3. Pedestrian and Bike Facilities

The areas surrounding the proposed Metrorail stations at Reston Parkway and Wiehle Avenue have or will have many potential origins and destinations that can be reached by walking or biking. These locations include residential neighborhoods of varying densities, office buildings, commercial centers and hotels. Access to and from these locations will drive the success of these Metrorail stations and ultimately the Dulles Metrorail Extension, as travelers will be more likely to switch to using Metro if the whole trip is easy, safe and comfortable. Fairfax County has recognized the importance of comprehensive pedestrian and bicycle system planning in the proposed station areas.

This plan addresses the needs of pedestrians and bicyclists who wish to access Metrorail in the areas surrounding the Reston Parkway and Wiehle Avenue stations. The distance that people are generally willing to walk to access a rail transit station is approximately ¼ of a mile, although some people are willing to walk up to ½ of a mile or more. Bicyclists are generally willing to ride much further to access transit; distances of well over a mile can be easily and quickly traversed by a bicyclist if appropriate facilities are provided. In the study area, the cycling distance may be greatly increased by the existence of the W&OD Trail, which serves as a major arterial for bicyclists accessing the stations from the east or the west.

The station area has been divided into four quadrants for ease of discussion; each quadrant corresponds to a proposed station entrance. Within the spheres of influence – ¼ to ½ of a mile for pedestrians and one mile for bicyclists – the potential destinations and origins were identified. "Desire lines" that link these locations within the community with the closest station entrance represent the shortest path between the two points and indicate where pedestrians and bicyclists would like to go. While it is rarely possible to provide a direct path along this line due to obstructions such as buildings and various engineering constraints, the shortest possible path typically provides the best access. By analyzing each potential path, a comprehensive list of recommended improvements was compiled that identifies the infrastructure and other needs of those accessing Metro by foot or bike.

While this plan deals primarily with the existing land uses, it should be noted that it also accounts for potential re-development and increases in density that may occur in the areas closest to the stations. Significant increases in density for both office and residential uses may be possible in many areas once the rail line is operational, and mixed-use development is encouraged for many of the parcels within walking and biking distance of the stations. This redevelopment is likely to increase the demand for pedestrian and bicycle facilities, in addition to providing Fairfax County with a means of obtaining those improvements with minimum cost (such as proffers from developers). With new developments, the desire lines and available paths will change and evolve, and it is important that the list of improvements and recommendations contained in this report be re-evaluated on a regular basis to determine what changes and additions need to be made.

A. Recommendations

The recommendations presented in the following sections are divided into two user-based categories: pedestrians and bicyclists. Of course, many of the recommended facilities will be used by both groups and should be designed to accommodate the needs of all types of non-motorized users. However, in

situations with high levels of bicycle or pedestrian traffic (as is expected in this area) it is safer for all travelers if the different modes are separated as much as possible to avoid conflicts and crashes.

Furthermore, the recommendations presented in this document are intended to establish targets for a safe and convenient network for bicyclists and pedestrians. As time and conditions change there may be opportunities for other measures that can enhance mobility and safety for pedestrians and bicyclists. This report details the specific major projects that are recommended in the study area in addition to highlighting general recommendations for the entire area. Implementation of these general recommendations may require additional small construction projects and some additional cost.

a. Pedestrians

To serve the community and make transit a success in Reston, pedestrians should be provided with safe and convenient places to walk. In general, improvements to the pedestrian network will follow these principles:

- Increase connectivity of existing paths.
- Provide more direct access.
- Minimize exposure of pedestrians to moving vehicles.
- Increase visibility of pedestrians.

To accomplish these goals, a wide array of modifications, additions and improvements are recommended for the pedestrian network. These are illustrated in Figure 3-3 and detailed in Appendix B. These findings were based on an inventory of existing facilities, geometric, traffic, and crash data, and quantitative evaluation techniques (e.g., the intersection safety indices) described in the Existing Conditions Report.

One of the major goals of the Reston community in general and the RMAG in specific has been to obtain "four-corner access" to each of the stations. This ideal, which would provide four entrances to each station requires the fewest street crossings and therefore promotes pedestrian safety. Providing additional entrances to the Metrorail stations beyond those recommended in the ROD was beyond the scope of this study, and as such they are not recommended in this report. However, the recommendations found in this report seek to provide the best and safest access possible to each of the stations from the entrances laid out in the ROD.

By providing high-quality surface-facilities of an urban nature, it will be possible to create safe and pleasant walking conditions such that additional entrances are no longer a priority.

Two general types of improvements are recommended to enhance travel conditions for pedestrians: intersection improvements and sidewalk improvements. Intersection improvements deal with improvements to intersection geometry, crosswalk placement or design, signalization, curb-ramps and signage. In general, the following items are recommended for use at intersections:

- All crosswalks within a ½ a mile of any station should be painted block-style for maximum visibility (continental or ladder type markings).
- All traffic signals within ½ a mile of any station should include pedestrian countdowns.

- Median refuges should be used where possible to assist pedestrians in crossing wide, busy intersections. Refuge should be at least 5 feet wide (6 feet is preferred). Wider refuges are necessary at W&OD Trail crossings in order to accommodate groups of users.
- All curb ramps within the study area should be compliant with the Americans with Disabilities Act (ADA).
- Wider lanes are not always better! Eleven-foot lanes should be sufficient on most roads (except major arterials) to help control traffic speeds and reduce crossing times and exposure for pedestrians.
- There should be a marked crosswalk within 250 feet of all bus stops on major streets.
- Turning radii should be designed to urban design standards (the only exception may be major arterials with significant truck volumes) to encourage slower right turn movements and reduce crossing times and exposure for pedestrians.
- Right-turn slip lanes (also known as right turn channelized islands or pork chops) should be designed to slow turning vehicles and provide drivers with a clear view of crossing pedestrians (see Figure 3-1).
- Wayfinding signing should be used extensively to direct pedestrians along the shortest routes to major destinations.
- All street crossings should include adequate lighting to improve pedestrian visibility.

These general recommendations should be implemented at all intersections within a ½ to 1 mile radius of all station entrances. In addition, thirty-three intersections and six at-grade trail crossings were analyzed in detail as part of the study area, as shown in Figure 3-2. (The numbers in the figure are reference numbers that are referred to throughout the text and in the appendices.) Based on the existing conditions at these locations, the expected development patterns in the area and the estimated pedestrian and vehicular traffic levels, a wide range of intersection improvements were recommended, as shown in Table 3-1. Conceptual designs for many of the recommended intersection actions are included in the following sections and Appendix B, and care was taken to ensure that the concepts could be executed in the space available with little to no additional right-of-way required. However, these designs are not engineering designs, and all recommendations should be thoroughly analyzed to ensure the safety of drivers, bicyclists and pedestrians.

Figure 3-1: Pedestrian Friendly Right-Turn Slip Lane Design

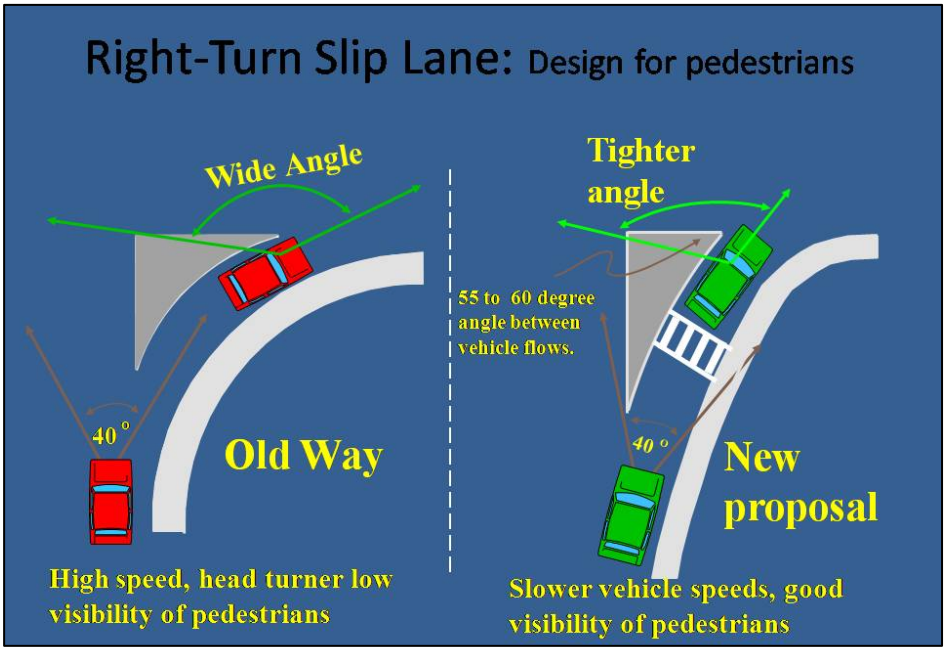
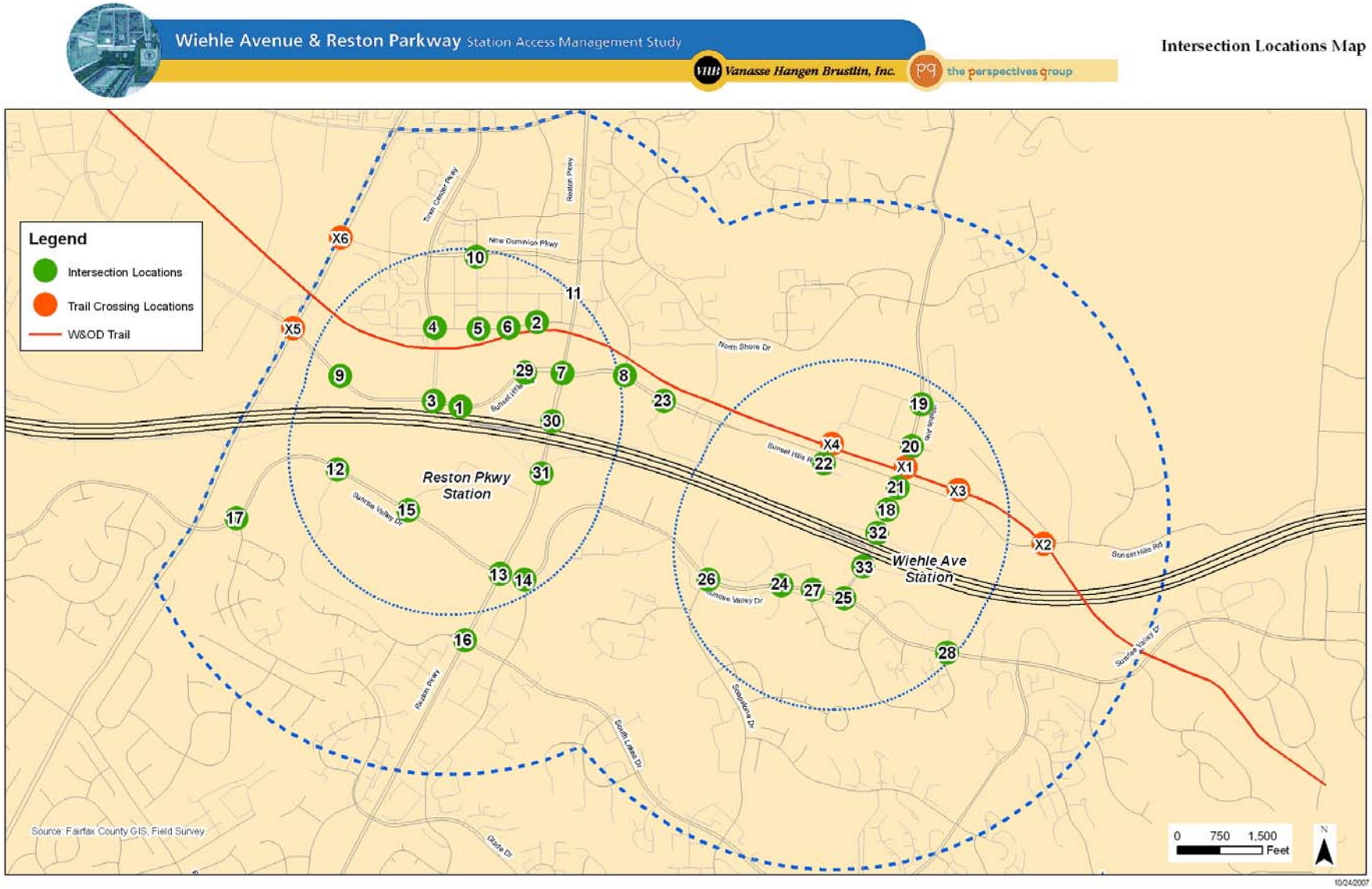


