend

- Innovation Center Station
- Town of Herndon
- Multimodal District
- Boundary of Innovation Center Multimodal District
- Multimodal District

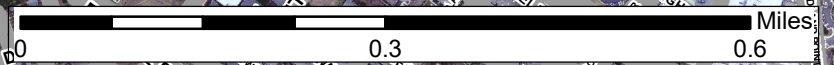




Figure 2: Innovation Center TSA Existing Street Network



Legend

- M** Innovation Center Station
- Existing Streets
- Town of Herndon
- Multimodal District**
- Boundary of Innovation Center Multimodal District
- Multimodal District

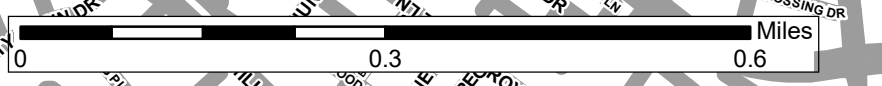




Figure 3: Innovation Center TSA Future Street Network

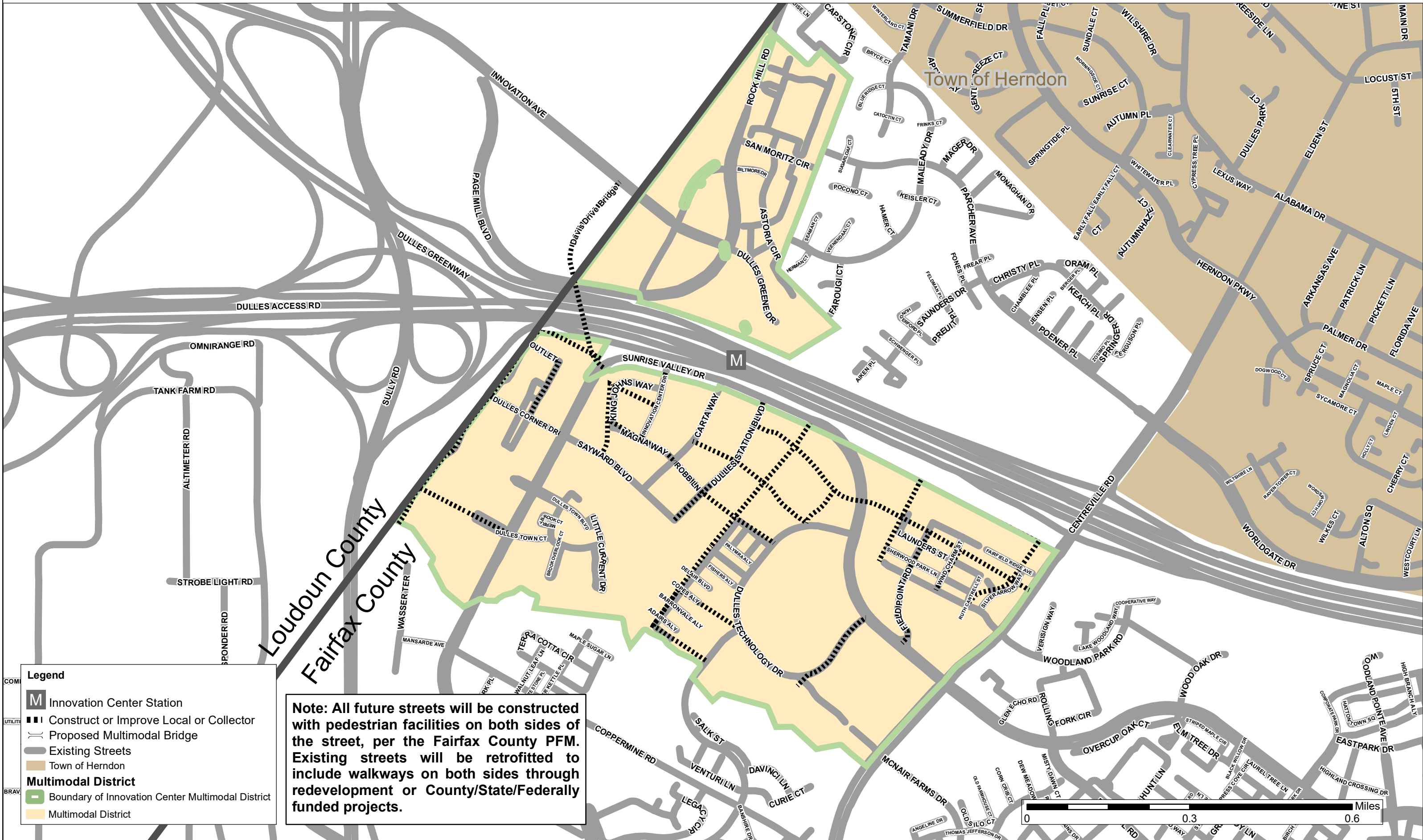
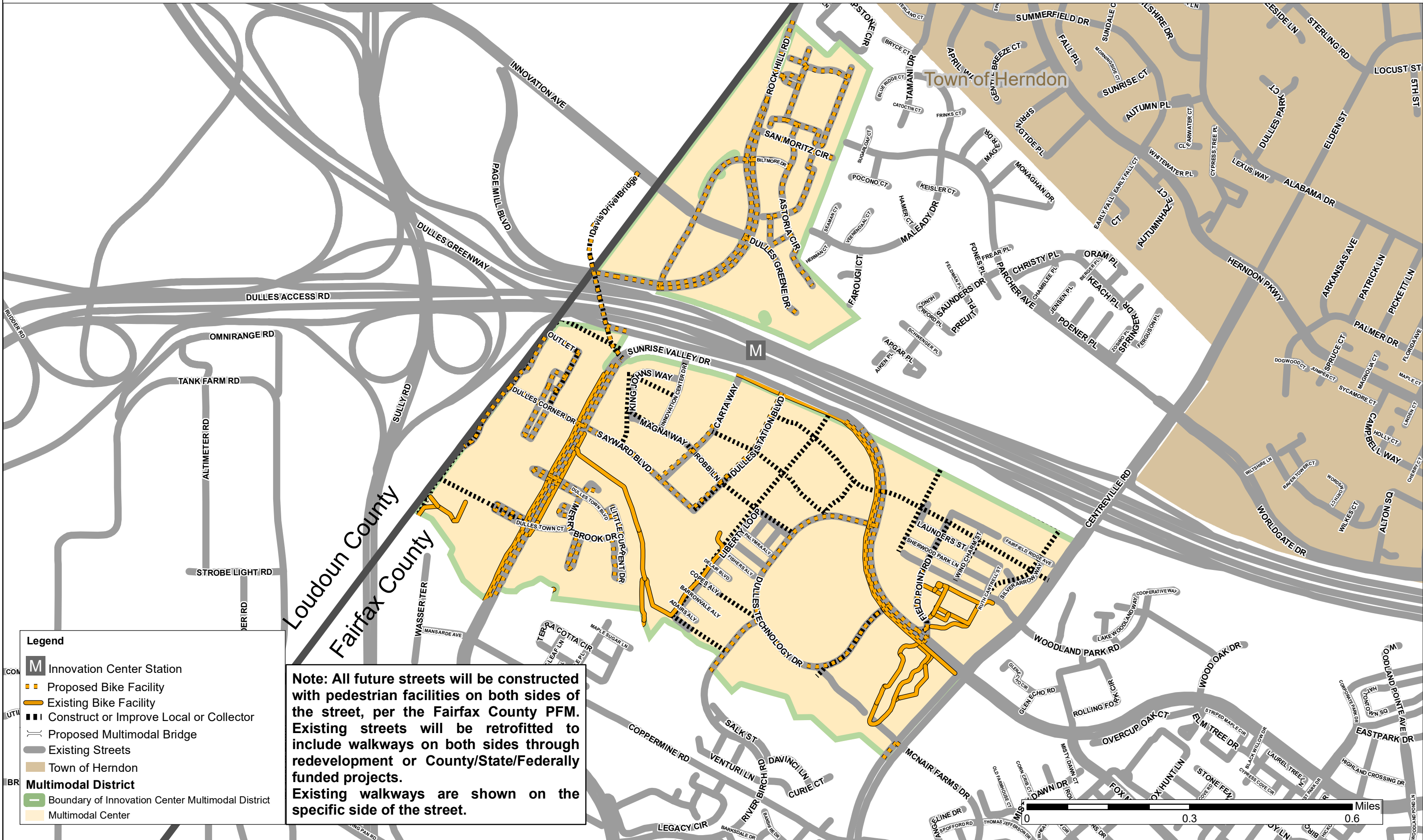




Figure 4: Innovation Center TSA Bicycle Network



Legend

- Innovation Center Station
- Proposed Bike Facility
- Existing Bike Facility
- Construct or Improve Local or Collector
- Proposed Multimodal Bridge
- Existing Streets
- Town of Herndon
- Multimodal District**
- Boundary of Innovation Center Multimodal District
- Multimodal Center

Note: All future streets will be constructed with pedestrian facilities on both sides of the street, per the Fairfax County PFM. Existing streets will be retrofitted to include walkways on both sides through redevelopment or County/State/Federally funded projects. Existing walkways are shown on the specific side of the street.