Table 3-1: Recommended Intersection Improvements by quadrant

Quadrant	Pedestrian Countdown Signal	Upgrade curb ramps	Construct Curb Ramps	Improved Crosswalk	Median Refuge	Channelized Right Turns	Warning Signage	Decrease Crossing Dist	Decrease Curb Radius	New Crosswalk
Reston Parkway - North	27	41	11	22	18	0	4	7	8	16
Reston Parkway - South	24	21	13	15	10	3	3	5	4	11
Wiehle Ave - North	19	27	3	16	7	2	4	6	6	10
Wiehle Ave – South	7	16	5	5	6	1	3	3	4	7
Total	77	105	32	58	41	6	14	21	22	44

Figure 3-2: Pedestrian Study Intersection Locations



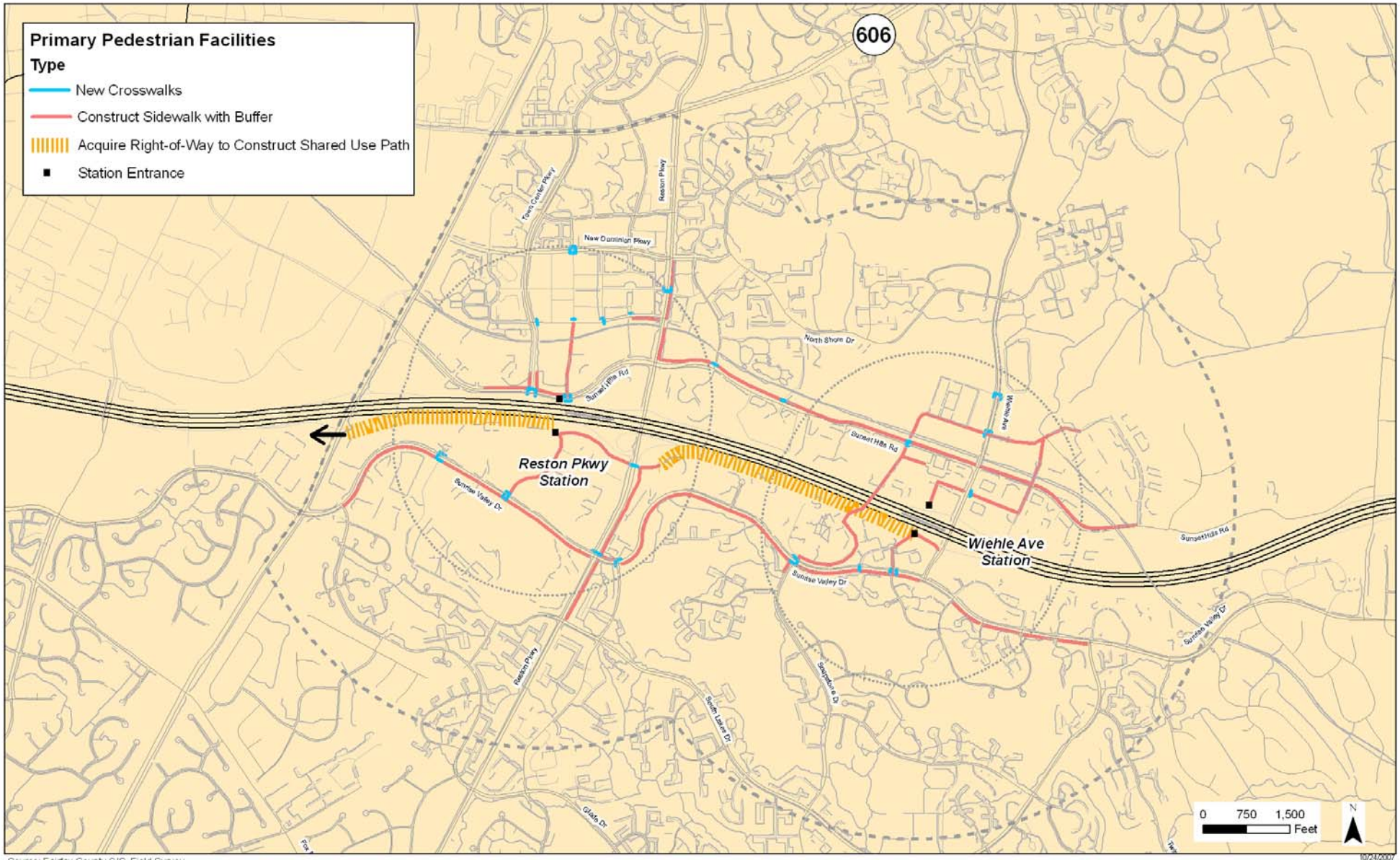
The sidewalk recommendations in this report include improvements and guidelines to help pedestrians move around the area safely and easily. Throughout the pedestrian sphere of influence (between ¼ and ½ of a mile from the station entrance) the following recommendations can generally be expected:

- Wherever possible, there should be sidewalks on both sides of major thoroughfares.
- Sidewalks on major paths should be at least 6-feet wide wherever possible and 8 feet on major pedestrian pathways including sidewalks adjacent to commercial frontage zones (5-foot minimum clear width). Wider paths are necessary where bicyclists are expected to share the trail. These recommendations are minimums, and wider facilities should be considered wherever warranted by volumes.
- Sidewalks should be separated from the roadway by a landscaped buffer of at least four feet wherever possible.
- All pedestrian pathways should have adequate, continuous lighting. Wherever high levels of pedestrians are expected, pedestrian-scale lighting elements should be included that provide good visibility for pedestrians.
- Sidewalks and trails should connect to adjacent communities wherever possible to provide additional connectivity throughout the region, not just within Reston.

In order to promote the use of sidewalks and trails in the Reston of 2030, the study team has developed a set of recommendations that are "urban" in their character. Pedestrians and bicyclists do not need to be separated from the activities of daily life; trails and sidewalks should be built on street level with access to the businesses, residences and other elements of the Reston community. These more urban roadway cross sections provide a safe and vibrant atmosphere for pedestrians and bicyclists, and encourage these users to use the facilities on a regular basis.

Information about the exact right-of-way widths for most of the necessary roadways was not available, so each segment where sidewalk construction is recommended must be analyzed for right-of-way issues before design and implementation. Figure 3-3 illustrates the locations where additional sidewalks are recommended in the study area. In total, over 49,000 linear feet – or about nine miles – of sidewalks are recommended in this plan.

Figure 3-3: Pedestrian Network Recommendations



b. Bicyclists

Bicyclists form a vital component of any community and will greatly increase the reach of Metro throughout the community. To achieve this objective, improvements to the bicycle network should be based on the following principles:

- Increase connectivity of existing paths.
- Provide more direct access.
- Ensure that vehicle speeds are compatible with bicycle travel.

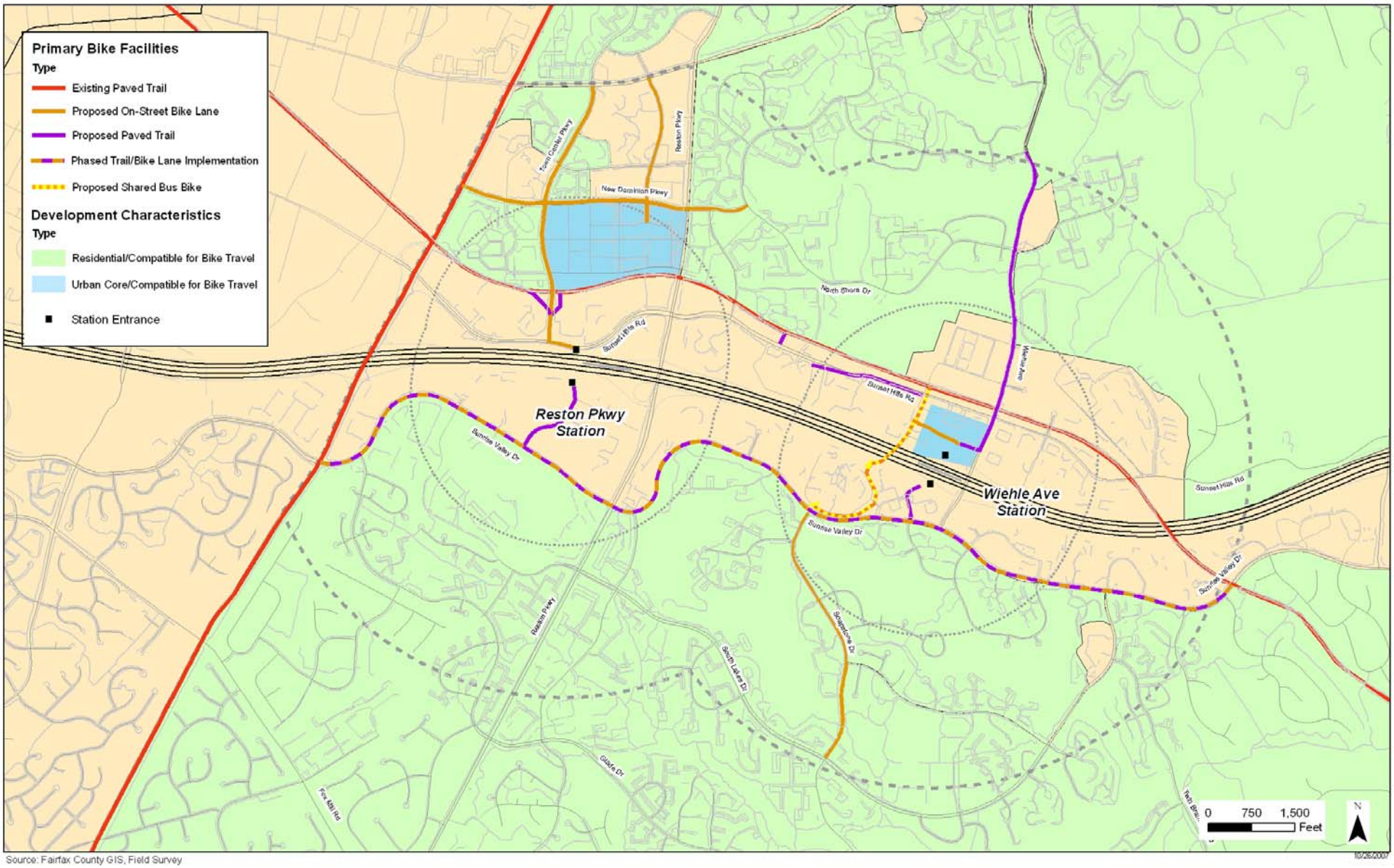
Bicycle recommendations were made for two general types of locations: trail crossings and network segments. Trail crossings (locations where a major off-street bike trail crosses a roadway) are approached on a case-by-case basis with the major goal of improving safety for bicyclists and removing unnecessary conflicts between bicycles and automobiles. Recommendations at these locations typically include elements similar to pedestrian intersection improvements. Improvements to improve the connectivity of the bicycle network typically include one or more of the following:

- On-street bike lanes in both directions (4 feet wide).
- Off-street bike trail (10 feet wide).
- Off-street shared use path (10 feet wide).
- On-street combined bike and bus lanes.

More specifics are provided for each intersection and roadway section of interest in the following sections. The recommended additions to the bicycle network are shown in Figure 3-4. The addition of approximately 32,000 linear feet – or about six miles – of dedicated bicycle and shared use trails is recommended. Additionally, another 73,000 linear feet – or almost 14 miles – of dedicated bicycle lanes are recommended in this plan.

It is critical that bicyclists be informed of new routes so they can choose the most convenient route. This information should be provided in area maps showing biking facilities and wayfinding signing to direct bicyclists along the shortest routes to major destinations.

Figure 3-4: Bicycle Network Recommendations



Intersections at trail crossings along both the W&OD and the Fairfax County Parkway Trails were also evaluated in this study. Those crossing major roads were studied in greater detail and described later in the report. Four at-grade crossings of the W&OD Trail were investigated near the Wiehle Avenue station and several grade separated crossings were investigated near the Reston Parkway station. In general, the at-grade crossings of the W&OD Trail were well-marked with signage and pavement markers for both bicyclists and drivers. Sight distance and heavy traffic volumes are the major issues encountered at these locations. The grade-separated crossings provide safe and fast access for bicyclists traveling through Reston, but suffer from a lack of connectivity with the surface street network. The recommended improvement measures are presented later in this report.

The Fairfax County Parkway Trail provides a key north-south connection in the study area, and the trail includes sufficient capacity and width for the expected bicycle demand. Insufficient sight-distance and advanced warning for drivers near at-grade crossings and intersections make bicycling along the trail difficult and unsafe and should be improved. Detailed recommendations are presented for two locations at at-grade crossings of the Fairfax County Parkway Trail later in this report.

Generally, all at-grade trail crossing locations should have a similar set of standard treatments to improve safety of bicyclists including:

- Advanced warning signage for vehicles as dictated by the current Manual on Uniform Traffic Control Devices (MUTCD), shown in Figure 3-5.
- Warning signage for bicyclists.
- Highly visible crosswalk facilities including countdown pedestrian signals where appropriate.
- Improved sight distance for the both vehicles and bicyclists at trail crossings.

Figure 3-5: Warning signage recommended for trail crossings. (Source: MUTCD)

A standard set of treatments provides a more familiar situation to both drivers and bicyclists; safety is improved when drivers and bicyclists know what to expect near at an at-grade crossing. Where necessary, additional measures can be taken to improve the visibility of bicyclists crossing major roadways.

c. Estimated Pedestrian Volumes

Determining the number of pedestrians likely to be using a specific pedestrian facility 25 years in the future is a difficult exercise that cannot be completed with absolute accuracy. However, it is important to know that recommended infrastructure improvements will be used and that they can accommodate the future pedestrian volumes. The number of transit passengers accessing the proposed Metrorail stations by foot can be used to estimate the number of commuters that will require pedestrian facilities at specific intersections. Additionally, internal pedestrian trips can be estimated based on the population and employment levels of the study area.

i. Pedestrians Accessing Metrorail

Based on the analysis conducted as part of the FEIS process, estimates of the number of pedestrians accessing each of the Reston area stations were developed. This estimate was divided into two categories: people beginning their trip in Reston and walking to either the Reston Parkway or Wiehle Avenue stations or using Metrorail to access one of the two stations and walking to their final destination in Reston. The FEIS produced numbers for the morning peak period; afternoon peak numbers were estimated by assuming symmetry in the AM and PM pedestrian patterns. The results are shown below in Table 3-2.

Table 3-2: Estimated Peak Period Walk Trips to/from Stations

AM Peak Period Walk Trips	From Zones to Station	From Station to Zones
Wiehle Ave Station	600	963
Reston Parkway Station	555	545
PM Peak Period Walk Trips		
Wiehle Ave Station	963	600
Reston Parkway Station	545	555

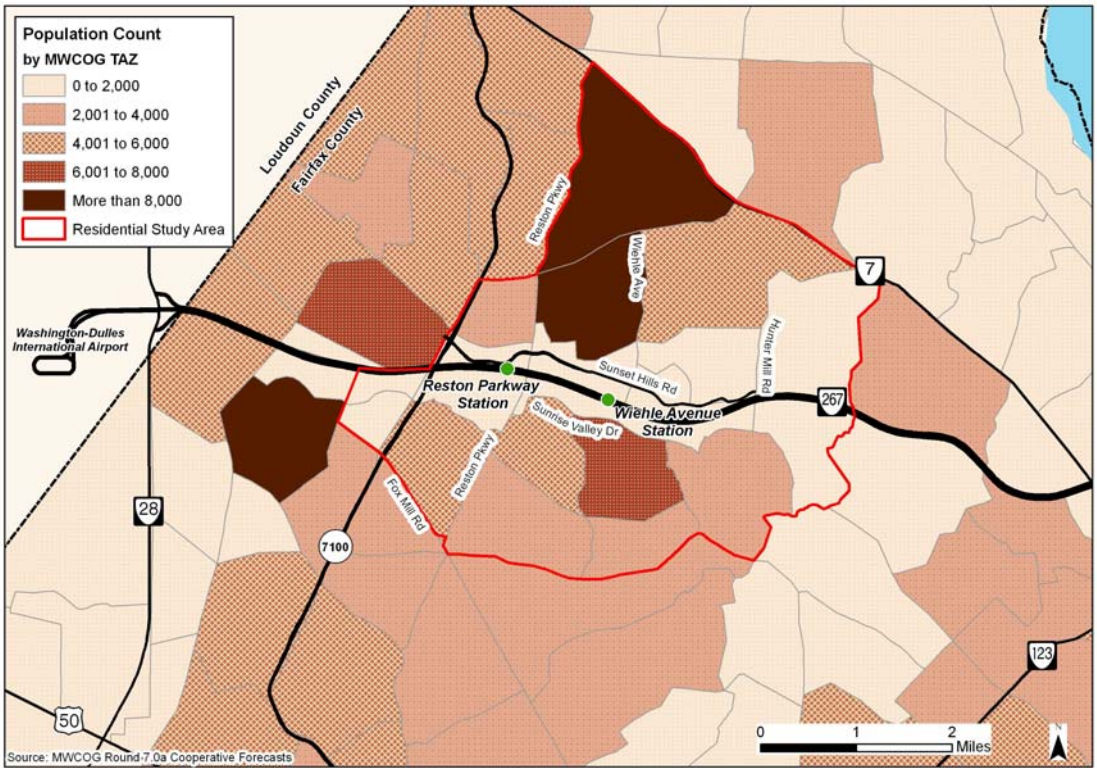
The pedestrian destinations were split by Traffic Analysis Zone (TAZ) for each station. Based on this information, the pedestrians were then assigned to paths according to their ultimate destinations. Where multiple paths to the same destination exist, the pedestrians were split according to the relative lengths of the paths, so that longer paths were assigned a smaller portion of the pedestrians making that trip.