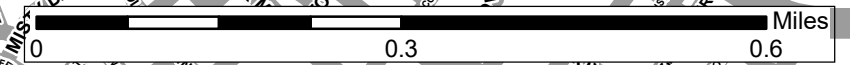
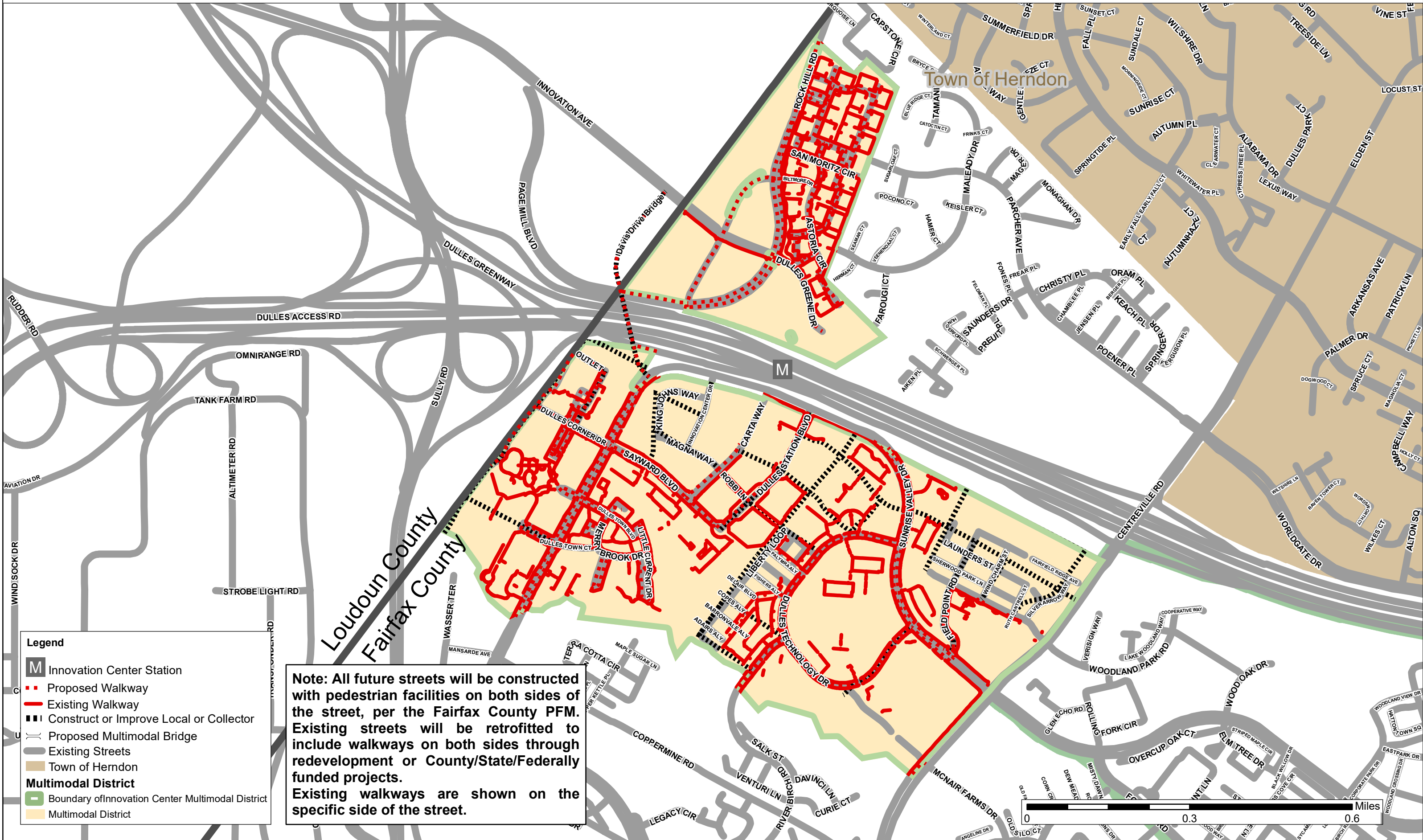




Figure 5: Innovation Center TSA Pedestrian Network



Legend

- M Innovation Center Station
- - - Proposed Walkway
- Existing Walkway
- Construct or Improve Local or Collector
- Proposed Multimodal Bridge
- Existing Streets
- Town of Herndon
- Multimodal District**
- Boundary of Innovation Center Multimodal District
- Multimodal District

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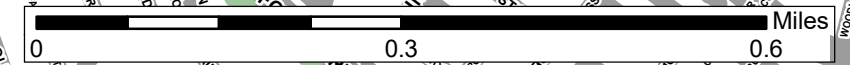
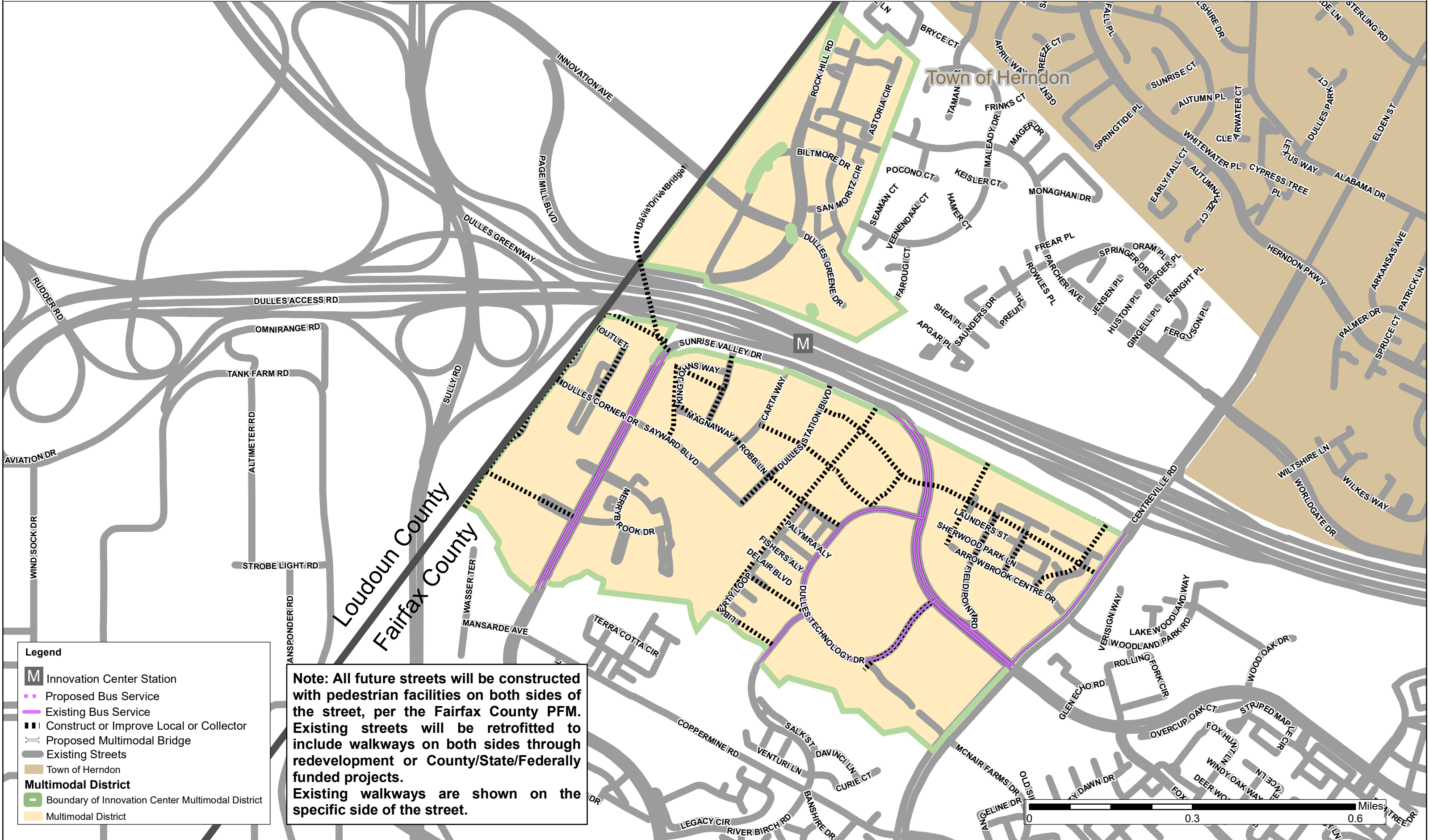