Even along a specific path, it is impossible to know exactly what route a pedestrian will take, especially when crossing at an intersection. For example, a pedestrian on the southeast corner of an intersection who needs to get to the northwest corner can cross either the eastern and northern crosswalks or the southern and western crosswalks to reach their destination with the same amount of time and effort. Their choice is most likely to depend on which direction has a green signal when they reach the intersection. Therefore, estimates of pedestrian volumes at these locations are not estimates of actual traffic, but estimates of the maximum number of potential pedestrians on any particular crosswalk. Both the AM and PM peak period trips were assigned.

ii. Local Pedestrian Trips

In addition to Metrorail passengers, local pedestrian trips will also be generated from the land uses in Reston. In general, the number of local pedestrian trips will be substantially outweighed by the number of pedestrians accessing the Metrorail stations. Residential, commercial and office development will all generate some level of pedestrian travel as residents and employees run errands and make other local trips around their community. However, higher density areas are likely to produce more of these pedestrian trips than lower density ones. Estimating the exact number of pedestrians making local trips is difficult, but the number of trips is generally related to the number of employees and residents in an area. The existing pedestrian levels in the community were used to determine the appropriate level of pedestrian activity for each zone. The existing population for each TAZ in the area was determined, as shown in Figure 3-6.

Figure 3-6: 2005 Population near Proposed Metrorail Stations



The number of residential pedestrian trips produced by each TAZ was estimated based on the 2005 population levels as follows:

- TAZ with population under 2000 will produce 2 trips/square mile
- TAZ with population between 2000 and 4000 will produce 4 trips/square mile
- TAZ with population between 4000 and 6000 will produce 8 trips/square mile
- TAZ with population between 6000 and 8000 will produce 12 trips/square mile
- TAZ with population over 8000 will produce 16 trips per square mile

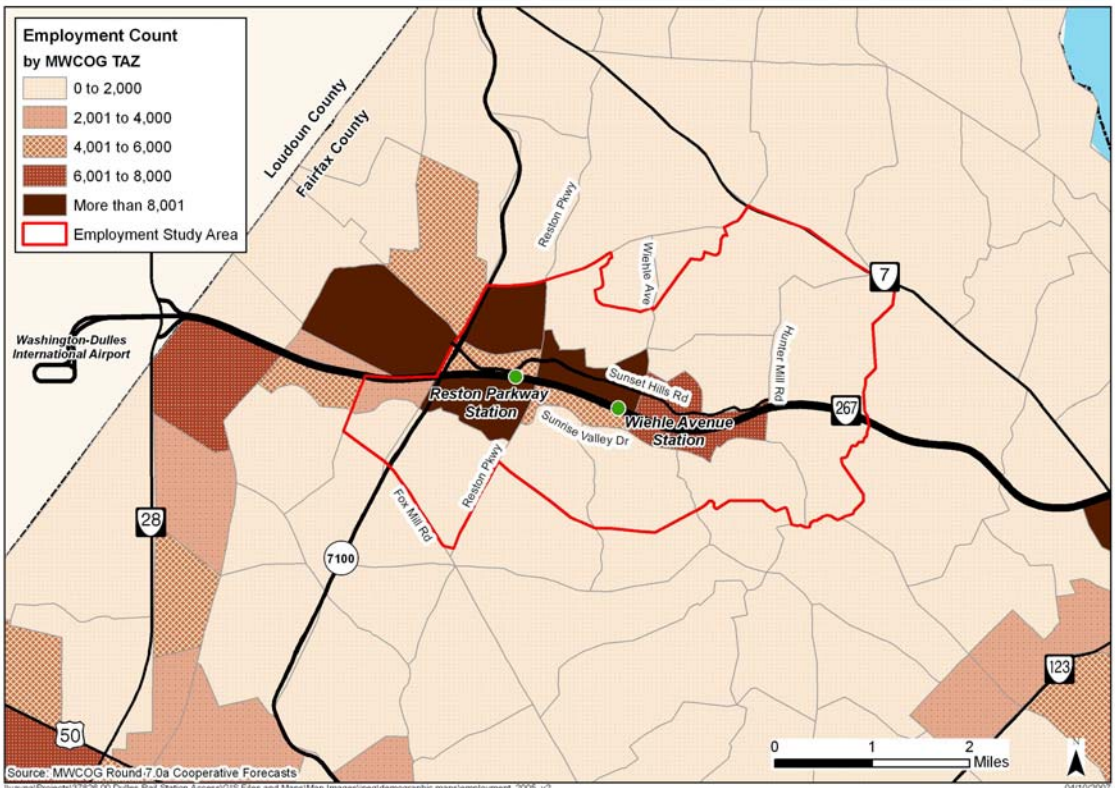
These rates are not exact, but provide a level of magnitude estimate of the number of pedestrian trips expected in each zone. The resulting pedestrian trips were then assigned as potential pedestrians on any intersections located in or adjacent to the TAZ.

The same type of calculation was conducted for employees, based on the 2005 employment levels in each TAZ, shown in Figure 3-7. A different scale was used for the local employee trips produced:

- TAZ with employment under 2000 will produce no trips
- TAZ with employment between 2000 and 4000 will produce 2 trips/square mile
- TAZ with employment between 4000 and 6000 will produce 4 trips/square mile
- TAZ with employment between 6000 and 8000 will produce 8 trips/ square mile
- TAZ with employment over 8000 will produce 16 trips/square mile

These rates provide an order-of-magnitude level estimate for the number of local pedestrian trips made by local employees, not exact trip estimates. Again, the trips produced by each TAZ were assigned as potential pedestrian trips to any intersections located in or adjacent to that TAZ.

Figure 3-7: 2005 Employment Levels near Proposed Metrorail Stations



The total number of potential peak period commuter pedestrians, local residential pedestrians and local employee pedestrians were summed on each crossing at every intersection to estimate the total potential pedestrian demand for each crossing facility. These numbers are included in Appendix C for reference.

B. Reston Parkway Station – North

This section addresses issues for pedestrians and bicyclists accessing the Reston Parkway Metrorail station from the north. The northern entrance to the station is located on the south side of Sunset Hills Road one block east of the intersection with Town Center Parkway. The major points of interest in this quadrant are located in the Reston Town Center, but access is also addressed for the office buildings south of the W&OD trail and the parcels immediately east of Reston Parkway. Most of the destinations in this area are located to the north of Sunset Hills Rd, requiring most pedestrians to cross this busy street. In some locations, Sunset Hills Rd is already 10 lanes wide, a daunting barrier for any pedestrian to cross. Without well-designed crossing facilities located along the length of the road, Sunset Hills Road can function as a major barrier to pedestrians, deterring people from using the Metrorail system and the sidewalks for their daily travel. Some internal circulation issues are also addressed. Bicycle access to the areas north of the Reston Town Center core and the W&OD trail are analyzed as well.

a. Pedestrians

The major generator of all types of traffic in this quadrant – but especially pedestrian traffic - is the Reston Town Center. The Town Center consists of high-density residential units, high-rise office space, and the busiest commercial center in the area. Also in the Town Center is the Reston Town Center Transit Station (RTCTS), a bus facility that accommodates passenger transfers and vehicle layovers and will be served by almost all of the bus routes in the area before and after the opening of the Reston Parkway Metro station. Pedestrian generators within ½ mile of the station entrance are shown in Figure 3-8, including:

A. Reston Town Center
B. Office and residential buildings east of Reston Parkway
C. Office buildings and shopping west of Town Center Parkway

Figure 3-8: Pedestrian destinations in Reston Parkway - North

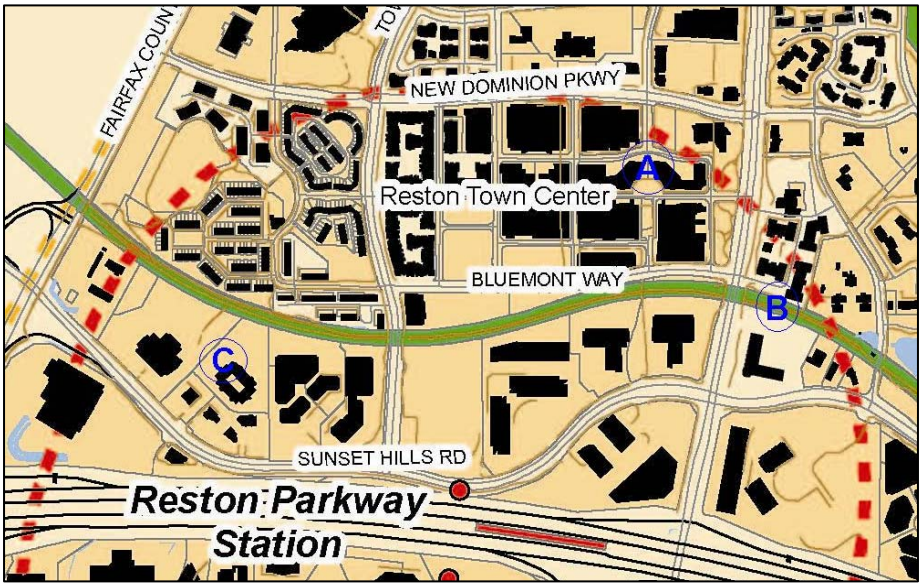


Table 3-3 details the major intersection actions recommended for this quadrant, while Table 3-4 details necessary additions to the sidewalk system. Note that this analysis deals only with the major routes and intersections and other necessary improvements may be required on residential streets or roadways and driveways that access individual buildings. Details of proposed intersection actions can be found in Appendix B.

Table 3-3: Intersection Improvements for Reston Parkway - North

No.	Location	Airline Distance to Station Entrance (ft)	Max. Pedestrian ISI[5]	Recommendations
I1	Sunset Hills @ Station Entrance	90	4.3	**East**: High visibility crosswalk, pedestrian countdown signal, curb ramps, median refuge island; **West**: High visibility crosswalk, pedestrian countdown signal, curb ramps, median refuge island; **South:** High visibility crosswalk, pedestrian countdown signal, curb ramps; **North**: high visibility crosswalk, pedestrian countdown signal
I2	Bluemont Way & Discovery St @ Pedestrian Bridge	1,800	--	**West**: High visibility crosswalk, pedestrian countdown signal, raised median refuge island; **North:** High visibility crosswalk, construct curb ramp (east)
I3	Sunset Hills & Town Center Pkwy	700	3.3	**All Approaches:** High visibility crosswalk, extend median to include pedestrian refuge, pedestrian countdown signal, construct curb ramps
I4	Town Center Pkwy & Bluemont Way	1,500	--	**North:** Extend median to include pedestrian refuge; **South:**, extend median to include pedestrian refuge, decrease right turn radius; **All Approaches:** Upgrade curb ramps, high visibility crosswalk, re-align crosswalk
I5	Explorer St & Bluemont Way	1,400	--	**North**: High visibility crosswalk & upgraded curb ramps
I6	Library St & Bluemont Way	1,500	--	**North:** Upgraded curb ramps; **East:** Median pedestrian refuge, pedestrian warning and knockdown signs; **West:** Median pedestrian refuge, pedestrian warning and knockdown signs; **All Approaches:** High visibility crosswalk
I7	Reston Pkwy & Sunset Hills Rd	1,600	4.8	**East:** Realign right turn channelization; **South:** Realign right turn channelization, extend median to include pedestrian refuge; **West:** Realign right turn channelization, extend median to include pedestrian refuge; **All Approaches:** High visibility crosswalk, pedestrian countdown signal, decrease right turn radius, upgrade curb ramps
I8	Sunset Hills & Old Reston Ave	2,500	4.0	**North:** High visibility crosswalk, pedestrian countdown signal, upgrade/construct curb ramps; **South**: Pedestrian countdown signal, upgraded curb ramps, high visibility crosswalk; **East:** Re-align high visibility crosswalk, extend median to include pedestrian refuge, pedestrian countdown signal, upgrade/construct curb ramps
I9	Sunset Hills @ Target Driveway	2,100	3.9	**All approaches**: High visibility crosswalks, countdown signals, upgraded curb ramps; **East**: Extend medians to include pedestrian refuge, re-align crosswalk
I10	Explorer St & New Dominion Pkwy	2,600	3.1	**All approaches**: High visibility crosswalks, upgraded curb ramps, decrease curb radii, potential signal with pedestrian phase; **East**: Extend median island to include pedestrian refuge; **West:** Pedestrian median refuge

[5] PISI (Pedestrian Intersection Safety Index) measures the safety of pedestrians at street crossings based on traffic control devices, number of lanes, vehicle speeds, land use and vehicular traffic levels. Ped ISI values are calculated for each approach on an intersection. Blank entries are locations where traffic levels were not available and the calculation could not be performed. The maximum Ped ISI is used to show the least safe crossing condition at each intersection.

No.	Location	Airline Distance to Station Entrance (ft)	Max. Pedestrian ISI[5]	Recommendations
I11	Reston Pkwy & Market St	2,600	4.0	**South:** High visibility crosswalk, pedestrian countdown signal, curb ramps, pedestrian median refuge; **West**: pedestrian countdown signal, high visibility crosswalk, curb ramps; **East:** pedestrian countdown signal, high visibility crosswalk, upgrade curb ramps; ****Intersection currently under construction to implement improvements****
I29	Sunset Hills Rd & Discovery Sq/ Northrup Grumman E Entrance	1,000	4.0	**East:** Median pedestrian refuge; **West:** Median pedestrian refuge; **All Approaches:** High visibility crosswalk, pedestrian countdown signal, upgrade curb ramps
I30	Reston Pkwy & Westbound DIAAH ramps	1,200	4.0	**North:** Realign pedestrian refuge island, decrease right turn radius; **West:** Realign crosswalks, high visibility crosswalks, pedestrian countdown signal, upgrade curb ramps

Table 3-4: Sidewalk Improvements for Reston Parkway - North

No.	Side	Street	From	To	Recommendations
S1	N	Sunset Hills Rd	Station Entrance	Target Driveway	Construct 6' sidewalk with 4' buffer and associated curb ramps where needed
S2	E	Reston Pkwy	Sunset Hills Rd	New Dominion Pkwy	Complete Sidewalk
S3	N	Sunset Hills Rd	Reston Pkwy	Business Center Dr	Construct 6' sidewalk with 4' buffer and associated curb ramps
S4	S	Bluemont Way	Reston Pkwy	Discovery St	Construct 6' at grade sidewalk to connect with Reston Pkwy and bus stop on Bluemont Way
S5	Both	Town Center Pkwy	W&OD Trail	Sunset Hills Rd	Complete 6' sidewalk with 4' buffer to intersection of Town Center Pkwy & Sunset Hills Rd
S16	New	Path	Sunset Hills Rd @ Station Entrance	Bluemont Way @ Explorer St	Construct 10' shared-use path to Bluemont Way to include at-grade crossing of the W&OD Trail

i. Metro Station to Reston Town Center

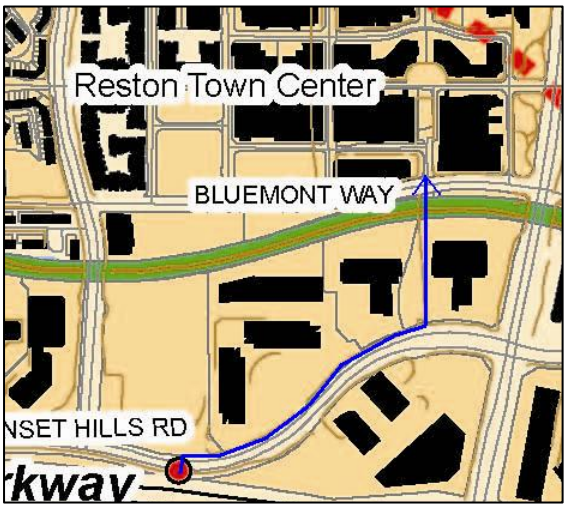
In this quadrant, the primary flow of pedestrians will be between the Metro station and Reston Town Center. Two hundred commuter pedestrians are expected to walk from the Metro station to the core of Reston Town Center (the area defined by New Dominion Pkwy, Town Center Pkwy, Bluemont Way and Reston Pkwy.) Another 300 are projected for areas north and west of this core. Walking is likely to occur throughout the day as employees enter Reston Town Center in the mornings, residents return in the evenings and visitors arrive throughout the day – especially during lunchtime and in the evening. On a straight line, these two locations are less than 2000 feet apart (using the intersection at Market St & Library St as the center of Reston Town Center) and three primary potential paths exist between them:

1. An eastern route utilizing an existing bridge over the W&OD trail,
2. A western route along Town Center Parkway, and
3. A central route on a new crossing of the W&OD trail on the "Gateway Property"

Depending on the specific destination of a pedestrian, any of these paths may be faster and more direct. Due to the large number of potential destinations in Reston Town Center and the large number of pedestrians estimated to be walking along this desire line, the actions associated with all of these routes are recommended for implementation as part of this plan.

1) Eastern Route

Figure 3-9: Eastern Route to Reston Town Center



The eastern route between the proposed station and the Town Center is currently used by many pedestrians during the day as they come from the offices south of Bluemont Way to eat in the restaurants in Reston Town Center. Pedestrians walk along Sunset Hills Rd, on a path between two office buildings (called Discovery Sq) and over a pedestrian bridge that crosses the W&OD trail just to the west of Reston Parkway, as shown in Figure 3-9. This route provides the most direct pedestrian access to the eastern portion of Reston Town Center, including the RTCTS. By 2030, over 300 pedestrians are estimated to use this route to access their destinations in Reston Town Center from the Reston Parkway Metrorail station. This path from the proposed station to Bluemont Way is over 2000 feet long and requires pedestrians to cross Sunset Hills Rd and Bluemont Way. Including time for crossing intersections, this would be about a 12-minute trip for the average pedestrian[6]. Improvements are needed at several intersections in order to provide safe and easy access along this high volume pedestrian path, including:

- Sunset Hills Rd @ Station Entrance (I1): High visibility crosswalks, countdown pedestrian signals and ADA compliant curb ramps for all approaches; Median refuge islands for Sunset Hills Rd approaches (see Figure 3-20 for proposed cross-section details).
- Sunset Hills Rd & Discover Sq (I29): High visibility crosswalks, pedestrian countdown signals and upgraded curb ramps on all approaches. Median pedestrian refuges should be constructed on both crossings of Sunset Hills Rd.
- Bluemont Way @ pedestrian bridge (I2): High visibility crosswalk, median refuge island and potential pedestrian signal across Bluemont Way (dependent on signal warrant); Crosswalk across Discovery St.
- All driveways along Sunset Hills Rd should include high visibility crosswalks, countdown pedestrian signals and ADA-compliant curb ramps. Median refuge islands should be included across Sunset Hills Rd wherever possible.

[6] Estimates of walking time are based on 3.5 ft/sec walking speed and an additional 1 minute delay at each street crossing.

2) Western Route

Pedestrians can also travel along Sunset Hills Rd, Town Center Parkway and Bluemont Way to access the Reston Town Center as shown in Figure 3-10. This path is about 2100 feet long from the station to Bluemont Way and requires crossing Sunset Hills Rd. Including crossing intersections, this would be about an 11-minute trip for most pedestrians[7]. Approximately 50 pedestrians are expected to use this route each day to access Reston Town Center. To make this path safe and hospitable to pedestrians, significant infrastructure improvements will be necessary including:

Figure 3-10: Western route to Reston Town Center

- Sunset Hills Rd & Town Center Pkwy (I3): High visibility crosswalks, pedestrian countdown signals, ADA-compliant curb ramps and median refuge islands for all approaches.
- 6-foot sidewalk and 4-foot buffer along the north side of Sunset Hills Rd west of the station entrance (S1).
- Completion of the 6-foot sidewalk on the west side of Town Center Parkway between the W&OD trail and Sunset Hills Rd (S5).
- Extend sidewalks to reach the northwestern corner of the intersection of Sunset Hills Rd & Town Center Pkwy.
- Bluemont Way & Town Center Pkwy (I4): Realigned high visibility crosswalks and ADA compliant curb ramps on all approaches and extended median refuge islands on the Town Center Parkway approaches.