Figure 6: Innovation Center TSA Transit Network



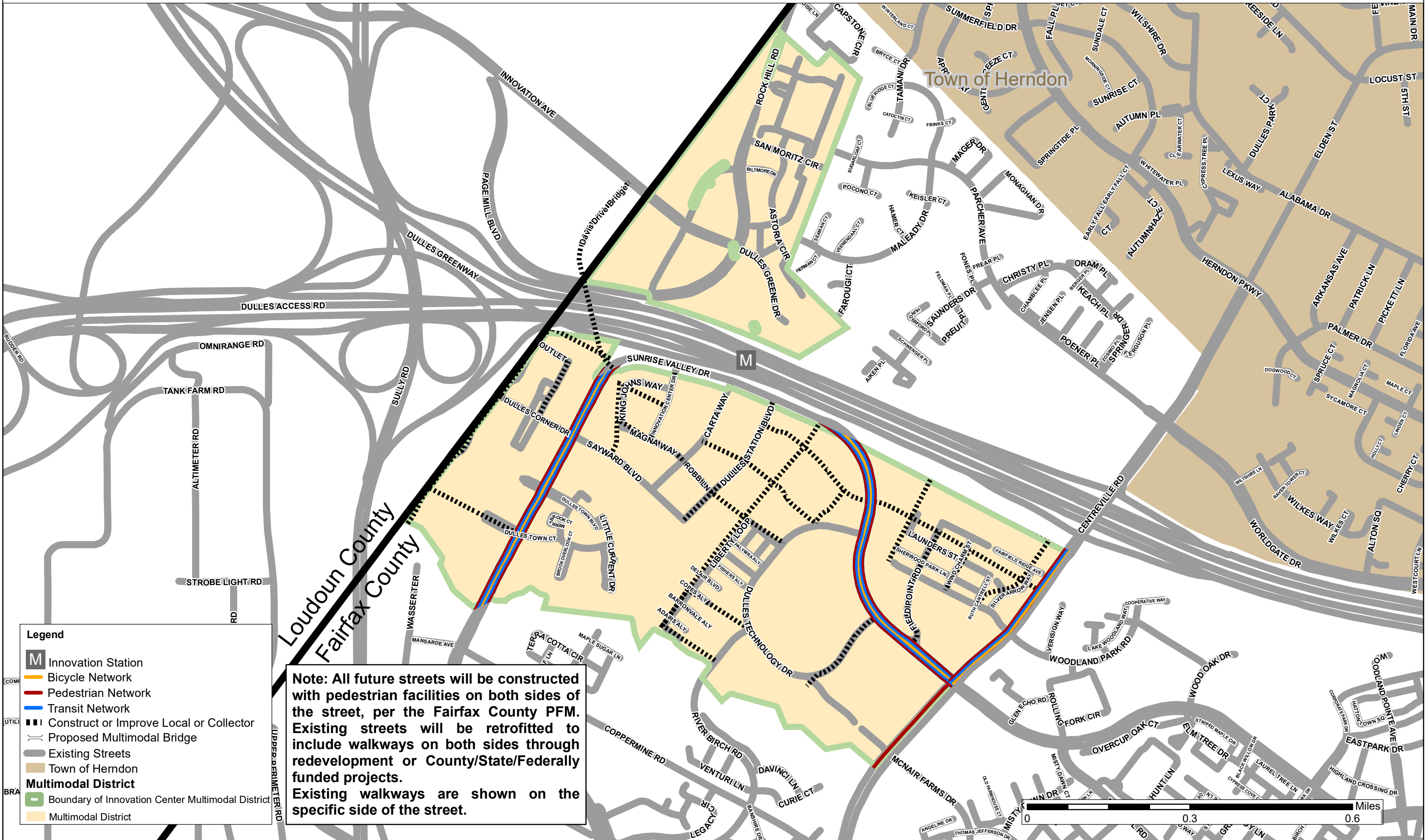
Legend

- M** Innovation Center Station
- - - Proposed Bus Service
- Existing Bus Service
- - - Construct or Improve Local or Collector
- == Proposed Multimodal Bridge
- Existing Streets
- Town of Herndon
- Multimodal District
- Boundary of Innovation Center Multimodal District
- Multimodal District

Note: All future streets will be constructed with pedestrian facilities on both sides of the street, per the Fairfax County PFM. Existing streets will be retrofitted to include walkways on both sides through redevelopment or County/State/Federally funded projects. Existing walkways are shown on the specific side of the street.



Figure 7: Innovation Center TSA Transportation Network



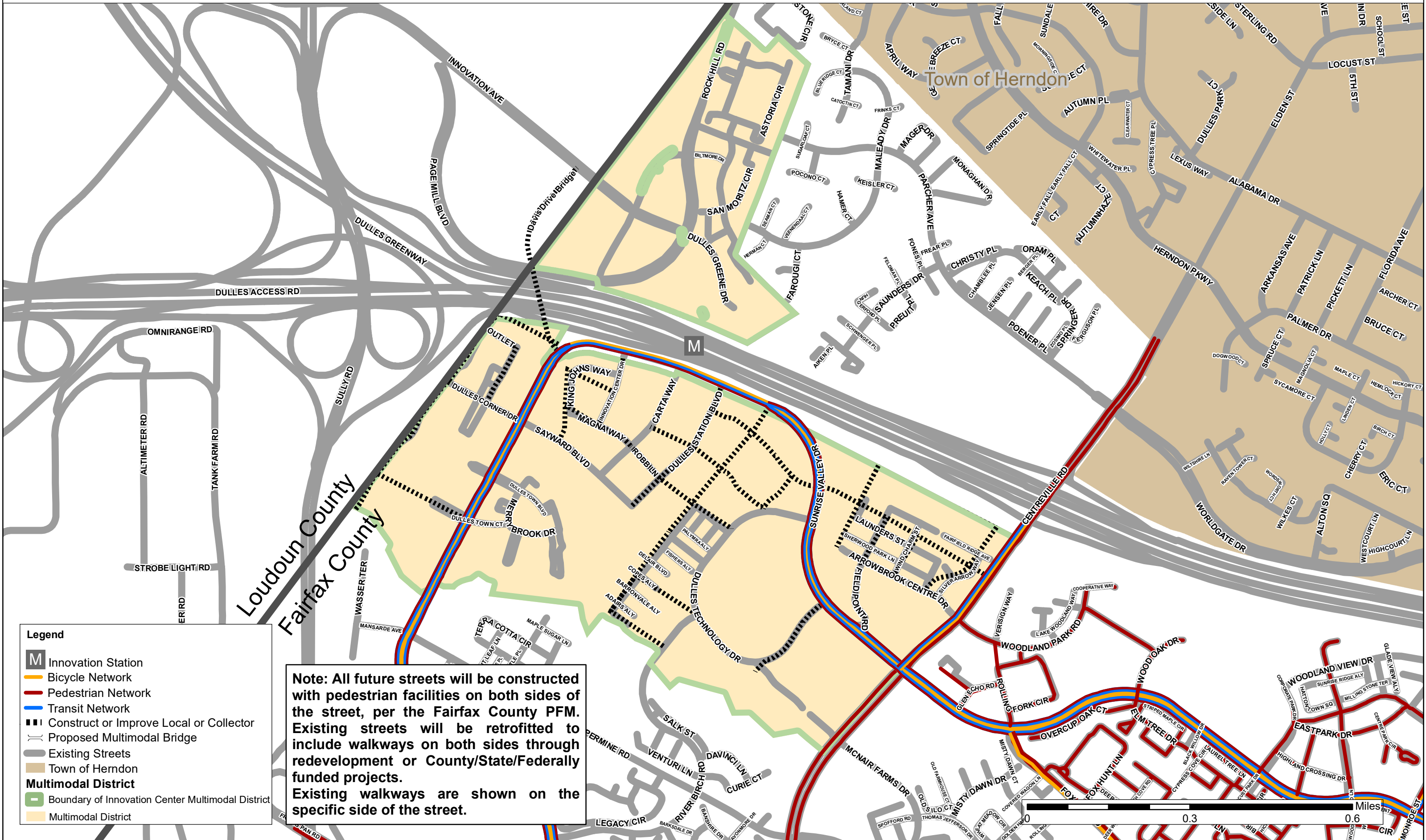
Legend

- Innovation Station
- Bicycle Network
- Pedestrian Network
- Transit Network
- Construct or Improve Local or Collector
- Proposed Multimodal Bridge
- Existing Streets
- Town of Herndon
- Multimodal District**
- Boundary of Innovation Center Multimodal District
- Multimodal District

Note: All future streets will be constructed with pedestrian facilities on both sides of the street, per the Fairfax County PFM. Existing streets will be retrofitted to include walkways on both sides through redevelopment or County/State/Federally funded projects. Existing walkways are shown on the specific side of the street.



Figure 8: Innovation Center TSA Transportation Surrounding Network



Legend

- Innovation Station
- Bicycle Network
- Pedestrian Network
- Transit Network
- Construct or Improve Local or Collector
- Proposed Multimodal Bridge
- Existing Streets
- Town of Herndon
- Multimodal District**
- Boundary of Innovation Center Multimodal District
- Multimodal District

Note: All future streets will be constructed with pedestrian facilities on both sides of the street, per the Fairfax County PFM. Existing streets will be retrofitted to include walkways on both sides through redevelopment or County/State/Federally funded projects. Existing walkways are shown on the specific side of the street.



Table 2: Innovation Center TSA Functional Classification and Modal Emphasis

District	Name	VDOT Functional Classification	FCDOT Functional Classification	DRPT Classification	Modal Emphasis
Innovation Center TSA	Arrowbrook Centre Dr	Local	Local	Local	Bicycle, Pedestrian, Parking, Median
Innovation Center TSA	Astoria Circle	Local	Local	Local	Pedestrian, Parking
Innovation Center TSA	Biltmore Drive	Local	Local	Local	Pedestrian
Innovation Center TSA	Brook Overlook Court	Local	Local	Local	Pedestrian, Parking
Innovation Center TSA	Carta Way	Local	Local	Local	Bicycle, Pedestrian, Transit
Innovation Center TSA	Centerville Road	Minor Arterial	Minor Arterial A	Through Corridor	Bicycle, Pedestrian, Transit
Innovation Center TSA	Davis Drive Extension		Collector		Bicycle, Pedestrian, Transit
Innovation Center TSA	Dulles Circle	Local	Local	Local	Pedestrian, Parking
Innovation Center TSA	Dulles Corner Boulevard	Local	Local	Local	Pedestrian, Median
Innovation Center TSA	Dulles Corner Drive	Local	Local	Local	Bicycle, Pedestrian, Median
Innovation Center TSA	Dulles Corner Lane	Local	Local	Local	Bicycle, Pedestrian, Median
Innovation Center TSA	Dulles Corner Park	Local	Local	Local	Bicycle, Pedestrian, Median
Innovation Center TSA	Dulles Greene Drive Blvd	Local	Local	Local	Bicycle, Pedestrian, Parking
Innovation Center TSA	Dulles Station Boulevard	Local	Local	Local	Bicycle, Pedestrian, Median
Innovation Center TSA	Dulles Technology Drive	Local	Local	Local	Bicycle, Pedestrian, Transit
Innovation Center TSA	Dulles Town Boulevard	Local	Local	Local	Bicycle, Pedestrian, Median
Innovation Center TSA	Dulles Town Court	Local	Local	Local	Pedestrian, Parking
Innovation Center TSA	Fairfield Ridge Avenue	Local	Local	Local	Bicycle, Pedestrian, Parking
Innovation Center TSA	Field Point Road	Local	Local	Local	Bicycle, Pedestrian, Parking
Innovation Center TSA	Innovation Avenue	Major Collector	Local	Local	Bicycle, Pedestrian, Transit
Innovation Center TSA	Innovation Center Drive	Local	Local	Local	Bicycle, Pedestrian
Innovation Center TSA	King Johns Way	Local	Local	Local	Pedestrian, Parking
Innovation Center TSA	Launders Street	Local	Local	Local	Pedestrian
Innovation Center TSA	Little Current Drive	Local	Local	Local	Pedestrian
Innovation Center TSA	Magna Way	Local	Local	Local	Pedestrian
Innovation Center TSA	Merrybrook Court	Local	Local	Local	Pedestrian
Innovation Center TSA	River Birch Road	Minor Collector	Local	Local	Bicycle, Pedestrian, Parking