3) Central Route

Clearly, the two routes described above should be options to pedestrians and may be the preferred route for some pedestrians based on their origin/destination within Reston Town Center. However, a more direct route would be desirable for pedestrians destined for the central areas of Reston Town Center including the RTCTS, as the eastern and western routes are both relatively long and may discourage Metro ridership. Therefore, a more direct route through the "Gateway parcel" (owned by Boston Properties) is desirable. This tract of land is currently undeveloped, although a plan for an office park with a parking garage has already been approved. Therefore time is of the essence. Ideally, a new plan would entail a pedestrian and bicycle connection on the east side of the parcel between Sunset Hills Road and the W&OD Trail as shown in Figure 3-11. There would need to be an at-grade crossing of the W&OD Trail and the path would continue north to cross Bluemont Way and

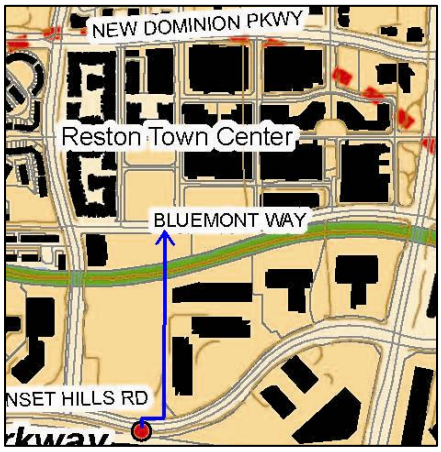


Figure 3-11: Central Route to Reston Town Center

[7] Estimates of walking time are based on 3.5 ft/sec walking speed and an additional 1 minute delay at each street crossing.

into Reston Town Center (S16). Grading and ADA compliance must all be considered when engineering design is being completed for this project. This path is approximately 1400 ft long to Bluemont Way and would require an 8-minute walk for the average pedestrian[8]. An estimated 225 pedestrian trips each day are projected for this path.

ii. Metro Station to locations east of Reston Parkway

The Reston Parkway station will also be the primary stop for employees at several large office and residential complexes to the east of Reston Parkway, on both sides of Sunset Hills Rd. Several major employers have offices in this area which will be prime candidates for utilizing the new Metrorail system, and over 300 pedestrian trips per day are projected for this area. In the area between the station entrance and Reston Parkway, Sunset Hills Rd can serve as the primary access route for pedestrians and bicyclists. For those destinations to the east of Reston Parkway, two potential routes exist including a northern route along Sunset Hills Rd and a southern route that parallels the DIAAH. Because almost all of the buildings and complexes in this area front directly onto Sunset Hills Rd, this southern route would provide only a limited benefit for pedestrians accessing these locations. In addition, because of the higher construction costs and difficulty obtaining right-of-way, the southern route is not a recommended path.

1) Northern Route

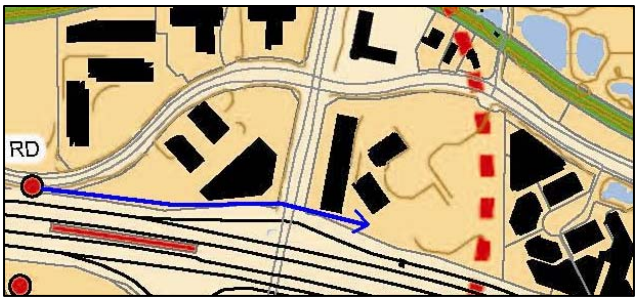
The northern route utilizes existing infrastructure on Sunset Hills Rd to provide access to the areas east of Reston Parkway. The route is approximately 2100 feet long and requires several street crossings at small intersections along Sunset Hills Rd in addition to the major crossing at Sunset Hills and Reston Pkwy. Significant pedestrian actions are required in this area including:

- Sunset Hills Rd & Discovery Sq/eastern Northrup Grumman entrance (I29): High visibility crosswalks, pedestrian countdown signals, upgraded curb ramps on all approaches and median pedestrian refuges on Sunset Hills approaches.
- Sunset Hills Rd & Reston Pkwy (I7): High visibility crosswalks, pedestrian countdown signals, decreased right turn radii and upgraded curb ramps at all approaches. The right-turn slip lanes should be re-aligned according to the policy presented earlier in the report on the eastern, southern and western approaches. The medians on the southern and western approaches should be extended into the crosswalk to include pedestrian refuge islands.
- Complete a 6-foot sidewalk with 4-foot buffer on the east side of Reston Pkwy between Sunset Hills and New Dominion Pkwy (S2).
- Direct sidewalk connections from the eastern corners of the intersection of Sunset Hills Rd & Reston Pkwy to the private developments next to it.
- 6-foot sidewalk with 4-foot buffer along the north side of Sunset Hills Rd east of Reston Pkwy as far as Plaza America or Business Center Dr(S3).

[8] Estimates of walking time are based on 3.5 ft/sec walking speed and an additional 1 minute delay at each street crossing.

- Sunset Hills Rd & Old Reston Ave (I8): Crossings of Sunset Hills Rd will not be encouraged on the western approach and no crosswalk should be provided at that location. Crossings should be concentrated on the east side of the intersection where the high-visibility crosswalk should be re-aligned and the median extended to provide a pedestrian refuge island. Pedestrian countdown signals and ADA-compliant curb ramps should be installed on the remaining three approaches. High visibility crosswalks are necessary on the northern and southern approaches.

2) Southern Route



One other potential route between the Metro Station and the office park south of Sunset Hills Rd (and potentially beyond to Plaza America) would be to travel along the DIAAH and requires only the crossing of Reston Parkway near the access ramps. This route would be approximately 1600 feet long instead of the 2100 feet required by the northern route along surface streets, which provides an approximate times savings of just over 2 minutes. All of the development in this area is distinctly oriented towards Sunset Hills Road, and the area behind Plaza America is particular inhospitable for pedestrians and bicyclists. Obtaining right of way may be a challenge and construction costs would certainly be significant for this path, in addition to the complications arising from a crossing of Reston Parkway at this location. Infrastructure improvements that would be necessary to implement this route include:

- Shared-use (pedestrian and bicycle) pathway along the north side of the DIAAH from the station entrance east at least as far as Plaza America.
- Reston Parkway @ westbound DIAAH ramps (I30): High visibility crosswalk, pedestrian countdown signal, ADA-compliant curb ramps and a pedestrian median refuge on the northern approach.
- Access sidewalks from the new path to private developments along Sunset Hills Rd

Due to the constraints already mentioned and the small time savings anticipated for pedestrians, this route and the associated improvements are not recommended at this time. As redevelopment occurs in the area, it may eventually become practical and appropriate to construct a shared-use path in this location.

iii. Metro Station to areas west of Town Center Pkwy

Several developments west of Town Center Parkway are also within walking distance of the Metro station including proposed and existing office buildings, major retail facilities (a Target near Fairfax County Pkwy and Sunset Hills Rd), a hotel and several restaurants. Approximately 150 daily pedestrian trips to these areas have been projected for 2030. Access to these destinations is best provided by Sunset Hills Rd, which will require several infrastructure actions, including:

- Improvements previously mentioned for the intersection of Sunset Hills Rd and Town Center Pkwy (I3).
- Completion of the sidewalk and associated ADA-compliant curb ramps along the north side of Sunset Hills Rd between Town Center Pkwy and the Fairfax County Pkwy (S1).

- Sunset Hills Rd & Target Driveway (I9): High visibility crosswalks, pedestrian countdown signals and upgraded curb ramps are needed on all approaches. On the eastern approach the crosswalk should be re-aligned and the median extended to include a pedestrian refuge.

iv. Access to and around Reston Town Center

Reston Town Center is currently a pleasant place to walk, and the introduction of Metrorail service and increased bus service will help to increase the level of pedestrian activity occurring in the area as a whole, not just to and from the Metro station. Pedestrian travel in and around Reston Town Center should be accommodated and encouraged by providing the facilities necessary for safe, easy and convenient pedestrian travel. In order to achieve this goal, several other pedestrian actions are recommended in this area including:

- Explorer St & New Dominion Pkwy (I10): High visibility crosswalks and upgraded curb ramps should be installed on all four approaches. The curb radii should be decreased (where possible) to 25 feet to slow turns and decrease pedestrian crossing distances. The medians on both approaches on New Dominion Pkwy should be extended into the crosswalk to create a pedestrian refuge. A signal warrant should be conducted to determine of a traffic signal with a pedestrian phase is needed at this location.
- Provide sidewalk at street level along the south side of Bluemont Way from the RTCTS to Reston Parkway (S4). This is in addition to or in place of the temporary grade-separated asphalt path the currently exists in order to provide access to the bus stop and the RTCTS from areas east of Reston Pkwy (See Figure 3-12).
- Reston Parkway & westbound DIAAH on-ramp (I30): Realign the pedestrian right-turn slip lane on the northern approach according to the design presented earlier in this report and decrease the turning radius. Across the on-ramp, the high visibility crosswalks should be added on a different (shorter) alignment, a pedestrian countdown signal should be added across the longer leg of the crossing and the curb ramps should be upgraded.
- Reston Pkwy & Market St (I11): Crosswalk, pedestrian countdown signal, ADA-compliant curb ramps and pedestrian median refuge across Reston Pkwy (construction is complete).
- Upgraded ADA-compliant curb ramps at all intersections along Town Center Pkwy, Reston Pkwy and New Dominion Pkwy (approximately 23 ramps).
- Bluemont Way & Explorer St (I5): High visibility crosswalk and ADA-compliant curb ramps across Explorer St.
- Bluemont Way & Library St (I6): High visibility crosswalks on northern and eastern approaches, median refuge islands on eastern and western approaches (minimum 5 feet wide) with pedestrian knock-down signs and ADA-compliant curb ramps on the northern approach.

Figure 3-12: Missing sidewalk on Bluemont Way near Reston Parkway.

b. Bicycle Access

Bicyclists can use many of the same facilities as vehicles and pedestrians; however it is often advisable to provide separate pathways to ensure the safety of all travelers, especially in areas with high volumes of bicyclists or pedestrians. The Reston Parkway station area is expected to experience heavy volumes of bicycle traffic due to the nature of the surrounding community in Reston Town Center and the station's proximity to the W&OD Trail and the Fairfax County Parkway Trail, both major regional bicycle facilities. Two types of bicycle trips should be accommodated and encouraged by the infrastructure in the area: local trips to, from and around Reston Town Center and commuter trips to and from the Metrorail station. Encouraging people to make local trips by bicycle can help reduce traffic congestion as cars are removed from the roads for shopping and entertainment trips. This requires that all of the major trip generators in the area be served by bicycle facilities. Access to the Metrorail station specifically must be provided from major residential, commercial and office developments and the W&OD and Fairfax County Parkway trails, which allow residents of a larger region to access the Metrorail system on their bicycles. Table 3-5 shows the major recommended bicycle facility improvements. Bicycle trails intersect with Reston area streets at several locations in the station area, and easy and safe access to and from both the W&OD and Fairfax County Parkway trails is necessary at each of these locations. Table 3-6 shows the recommended improvements to at-grade trail crossings in the area.

Table 3-5: Bicycle Recommendations for Reston Parkway - North

	Side	Street	From	To	Recommendations
B1	Both	Town Center Pkwy	Sunset Hills	Baron Cameron Ave (potential extension further north)	4-foot bike Lanes on both sides of the street
B2	Both	Sunset Hills	Town Center Pkwy	Station Entrance	4-foot bike Lanes connecting to bike lanes on Town Center Pkwy, acquire necessary right-of-way
B3	Both	New Dominion Pkwy	Fairfax County Pkwy	Reston Pkwy (potential extension to North Shore Dr)	4-foot bike lanes on both sides of the street
B4	Both	Fountain Dr	Freedom Dr	Baron Cameron Ave (potential extension further north)	Bike lanes to be constructed in conjunction with redevelopment: Spectrum development to include maximum 4-lane cross section with 4-foot bike lanes
B9	Both	NEW Connectors	Town Center Pkwy	W&OD trail	**East:** Pave and formalize existing at grade access ramp **West:** Construct pave access ramp to W&OD trail
B13		New Connector	Reston Town Center Transit Station	W&OD trail	Construct formal, ADA compliant connection

Table 3-6: Trail Crossing Recommendations for Reston Parkway - North

No.	Location	Existing Condition	Recommendations
X5	Sunset Hills Rd @ Fairfax County Pkwy Trail	At-Grade	Widen waiting area, widen curb ramps, pedestrian countdown signal, improved crosswalk, warning signage, redesign ramp, warning flashers with automatic detection
X6	New Dominion Pkwy @ Fairfax County Pkwy Trail	At-Grade	Widen waiting area, widen curb ramps, pedestrian countdown signal, improved crosswalk, warning signage

i. W&OD Trail to Metro Station

The W&OD trail is the major bicycle facility in the area and provides east-west access north of the DIAAH and from the Fairfax County Parkway Trail to the west. Many bicyclists will access the Metro Station from this trail. The trail is closest to the Reston Parkway station when it crosses Town Center Parkway, which is a grade separated crossing. Based on engineering constraints, direct connections between Town Center Parkway and the W&OD trail should be formalized to allow easy access for bicyclists traveling in either direction along the trail to the Metrorail station as shown in Figure 3-13 and Figure 3-14. Further, a dedicated bicycle facility should be provided that connects the trail seamlessly with the station entrance. Due to the width of the existing surface roads, the proposed development in the area and the high traffic volumes of all modes expected in the area, dedicated bike lanes are recommended as the best solution. The infrastructure actions that will be necessary to provide safe and efficient access include:

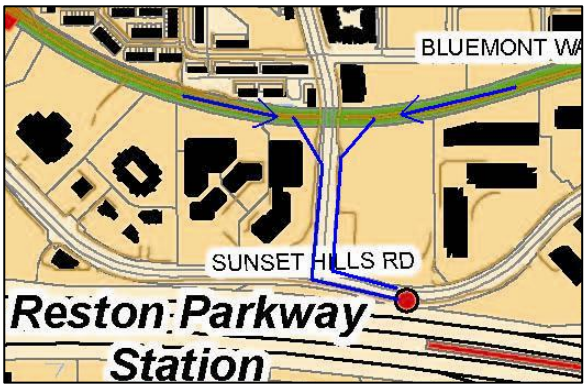


Figure 3-13: Proposed connection to W&OD Trail at Reston Parkway Station

- Formalized ramp connections to Town Center Parkway from the W&OD trail (B9):
  - East: Pave and formalize the existing at-grade access ramp.
  - West: construct paved access ramp to trail (may need to be located west of Centennial Executive Center office building to meet grade requirements).
- Town Center Parkway from the W&OD trail to Sunset Hills Rd (B1): Dedicated four-foot bike lanes on both sides of the street with good connections to the new ramps.
- Sunset Hills Rd from Town Center Pkwy to the station (B2): Dedicated four-foot bike lanes on both sides of street will direct access into station area.

Figure 3-14: Informal gravel connection to W&OD trail east of Town Center Pkwy

Potential roadway cross-sections have been analyzed which indicate that bike lanes would be a viable option in this area without significant road widening, as shown in Figure 3-20 later in the report.

ii. W&OD Trail to Reston Town Center

As a major destination in the region, a bicycle connection between the W&OD Trail and Reston Town Center is an important link in the bicycle network. The trail is directly adjacent to the Reston Town Center Transit Station (RTCTS) on Bluemont Way, although the two are separated by a substantial grade differential. Many informal trails and "goat paths" have been indentified in this area, indicating a significant demand for the connection by both bicyclists and pedestrians. A formal connection would be difficult due to the design requirements of the ADA (e.g. maximum 5% slope), but should be pursued through coordination with the Northern Virginia Regional Parks Authority (B13). The improved connection at Town Center Parkway recommended in the previous section (B9) may be a possible alternative for bicyclists; however pedestrians using the trail will still create demand for a direct connection at Bluemont Way and Library St.

Figure 3-15: Informal "goat paths" near the RTC Transit Station

iii. Fairfax County Parkway Trail Connections

The Fairfax County Parkway Trail intersects with three important facilities in the station area: Sunset Hills Rd, the W&OD Trail and New Dominion Parkway. After the implementation of the recommendations in this report, bicycle access to the Metrorail station will be provided by transferring to the W&OD Trail and then utilizing the bike lanes on Town Center Parkway and Sunset Hills Rd. The station can also be accessed directly by Sunset Hills Rd, however no dedicated facilities are recommended for this roadway west of Town Center Parkway because bicyclists from the south will be able to use the facilities recommended for Sunrise Valley Dr. New Dominion Parkway will also provide direct access to Reston Town Center via the proposed bike lanes, and a direct connection from the Trail must be provided. In addition, all trail intersections with roadway facilities must be redesigned in order to provide safer conditions for bicyclists including:

- More visible crosswalks.
- Additional warning signage.
- Changes in intersection geometry.
- Additional wayfinding.

These types of changes should be investigated for all crossings of the Fairfax County Parkway Trail in the area. Two crossings of the trail were studied in some detail as part of this study: Sunset Hills Rd (X5) and New Dominion Parkway (X6). At Sunset Hills Rd, the trail crosses what is essentially an on-ramp from Fairfax County Parkway to Sunset Hills Rd. Vehicle speeds are fairly high, visibility is low and there is no traffic control device that requires vehicles to stop making this a very dangerous crossing for bicyclists, as shown in Figure 3-16. A re-design of this ramp will be necessary in order to improve safety in addition to other treatments:

- Widen waiting area for bicycles.
- Widen curb ramps.
- Pedestrian countdown signals.
- High visibility crosswalk.
- Warning signage and flashers with automatic detection.

Figure 3-16: Fairfax County Parkway Trail crossing at Sunset Hills Rd.

The crossing of the Fairfax County Parkway Trail at New Dominion Parkway is a more traditional street crossing, as shown in Figure 3-17. Visibility is still low and very little has been done to make the trail crossing safer for bicyclists. This intersection also has the potential for some limited pedestrian activities, and some actions should be taken to ensure the safety of all users, including:

- Widen waiting area on both sides of the crossing.
- Widen curb ramps.
- Pedestrian countdown signal.
- High visibility crosswalk.
- Warning signage.

Figure 3-17: Fairfax County Parkway Trail crossing at New Dominion Pkwy

iv. Neighborhoods to Metrorail Station

The residential neighborhoods that will use the northern entrance of the Reston Parkway station to access the Metrorail system are primarily located to the north and north-east of the station. Major residential neighborhoods include Reston Town Center itself, areas north of Baron Cameron Ave and areas along North Shore Dr east of Reston Parkway. Many of these neighborhoods are within easy bicycling distance of the future station, and bicycle connections to these areas are important to provide Metrorail access to Reston residents.

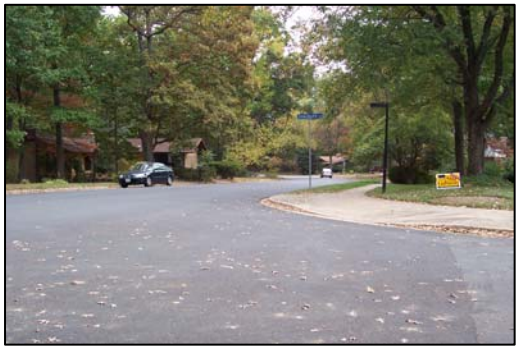


Figure 3-18: Residential streets can accommodate bicycle traffic

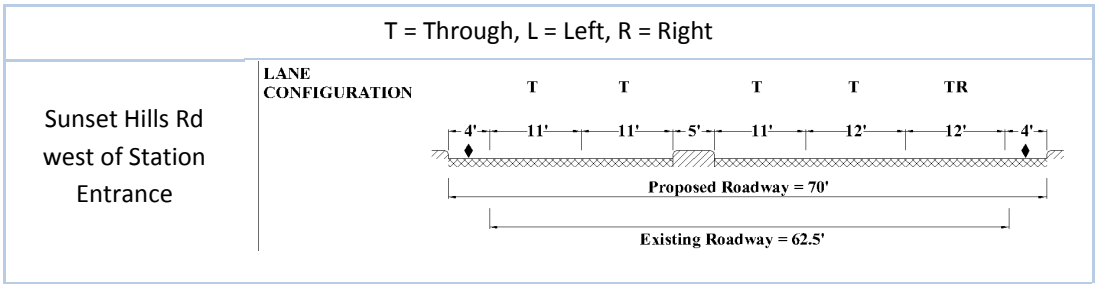
On the local neighborhood streets, bicycling is easily accommodated by the existing street network with wide streets, slow vehicle speeds and existing sidewalks and off-street trails as shown in Figure 3-18. However, it is the distance between the neighborhood streets and the station that require additional bicycle facilities as traffic volumes and speeds are significantly higher on these larger arterial and collector roadways. In Reston Town Center, traffic volumes are higher, but the layout and design of the street network which encourages low vehicle speeds and high levels of non-motorized travel also provides a good environment for bicycling without additional dedicated facilities (see Figure 3-19).