3/24/2022

Innovation Center TSA	Robb Lane	Local	Local	Local	Pedestrian
Innovation Center TSA	Rock Hill Road	Local	Local	Local	Pedestrian, Parking
Innovation Center TSA	Ruth Cantrell Street	Local	Local	Local	Pedestrian, Parking
Innovation Center TSA	San Moritz Circle	Local	Local	Local	Pedestrian, Parking
Innovation Center TSA	Sayward Boulevard	Local	Local	Local	Bicycle, Pedestrian, Transit
Innovation Center TSA	Sherwood Park Lane	Local	Local	Local	Pedestrian
Innovation Center TSA	Shresbury Court	Local	Local	Local	Pedestrian, Parking
Innovation Center TSA	Sunrise Valley Drive	Major Collector	Minor Arterial B	Avenue	Bicycle, Pedestrian, Transit, Median
Innovation Center TSA	Trippe Lane	Local	Local	Local	Pedestrian, Parking
Innovation Center TSA	Wasser Terrace	Local	Local	Local	Pedestrian, Parking, Median
Innovation Center TSA	Wind Charm Street	Local	Local	Local	Bicycle, Pedestrian, Parking



Figure 9: Innovation Center TSA Functional Classification - VDOT



Legend

- Innovation Center Station
- Interstate
- Freeway/Expressway
- Other Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Street
- Construct or Improve Local or Collector
- Existing Streets
- Town of Herndon
- Boundary of Innovation Center Multimodal District
- Multimodal District

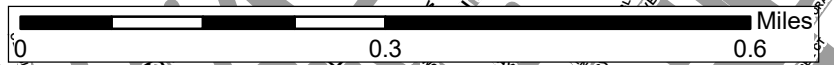
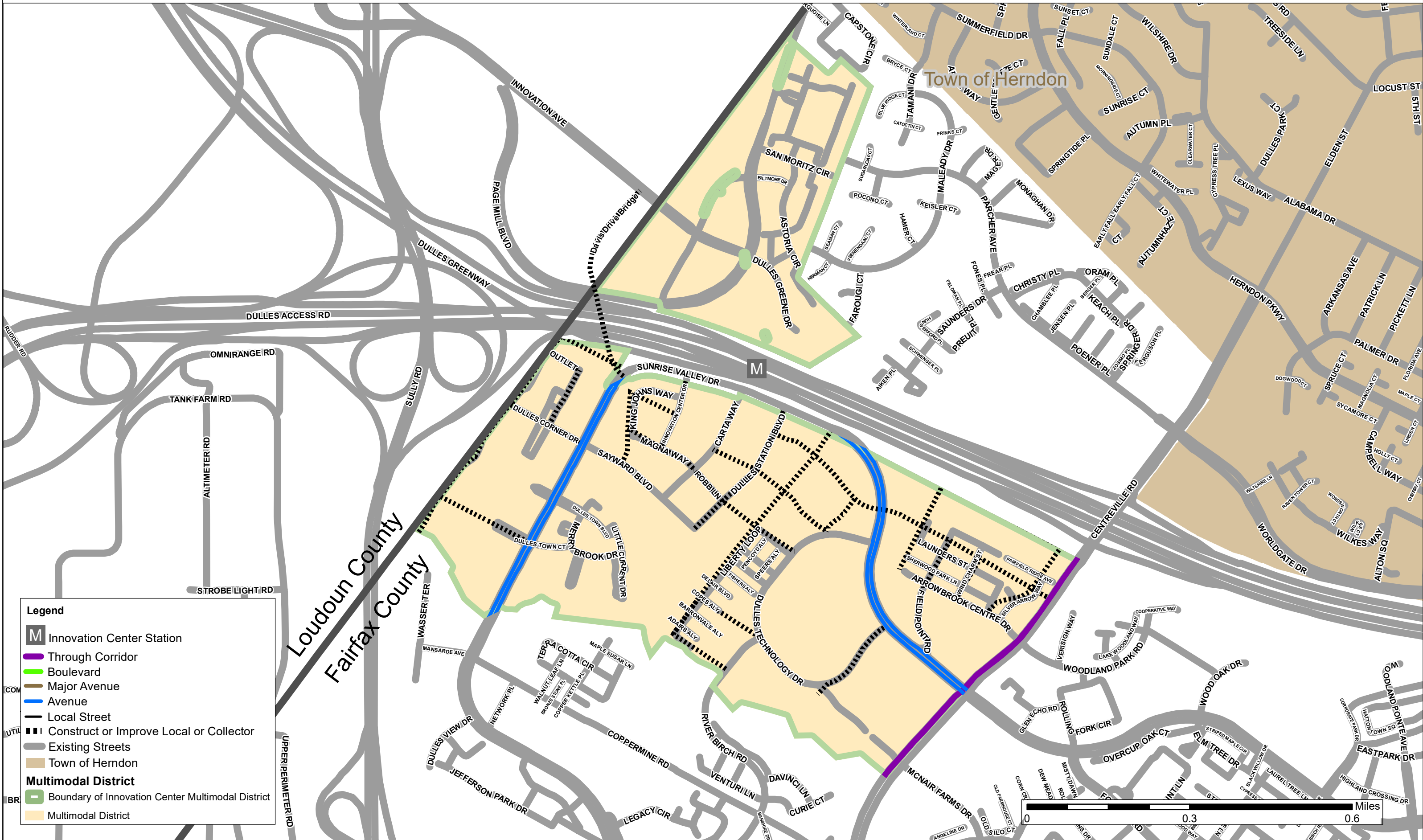


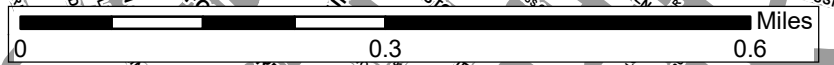


Figure 10: Innovation Center TSA Functional Classification - DRPT



Legend

- M** Innovation Center Station
- Through Corridor
- Boulevard
- Major Avenue
- Avenue
- Local Street
- Construct or Improve Local or Collector
- Existing Streets
- Town of Herndon
- Multimodal District**
- Boundary of Innovation Center Multimodal District
- Multimodal District



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Appendix B

Fairfax County Methodology for Developing a Multimodal System Plan

Urban Street Standards Approach and Process

Background and History: The Virginia Department of Rail and Public Transportation (DRPT) published the Multimodal System Design Guidelines (Guidelines) in October 2013 and published an update in March 2020. The Guidelines establish a basic framework for multimodal planning in the Commonwealth and are intended as a resource for local planners, engineers, designers, policy and decision makers, and anyone else engaged in multimodal planning throughout Virginia.¹

The Guidelines discuss the integration of land use, transportation, and urban design to support multimodal connectivity and mobility in Virginia.

In 2010, § 15.2-2222.1 (Code of Virginia) was amended to add section § 33.1-69.001, requiring the Virginia Department of Transportation (VDOT), DRPT, and jurisdictions with urban and urban development areas that use the urban county executive form of government to review new design standards for state secondary highway system components. In January 2014, VDOT implemented this legislation by adopting the Guidelines as its statewide multimodal design standards for mixed-use urban centers through the addition of Appendix B(2) to the Road Design Manual (RDM). In Fairfax County, mixed-use urban centers include Community Business Centers and Transit Station Areas that are organized by the land classifications in the Concept for Future Development as described in the Fairfax County Comprehensive Plan. Mixed-use centers are planned for a mix of higher density residential and non-residential land uses.

Fairfax County has been working with VDOT and DRPT on several fronts: reviewing of the statewide Multimodal Design Standards, developing a Multimodal System Plan for Fairfax County, and revising Appendix B(2) of the RDM. The purpose of this document is to describe in detail the methodology Fairfax County undertook in developing its Multimodal System Plan.

Multimodal System Plan Defined: According to DRPT, a Multimodal System Plan for a local jurisdiction is “an integrated land use and multimodal transportation plan that shows the key Multimodal Districts, Centers and Multimodal Corridors in a region and ensures that there is a connected circulation network for all travel modes. Such a plan can either be done “from scratch” or, more often, by assembling all of the existing land use and transportation plans into a unified whole.”² Fairfax County has taken the later approach because the Comprehensive Plan includes recommendations for multimodal transportation components. Furthermore, the county’s Comprehensive Plan is reviewed regularly, and Plan amendments and land use studies are supported by transportation planning analysis in accordance with state and federal requirements.

Fairfax County’s Multimodal System Plan: The Multimodal System Plan is comprised of both countywide and activity center level components. The countywide components include a **Countywide Multimodal Corridor Map** that displays the connectivity and modes between activity centers, and a **Countywide Multimodal System Plan Map** that assembles all of the modal networks onto one map. The Multimodal Corridor Map will include supporting tables listing the roadways using DRPT classifications for each core area.

¹ http://www.drpt.virginia.gov/activities/files/DRPT_MMSDG_FINAL_oct31B.pdf, page 10.

² http://www.drpt.virginia.gov/activities/files/DRPT_MMSDG_FINAL_oct31B.pdf, page 19.

The activity center level components consist of the **Multimodal District Plans for Fairfax County Activity Centers**. Each Multimodal District Plan will delineate the boundaries of where the standards apply, reclassify roadways using DRPT categories, and identify modal emphasis. They also will contain the supporting documentation for District and Core classifications for each activity center. Both the county-wide and activity center level documents and maps will be submitted to VDOT for review and approval and, collectively, will comprise the county's Multimodal System Plan.

The Guidelines identify five steps that local jurisdictions can follow in developing a Multimodal Systems Plan. This document describes how Fairfax County approached each of the five steps.

VDOT Submittal Process: It was mutually determined by Fairfax County, VDOT and DRPT that the submittal process for VDOT to review and approve each Multimodal District Plan will be broken into two phases:

Phase I Submittal: Steps 1 – 5

The Phase I Submittal package includes:

- A. A narrative describing the Multimodal District and Center
- B. Calculations showing how the Activity Density Classification is derived. For the Innovation Center Transit Station Area, the areas planned for transit station mixed use and residential mixed use are classified as a P6 to a P4 multimodal center type depending on the distance from the Metro station. According to Guidelines, P^A is the most urban center type in terms of planned density and intensity of land uses.
- C. Series of maps showing the existing and future street network, pedestrian network, bicycle network, and transit network. The data in these maps is also combined to show the overall transportation network and connections of each mode outside the TSA
- D. Chart listing DRPT functional classification of each street in the District
- E. Chart listing the modal emphasis (pedestrian, bicycle, transit, parking, green) for each street

Phase II Submittal: Step 6

- A. Cross sections for each street in the District (excluding local streets)

Fairfax County is to submit each application directly to VDOT who will distribute the package to VDOT staff as well as DRPT with a 60-day review window. Each Phase I application is to be submitted and approved prior to the submittal of Phase II.

Step 1: Ensuring Public Engagement and Ongoing Input (page 28 of the Guidelines)

The Guidelines state that a "Multimodal System Plan is ultimately designed for the public, and as such, should reflect the perceptions, opinions and concerns of the public served by the plan."³ The Fairfax County Comprehensive Plan contains recommendations for future land use, transportation, housing, and other functional areas and forms the framework for the design of the multimodal system plan. Plan recommendations are developed with broad-based public outreach and participation. Likewise, public outreach and participation are key components to the Plan review and amendment process. Public engagement in the Plan amendment process can include a variety of methods such as informational presentations, design charrettes, community task forces, workshops, and/or public hearings; all of which are cited in the Guidelines.

³ http://www.drpt.virginia.gov/activities/files/DRPT_MMSDG_FINAL_oct31B.pdf, page 25.

Step 2: Analyzing Existing and Future Population & Employment

Step 2 involves data collection and analysis from a multimodal perspective to examine existing and future relationships between land uses and the transportation system, anticipated travel trends and growth of travel by various modes, and key areas of activity and destinations in the region for generating multimodal trips, either now or in the future.⁴ In Fairfax County, data collection and analysis is conducted to assess the impacts of development scenarios, implement Plan monitoring, and provide forecasts to the Metropolitan Washington Council of Governments (MWCOG). Countywide policy goals inform the strategic approach for allocating population and employment throughout the county as described in Step 3.

The Guidelines define activity density as a measure of population and employment combined and is expressed in terms of jobs plus population per acre.

$$\text{ACTIVITY DENSITY} = \text{POPULATION} + \text{JOBS/ACRE}$$

Rather than using the activity density for the Multimodal Center (core area) to categorize the typology, Fairfax County determined it was more appropriate to use the activity density for the Multimodal District (activity center) geography. The term activity center is also used by MWCOG to describe existing urban centers, traditional towns, transit hubs, and areas expecting future growth and where local governments are targeting future residential and commercial development.⁵ Comprehensive Plan quantification is based upon the activity center boundary. The 20 activity centers that were analyzed all fell within the P4 – Large Town/Suburban Center to P6 - Urban Core center type. Because core areas are the densest areas planned within an activity center, the core area typologies also fell within the P4 –Large Town/Suburban Center to P6 - Urban Core type.

The quantification of Comprehensive Plan potential is based upon planned residential and non-residential development. Due to the complexity and number of land use options in the Plan, the practice has been to combine all of the Plan options into two major alternatives. One alternative is “maximum non-residential”, calculated by assuming the implementation of land use recommendations that maximize commercial development. The other alternative is “maximum residential” and assumes the implementation of land use recommendations that maximize housing development. In preparing a Multimodal System Plan, the county chose to use the “maximum residential” alternative to evaluate Plan potential.

Several types of data were used to determine the Activity Density for Fairfax County activity centers:

1. Plan quantification of development potential - The “maximum residential” alternative of the Comprehensive Plan was used. A total amount of square feet was calculated for the planned office, retail, industrial, and government/institutional uses, as well as planned residential units. Planned hotel use was grouped with retail.
2. Planned nonresidential use - Employment factors were used to calculate the number of jobs estimated to result from each type of planned non-residential use. For example, 300 gross square feet per employee for office use and 450 gross square feet per employee for industrial production are some of the factors that were used.

⁴ http://www.drpt.virginia.gov/activities/files/DRPT_MMSDG_FINAL_oct31B.pdf , page 26.

⁵ <http://www.regionforward.org/coalition-3/work/activity-centers>, accessed 21 October 2013.

The employment factors were originally derived from Montgomery County, and modifications were made, as warranted, based upon various estimates by the Department of Planning and Zoning. These employment factors have been used consistently for the past several years in a variety of applications, including supplying MWCOG with employment estimates and estimating the impact of proposed development.

3. Planned residential use - Expressed in terms of single family, townhouse, and multi-family units. The number of people per dwelling unit was derived from the average household size by unit type by Planning District. If the geography of a Multimodal District included more than one Planning District, the Planning District that comprised a larger area was used; in other cases, one Planning District included most of the planned residential use.

4. Net acreage of each activity center - The total acreage of the area less the area devoted to major roads.

Step 2 Deliverable - A chart entitled Multimodal District Classifications, which summarizes the Activity Density calculations for each of the selected activity centers (see Attachment 1).

Steps 3 and 4: Designating Multimodal Districts and Centers

The Concept for Future Development as found in the Comprehensive Plan establishes the vision and policy direction for the county's future growth. The Concept for Future Development places emphasis on concentrating future employment growth and higher intensity development in designated Mixed-Use Centers, which are also considered activity centers in the county. The activity centers are envisioned to comprise a more balanced ratio of jobs and households as part of the mix of land uses. Many activity centers are also recommended to contain a well-connected grid of streets to facilitate safe and convenient access for pedestrians and bicyclists, and to support the viability of placemaking elements such as sidewalk cafes, urban parks, public art, and civic plazas.

Multimodal Districts

The county's activity centers are categorized as Tysons Corner Urban Center, Suburban Centers, Community Business Centers, and Transit Station Areas. There are a total of 30 activity centers, some of which also are designated as Commercial Revitalization Districts (CRDs) or Commercial Revitalization Areas (CRAs). CRDs and CRAs were designated by the Board of Supervisors in 1998 to incentivize improvements to the economic vitality, appearance, and function of specific older commercial centers. When applying the terminology from the Guidelines, the county views activity centers as analogous to the Multimodal Districts. Initially, 20 activity centers are anticipated to be submitted to VDOT for review. Tysons Corner Urban Center is omitted because this area has a separate agreement with VDOT for roadway design standards and maintenance. Activity centers not served by planned or existing transit or planned for higher intensity development also are removed from consideration. Lastly, activity centers that are currently the subject of a planning study in which the recommended land use density or intensity and transportation network is anticipated to be modified will be evaluated at a later date and could result in the submittal of additional Multimodal District Plans.

Multimodal Centers

The Comprehensive Plan recommends core areas for a majority of the activity centers. When applying the Guidelines terminology, the county views core areas as analogous to the Multimodal Centers. These core areas are planned for the highest intensity development with multimodal connectivity and are typically located within ½-¾ mile of an existing or planned transit station or town center.

The Guidelines define a Multimodal Center as a 1-mile diameter circle within a Multimodal District. The Center (core area) forms the nucleus for activities and is served by existing or future transit and by a current or planned network of streets. The boundary of each core area in the county was identified by evaluating the planned intensity or density for land units or sub-units in an activity center and also from unique site characteristics such as environmentally sensitive land or major highways. Land units were used because these smaller geographic areas contain site-specific land use recommendations and distinguish changes in intensity and land use in finer detail and with more accuracy than overlaying a one-mile circle around an existing or planned transit station or town center. Because of this variation from the Guidelines, boundaries of the county's centers vary somewhat in shape and size. In some cases, the Center comprises the entire District.

Step 3 and 4 Deliverable - A countywide map that identifies the twenty activity centers, with their corresponding Multimodal District and Center(s) boundaries.

Step 5: Designating Multimodal Corridors

1. The county's extensive GIS database was used to map the activity centers and core areas and identify roads that intersect these areas. The GIS Layers that were used as a base for creating the maps for each activity center include:
 - A. VDOT Draft Roadway Functional Classification
 - B. FCDOT Roadway Functional Classification (Comprehensive Plan-Transportation Chapter)
 - C. NHS Routes
 - D. Sidewalk/Trails (pedestrian layer)
 - E. Bicycle Master Plan (adopted October 2014)
 - F. Fairfax Connector Bus Routes
 - G. WMATA Metrobus Routes
 - H. Metrorail Stations and Railways
 - I. Park and Ride/Commuter Lots
 - J. VRE Stations and Railways
 - K. VRE Routes
 - L. Circulator Routes- i.e., local shuttle systems moving people within an activity center or between a transit station and major employment center.
 - M. Fairfax County Transit Development Plan
 - N. Revitalization Areas
 - O. Sub-units
 - P. Fairfax County Border
 - Q. Any future planned roadways

2. VDOT Functional Classifications were used as the basis to categorize the selected roadways that intersect the activity centers, and these classifications were compared with the Countywide Transportation Plan Map and transportation-related guidance in the Fairfax County Comprehensive Plan. If there were any discrepancies identified between the VDOT and FCDOT classifications, the county attempted to resolve these through a classification translation table (VDOT Translation Matrix) and discussed differences with VDOT.

3. Fairfax County's Roadway Classifications as defined in the Comprehensive Plan were translated to the Multimodal Corridor Types (major avenue, avenue, local, etc.) using the VDOT Translation Matrix.

4. Process for Identifying Multimodal Corridors and Functional Classification

- a. Load GIS layers including VDOT Functional Classification, FCDOT Functional Classification and Fairfax County Multimodal Districts.
- b. Perform GIS operation to select all roadways from FCDOT Functional Classification Layer to Fairfax County Multimodal Districts layer. Roads classified as 'Local' were excluded from the list.
- c. Export table to identify the FCDOT functional classification of all roads within the Multimodal Districts.
- d. Perform GIS operation to select all roadways from VDOT Functional Classification layer that intersect with Fairfax County Multimodal Districts layer. This layer includes all streets within Fairfax County and the selected streets represent the Multimodal Corridors.
- e. Export table to identify the FCDOT functional classification of all roads within each Fairfax County Multimodal District.
- f. Create table below to compare VDOT Functional Classification and FCDOT Functional Classification and include columns for translation into DRPT Functional Classification and Modal Emphasis.

District	Street Name	VDOT Functional Classification	FCDOT Functional Classification	DRPT Classification	Modal Emphasis

Various county agencies (Department of Transportation, the Department of Planning and Zoning, and the Office of Community Revitalization) with knowledge of specific activity centers worked together to classify streets according to the Guidelines. Resources used to classify streets include the adopted Fairfax County Comprehensive Plan guidance, recommendations from ongoing studies, review of the physical layout of the current design of the street using aerial imagery, review of the modes currently accommodated on the street, as well as the planned future modes. For activity centers where cross-sections are incorporated into the Comprehensive Plan, these cross-sections were the primary sources used to determine the Multimodal Street Typology. The county noted any issues with the classification due to differences between VDOT Functional Classification and FCDOT Functional Classification or with translation based on the physical layout of the street.

Step 5 Deliverable – A spreadsheet listing 1. roadways, 2. the VDOT Functional Classification, and 3. the DRPT Multimodal Street Typology. Accompanying the spreadsheet is a map displaying the roadways with their associated DRPT classification type.

Step 5A: Determine the modal emphases (modes that exist or are planned and will be accommodated with at least minimum standards) for all roadways except local roads

Information that formed the basis of the analysis included:

1. The Bicycle Master Plan, transit/bus routes, existing sidewalk/trail information, along with any other relevant studies as shown in Attachment II.
2. Identified Through Corridors and Placemaking Corridors
3. Planned street grid, if applicable.

Step 5A Deliverable - A series of Multimodal Corridor Maps that show the transportation modes on each corridor and a corresponding document that lists the modal emphases for all multimodal corridors.

Step 6: Defining the modal priority and creating corridor cross-sections

Once steps 1-5 are completed and approved, cross sections of each corridor in the multimodal district are created. Each mode identified as a modal emphasis in Step 5 must be accommodated with at least the minimum dimension described in the DRPT guidelines. If one or more primary modes are identified that mode must be assigned the optimal dimension shown in the DRPT Guidelines. Careful consideration is given to the total amount of right-of-way available to the corridor.

Step 6 Deliverable – An illustrated cross section for each multimodal corridor.

Publications:

Fairfax County Department of Planning and Zoning, Fairfax County Zoning Ordinance as amended through May 14, 2013, Appendix 7, Commercial Revitalization Districts, 25 June 2013, <<http://www.fairfaxcounty.gov/dpz/zoningordinance/appendices/apx07.pdf>>

Office of Community Revitalization, An Overview of the Development Review Process Within Commercial Revitalization Districts and Areas, April 2013, http://www.fcrcv.org/publications/download/DevelopmentInCRD_CRA.pdf

Fairfax County Department of Planning and Zoning, State of the Plan: An Evaluation of Comprehensive Plan Activities Between 2000-2010, May 2013, http://www.fairfaxcounty.gov/dpz/projects/state_of_the_plan.pdf

Attachment I: Multimodal District Classifications based on Comprehensive Plan Development Potential

Area	Merrifield	Annandale	Baileys Crossroads	Seven Corners	North Gateway	Penn Daw	Beacon/Groveton	Hybla Valley/Gum Springs	South County	Woodlawn	McLean
Planning District(s)	Jefferson	Annandale	Baileys	Baileys	Mt Vernon	Mt Vernon	Mt Vernon	Mt Vernon	Mt Vernon	Mt Vernon	McLean
Office (2013 Potential, gross square feet - gsf)	13,355,140	2,370,000	5,960,000	1,899,444	175,913	517,160	1,906,725	1,432,476	430,071	980,636	2,134,782
Employment Factor (gsf/emp)	300	300	300	300	300	300	300	300	300	300	300
Jobs	44,517	7,900	19,867	6,331	586	1,724	6,356	4,775	1,434	3,269	7,116
Retail Centers (2013 Potential, gsf)	3,150,937	1,830,000	2,760,000	1,636,155	215,070	704,176	912,686	2,217,428	151,837	569,426	1,134,230
Employment Factor (gsf/emp)	400	400	400	400	400	400	400	400	400	400	400
Jobs	7,877	4,575	6,900	4,090	538	1,760	2,282	5,544	380	1,424	2,836
Industrial Centers (2013 Potential, gsf)	2,321,823	0	0	42,471	0	0	0	0	0	0	0
Employment Factor (gsf/emp)	450	450	450	450	450	450	450	450	450	450	450
Jobs	5,160	0	0	94	0	0	0	0	0	0	0
Government Ins Centers (2013 Potential, gsf)	4,290,675	200,000	351,500	179,711	0	0	0	0	272,208	0	237,210
Employment Factor (gsf/emp)	500	500	500	500	500	500	500	500	500	500	500
Jobs	8,581	400	703	359	0	0	0	0	544	0	474
Single-Family Units (2013 Potential, ea)	0	21	1	0	0	0	0	0	0	44	0
Residential Occupancy Factor 2013 (ppl/unit)	2.90	3.00	2.81	2.81	2.84	2.84	2.84	2.84	2.84	2.84	2.89
People	0	63	3	0.00	0	0	0	0	0	125	0
Townhouse Units (2013 Potential, ea)	645	180	131	35	0	92	0	0	60	0	763
Residential Occupancy Factor 2013 (ppl/unit)	2.66	3.10	2.99	2.99	2.90	2.90	2.90	2.90	2.90	2.90	2.56
People	1,716	558	392	105	0	267	0	0	174	0	1,953
Multifamily Units (2013 Potential, ea)	11,309	2,530	8,769	6,020	2,265	1,662	2,722	1,443	0	82	438
Residential Occupancy Factor 2013 (ppl/unit)	2.27	2.51	2.37	2.37	2.11	2.11	2.11	2.11	2.11	2.11	1.85
People	25,671	6,350	20,783	14,267	4,779	3,507	5,743	3,045	0	173	810
Subtotal - Jobs	66,135	12,875	27,470	10,876	1,124	3,484	8,637	10,318	2,358	4,692	10,426
Subtotal - People	27,387	6,971	21,177	14,372	4,779	3,774	5,743	3,045	174	298	2,764
Total - People and Jobs	93,523	19,846	48,647	25,248	5,903	7,258	14,381	13,363	2,532	4,990	13,190
Total Land Area (acres)	1234.0	237.3	453.5	255.3	69.1	102.7	92.7	239.2	51.9	74.7	265.5
Density (ppl+jobs/acres)	75.8	83.6	107.3	98.9	85.4	70.7	155.1	55.9	48.8	66.8	49.7
Density Classification	P6	P6	P6	P6	P6	P6	P6	P5	P5	P5	P5

Note: If an activity center spans more than one planning district, planners evaluated which geographic area has the most residential potential, and the corresponding residential occupancy factors for that planning district were applied. In other cases, the majority of an activity center is in one planning district. The employment factors represent countywide standards. gsf = gross square feet; emp = employee; ppl = people Revised through 11/21/14

Area	Franconia-Springfield Area (CBC +TSA)	Huntington	Innovation Center TSA	Tysons Corner	Van Dorn	Vienna Metro Station	West Falls Church Metro Station	Wiehle-Reston East TSA^	Reston Town Center TSA^	Herndon TSA^	Wiehle-Reston East TSA *	Reston Town Center TSA *	Herndon TSA *
Planning District(s)	Springfield	Mt Vernon	Upper Potomac	McLean, Vienna	Rose Hill	Vienna	McLean	Upper Potomac	Upper Potomac	Upper Potomac	Upper Potomac	Upper Potomac	Upper Potomac
Offices (2013 Potential, gsf)	4,039,122	1,443,013	7,575,097	57,803,315	1,281,189	1,260,311	23,100	9,556,882	15,660,326	4,239,458	3,345,415	5,968,224	929,552
Employment Factor (gsf/emp)	300	300	300	300	300	300	300	300	300	300	300	300	300
Jobs	13,464	4,810	25,250	192,678	4,271	4,201	77	31,856	52,201	14,132	11,151	19,894	3,099
Retail Centers (2013 Potential, gsf)	6,415,944	649,703	402,507	12,360,977	957,462	139,567	28,514	170,684	1,369,083	182,986	752,718	1,342,850	209,149
Employment Factor (gsf/emp)	400	400	400	400	400	400	400	400	400	400	400	400	400
Jobs	16,040	1,624	1,006	30,902	2,394	349	71	427	3,423	457	1,882	3,357	523
Industrial Centers (2013 Potential, gsf)	2,511,064	0	0	0	130,423	0	0	65,587	447,343	0	0	0	0
Employment Factor (gsf/emp)	450	450	450	450	450	450	450	450	450	450	450	450	450
Jobs	5,580	0	0	0	290	0	0	146	994	0	0	0	0
Government Ins Centers (2013 Potential, gsf)	529,299	44,395	0	217,822	0	0	0	153,228	1,990,321	23,227	83,635	149,205	23,239
Employment Factor (gsf/emp)	500	500	500	500	500	500	500	500	500	500	500	500	500
Jobs	1,059	89	0	436	0	0	0	306	3,981	46	167	298	46
Single-Family Units (2013 Potential, ea)	479	806	0	74	200	0	251	0	0	0	0	0	0
Residential Occupancy Factor 2013 (ppl/unit)	3.19	2.84	3.13	2.89	2.83	2.99	2.89	3.13	3.13	3.13	3.13	3.13	3.13
People	1,528	2,289	0	214	566	0	725	0	0	0	0	0	0
Townhouse Units (2013 Potential, ea)	0	1,852	0	924	0	1,680	94	0	685	300	0	0	0
Residential Occupancy Factor 2013 (ppl/unit)	2.91	2.90	2.77	2.56	2.69	3.00	2.56	2.77	2.77	2.77	2.77	2.77	2.77
People	0	5,371	0	2,365	0	5,040	241	0	1,897	831	0	0	0
Multifamily Units (2013 Potential, ea)	7,144	7,670	8,184	50,727	786	3,555	1,894	9,066	12,000	5,880	4,182	7,460	1,162
Residential Occupancy Factor 2013 (ppl/unit)	2.00	2.11	1.94	1.85	1.86	2.32	1.85	1.94	1.94	1.94	1.94	1.94	1.94
People	14,431	16,184	15,877	93,845	1,462	8,248	3,504	17,588	23,280	11,407	8,113	14,472	2,254
Subtotal - Jobs	36,143	6,523	26,257	224,016	6,954	4,550	148	32,735	60,599	14,635	13,200	23,550	3,668
Subtotal - People	15,959	23,844	15,877	96,424	2,028	13,288	4,470	17,588	25,177	12,238	8,113	14,472	2,254
Total - People and Jobs	52,102	30,367	42,134	320,440	8,982	17,838	4,618	50,323	85,776	26,874	21,314	38,022	5,922
Total Land Area (acres)	737.0	604.6	450.0	2140.4	190.7	351.8	165.0	522.0	802.0	359.0	86.2	117.3	26.7
Density (ppl+jobs/acres)	70.7	50.2	93.6	149.7	47.1	50.7	28.0	96.4	107.0	74.9	247	324	222
Density Classification	P6	P5	P6	P6	P5	P5	P4	P6	P6	P6	P6	P6	P6

^Activity densities for the areas designated as "transit station mixed use" and "residential mixed use", as recommended in the Fairfax County Comprehensive Plan, 2013 Edition, Area III, Upper Potomac Planning District, amended through 4-29-2014, Reston Transit Station Areas.

*Activity densities for the areas designated as "transit station mixed use". These areas generally include the parcels within a safe, comfortable and reasonably direct 1/4 mile walk from the stations.

A range of development potential is recommended. The mid-point was calculated for the transit station mixed use areas and used for the impacts analysis, taking into account that not all parcels will develop at the planned maximum intensity.

COUNTYWIDE TRAILS PLAN

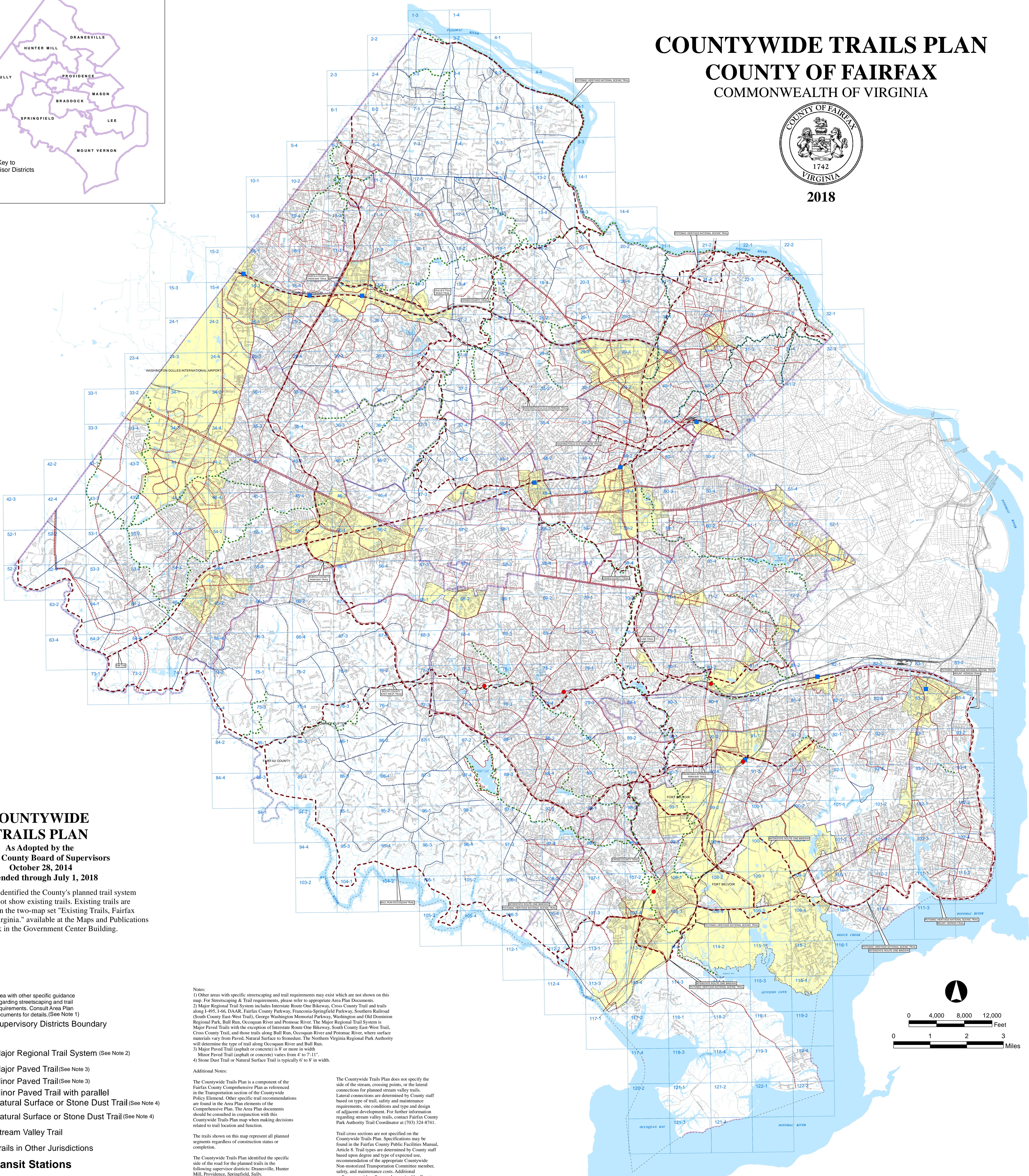
COUNTY OF FAIRFAX

COMMONWEALTH OF VIRGINIA



2018

Key to
Supervisor Districts



COUNTYWIDE TRAILS PLAN

As Adopted by the
Fairfax County Board of Supervisors
October 28, 2014
Amended through July 1, 2018

This map identified the County's planned trail system and does not show existing trails. Existing trails are depicted on the two-map set "Existing Trails, Fairfax County, Virginia," available at the Maps and Publications Sales Desk in the Government Center Building.

Legend

- Area with other specific guidance regarding streetscaping and trail requirements. Consult Area Plan documents for details. (See Note 1)
- Supervisory Districts Boundary
- Trails**
 - Major Regional Trail System (See Note 2)
 - Major Paved Trail (See Note 3)
 - Minor Paved Trail (See Note 3)
 - Minor Paved Trail with parallel
 - Natural Surface or Stone Dust Trail (See Note 4)
 - Stream Valley Trail
 - Trails in Other Jurisdictions
- Rail Transit Stations**
 - Rail Transit Stations
 - VRE Stations

Notes:

- 1) Other areas with specific streetscaping and trail requirements may exist which are not shown on this map. For Streetscaping & Trail requirements, please refer to appropriate Area Plan Documents.
- 2) Major Regional Trail System includes Interstate Route One Bikeway, Cross County Trail and trails along I-495, I-66, DAAR, Fairfax County Parkway, Franconia-Springfield Parkway, Southern Railroad (South County East-West Trail), George Washington Memorial Parkway, Washington and Old Dominion Regional Park, Bull Run, Occoquan River and Potomac River. The Major Regional Trail System is Major Paved Trails with the exception of Interstate Route One Bikeway, South County East-West Trail, Cross County Trail, and those trails along Bull Run, Occoquan River and Potomac River, where surface materials vary from Paved, Natural Surface to Stone/Dust. The Northern Virginia Regional Park Authority will determine the type of trail along Occoquan River and Bull Run.
- 3) Major Paved Trail (asphalt or concrete) is 8' or more in width.
Minor Paved Trail (asphalt or concrete) varies from 4' to 7'-11".
- 4) Stone Dust Trail or Natural Surface Trail is typically 6' to 8' in width.

Additional Notes:

The Countywide Trails Plan is a component of the Fairfax County Comprehensive Plan as referenced in the Transportation section of the Countywide Policy Element. Other specific trail recommendations are found in the Area Plan elements of the Comprehensive Plan. The Area Plan documents should be consulted in conjunction with this Countywide Trails Plan map when making decisions related to trail location and function.

The trails shown on this map represent all planned segments regardless of construction status or completion.

The Countywide Trails Plan identified the specific side of the road for the planned trails in the following supervisor districts: Dranesville, Hunter Mill, Providence, Springfield, Sully.

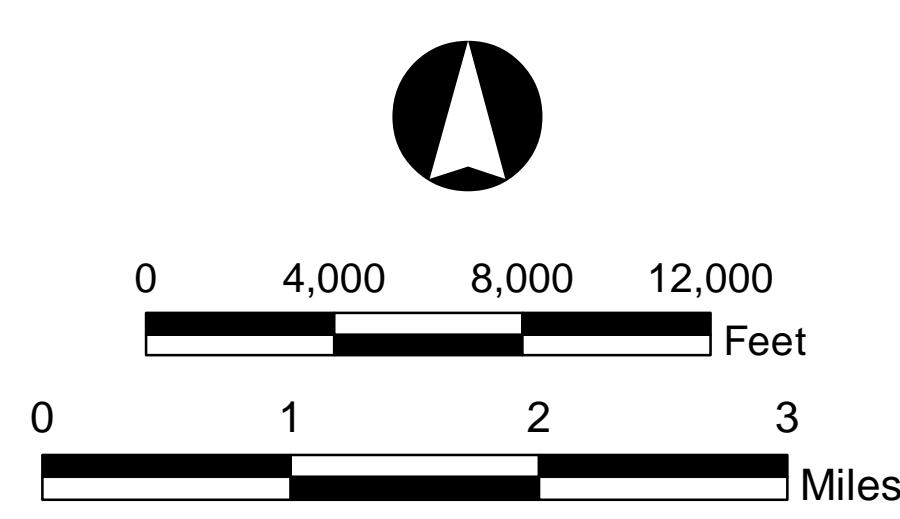
The Countywide Trails Plan does not specify side of road for the planned trails in the following supervisor districts: Braddock, Lee, Mason, Mt. Vernon.

Trails are to be located on one side of the Fairfax County Parkway.

The Countywide Trails Plan does not specify the side of the stream, crossing points, or the lateral connections for planned stream valley trails. Lateral connections are determined by County staff based on type of trail, safety and maintenance requirements, site conditions and type and design of adjacent development. For further information regarding stream valley trails, contact Fairfax County Park Authority Trail Coordinator at (703) 324-8741.

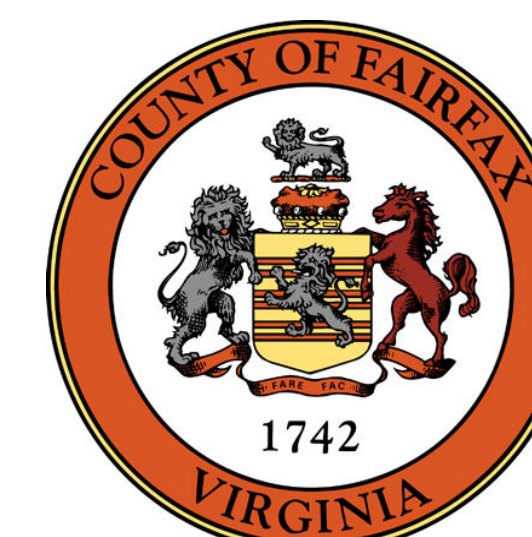
Trail cross sections are not specified on the Countywide Trails Plan. Specifications may be found in the Fairfax County Public Facilities Manual, Article 8. Trail types are determined by County staff based upon degree and type of expected use, recommendation of the appropriate Countywide Non-motorized Transportation Committee member, safety, and maintenance costs. Additional walkways or sidewalks may be required by County ordinances.

For further information contact the Fairfax County Department of Planning and Zoning at (703) 324-1210.

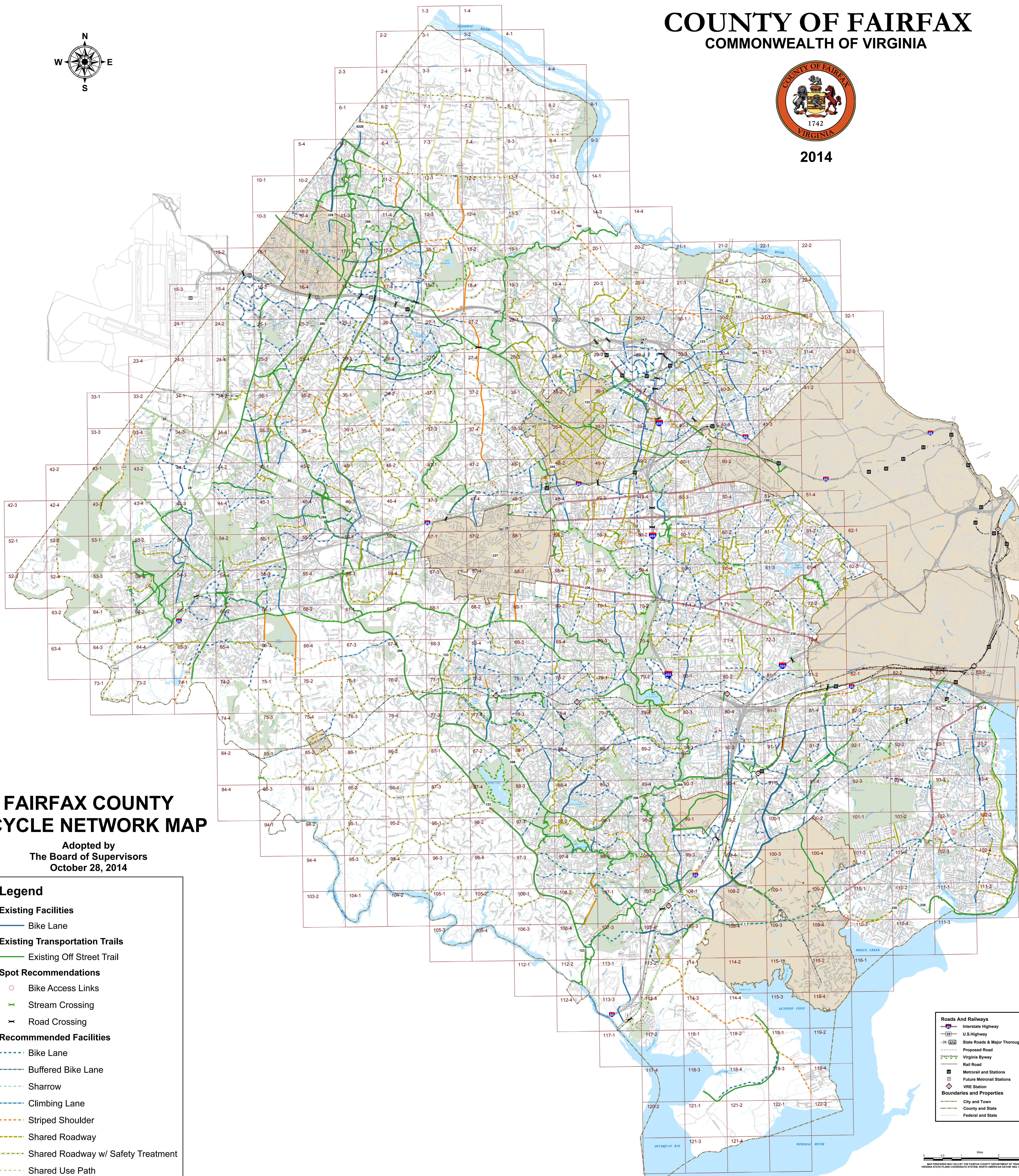
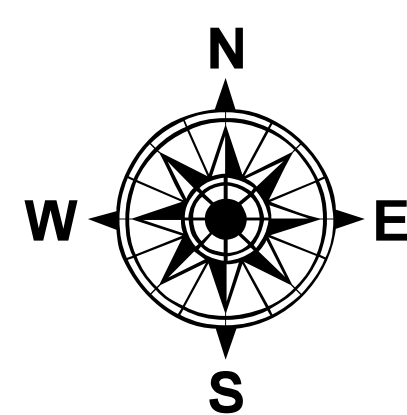


COUNTY OF FAIRFAX

COMMONWEALTH OF VIRGINIA



2014



FAIRFAX COUNTY BICYCLE NETWORK MAP

Adopted by
The Board of Supervisors
October 28, 2014

Legend

Existing Facilities

— Bike Lane

Existing Transportation Trails

— Existing Off Street Trail

Spot Recommendations

○ Bike Access Links

✕ Stream Crossing

✕ Road Crossing

Recommended Facilities

--- Bike Lane

--- Buffered Bike Lane

--- Sharrow

--- Climbing Lane

--- Striped Shoulder

--- Shared Roadway

--- Shared Roadway w/ Safety Treatment

--- Shared Use Path

--- Cycletrack

--- Policy Roads

Roads And Railways	
	Interstate Highway
	U.S. Highway
	State Roads & Major Thoroughfares
	Proposed Road
	Virginia Byway
	Rail Road
	Metrorail and Stations
	Future Metrorail Stations
	VRE Station
	Boundaries and Properties
	City and Town
	County and State
	Federal and State

Scale: 0 0.5 1 1.5 2 Miles
MAP PREPARED BY THE FAIRFAX COUNTY DEPARTMENT OF TRANSPORTATION
 VIRGINIA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983, U.S. SURVEY FOOT