Figure 3-19: Street design in Reston Town Center accommodates bicyclists

In order to provide access to, from and around the major residential neighborhoods that are within biking distance of the station, several dedicated facilities are recommended:

- Town Center Pkwy from W&OD trail to Baron Cameron Ave (B1): Dedicated four-foot bike lanes on both sides to connect to the residential North Point neighborhood (possible extension to Stevenage Rd).
- New Dominion Pkwy from Fairfax County Pkwy & North Shore Dr (B3): Dedicated four-foot bike lanes on both sides to connect to North Shore Dr and Lake Anne neighborhoods. The connection between the trail on Fairfax County Pkwy and these lanes must be improved as well.
- Fountain Dr from Freedom Dr to Baron Cameron Ave (B4): Dedicated four-foot bike lanes on both sides to connect northern neighborhoods directly to Reston Town Center (possible extension to Stevenage Rd).

Figure 3-4 shows the recommended bicycle network for the study area, with connections to all of the major destinations. In order to include dedicated bike lanes on these facilities, it will be necessary to alter the cross-section of the roads by changing lane widths, narrowing the median strip and in some cases widening the road slightly. Based on the existing curb-to-curb pavement widths (not right-of-way widths), some analysis was done to determine what scale the necessary improvements would take at various locations throughout the study area. These typical cross-sections are shown below in Figure 3-20 and indicate that widening the roadway is only likely to be necessary at the location closest to the Metrorail station. In addition, high levels of bicycle demand in Reston Town Center suggest the need for additional bicycle storage facilities throughout the area, specifically in the core.



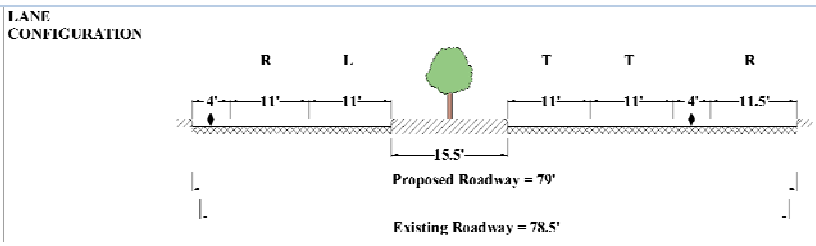
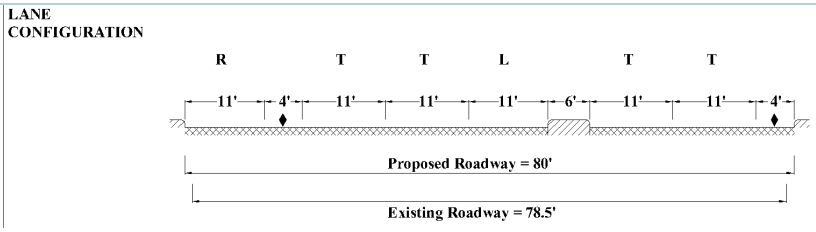
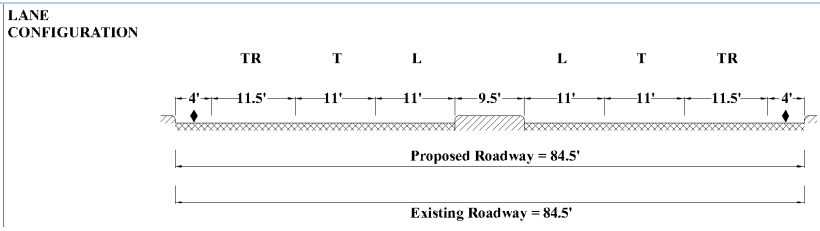
Town Center Pkwy north of Sunset Hills Rd	
Town Center Pkwy north of Bluemont Way	
New Dominion Pkwy east of Explorer St	

Figure 3-20: Potential cross-sections with bicycle lanes in Reston – North

C. Reston Parkway Station – South

The southern entrance to the Reston Parkway station is located just south of the eastbound DIAAH exit ramp at the northern end of Edmund Halley Dr. The Reston Parkway station area has a lower density of pedestrian and bicycle destinations south of the DIAAH than in the areas near Reston Town Center. The primary destinations in this quadrant are office complexes located along Sunrise Valley Dr, including the Reston International Center and the US Geological Survey Facility (USGS). Residential areas located south of Sunrise Valley Dr and USGS are also within walking or biking distance of the station area. The lower density of both office and residential destinations in this area may result in somewhat lower volumes of pedestrians than on the north side of DIAAH, but significant levels of bicyclists may be still expected. This is because residents and employees in the area must travel a longer distance to reach the station in the south than in the northern portion of the station area, which may make walking less attractive.

In the residential neighborhoods south of Sunrise Valley Dr, pedestrian and bicycle connectivity is augmented by a comprehensive network of off-street trails. These trails connect neighborhoods and provide shortcuts between Reston's many streets and cul-de-sacs, allowing for more direct access to major roadways. The recommendations for dedicated bicycle and pedestrian facilities will be focused on these major roadways, while connectivity in the individual neighborhoods will be provided by the local streets and the existing network of off-street trails. As such, these enhancements provide much needed links between the neighborhoods and commercial areas.

The major barrier to bicyclists and pedestrians accessing the Reston Parkway station from the south is Sunrise Valley Dr. Currently, there are only four marked crossings of this street between Fairfax County Parkway and Roland Clarke Pl (spaced an average of 1650 feet apart) and no sidewalks on the south side of the street. To help pedestrians and bicyclists access the station without making long detours to a marked crossing or crossing unsafely at an unmarked locations, five additional crossings are recommended for this stretch of Sunrise Valley Dr for an average distance of approximately 700 feet between marked crossings.

Several areas of office buildings (on both sides of Reston Parkway) and a major residential area will need pedestrian and bicycle access. In addition, access should be provided to the W&OD Trail and the Fairfax County Parkway Trail for bicyclists traveling to the area from more distant locations around the region.

a. Pedestrians

As shown in Figure 3-21, within a half-mile radius of the southern station entrance several destinations will need pedestrian access:

A. Office complexes west of Reston Parkway station
B. Office complexes east of the station but west of Reston Parkway
C. Development east of Reston Parkway (International Center)
D. Areas south of Sunrise Valley Dr
    1. USGS facility
    2. A residential neighborhood further south on
E. Access across the DIAAH should be provided to allow pedestrians to make use of Reston Town Center.

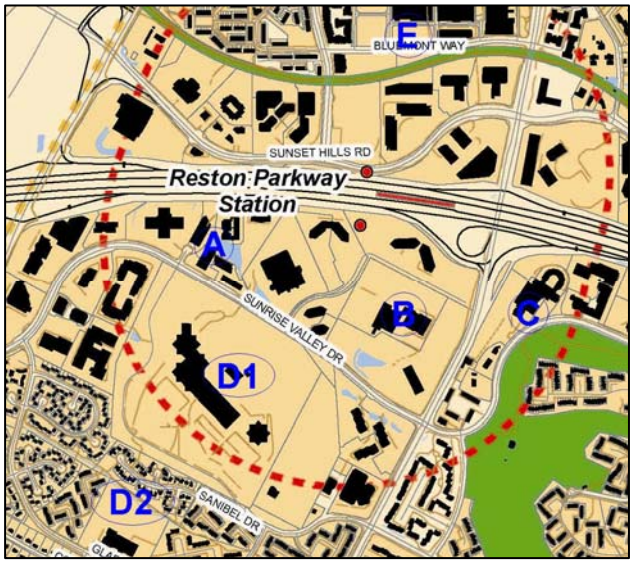


Figure 3-21: Pedestrian Destinations in Reston Pkwy - South

Table 3-7 highlights the major intersection improvements recommended for improved pedestrian safety and accessibility, while Table 3-8 highlights the necessary sidewalk improvements.

Table 3-7: Intersection Improvements for Reston Parkway - South

No	Location	Airline Distance to Station Entrance (ft)	Max. Pedestrian ISI[9]	Recommendations
I12	Sunrise Valley Dr & Mercator Dr	2,900	3.3	**North:** High visibility crosswalk, upgrade curb-ramps, pedestrian countdown signal; **West:** High visibility crosswalk, pedestrian countdown signal, pedestrian median refuge, upgrade/construct curb ramps, decrease right turn curb radius; **South:** High visibility crosswalk, construct curb-ramps, pedestrian median refuge, pedestrian countdown signal
I13	Sunrise Valley & Reston Pkwy	2,000	4.3	**North:** Channelized right turns; **West:** Re-align crosswalk; **South:** Re-align crosswalk; **East:** Re-align crosswalk, channelize right turns, decrease right turn radius; **All Approaches:** high visibility crosswalks, pedestrian countdown signals, upgrade curb-ramps
I14	Sunrise Valley & Colts Neck	2,100	2.9	**West:** Re-align stop bar, upgrade curb ramps; **North:** Upgrade 1 curb ramp; **East:** Extend median to include pedestrian refuge; **All approaches:** pedestrian countdown signals, high visibility crosswalks
I15	Sunrise Valley & Edmund Halley Dr	2,200	2.9	**North:** Upgrade curb ramps; **East:** construct/upgrade curb ramps; **West:** construct/upgrade curb ramps; **All Approaches:** High visibility crosswalk, pedestrian countdown signal, pedestrian median refuge
I16	Reston Pkwy & South Lakes	3,200	3.8	**All Approaches:** Upgrade curb-ramps, high visibility crosswalks, pedestrian countdown signals
I17	Sunrise Valley & Glade Dr	4500	3.3	**East:** Pedestrian median refuge, upgrade/ construct curb ramps; **South:** Re-align crosswalk, construct/upgrade curb ramps; **West:** Re-align crosswalk, pedestrian median refuge, upgrade curb ramps; **North:** Reduce right turn radius/ remove acceleration lane, upgrade curb ramps; **All approaches:** High visibility crosswalk, pedestrian countdown signal
I31	Reston Pkwy & Eastbound DIAAH ramps	800	3.3	**West:** High visibility crosswalk, pedestrian countdown signal, upgrade curb ramps, warning signage at unsignalized crossing, decrease right turn radius; **South:** Pedestrian median refuges, high visibility crosswalk, pedestrian countdown signal, construct curb ramps, stop bar for eastbound on ramp

Table 3-8: Sidewalk Improvements for Reston Parkway - South

	Side	Street	From	To	Recommendations
S7a	S	DIAAH	**Stage 1:** Edmund Halley Dr	**Stage 1:** International Center	**Stage 1:** Construct a shared-use path along the south side of the DIAAH (including a crossing of Reston Pkwy) 10-feet wide with 8-foot buffer, marked

[9] Pedestrian ISI (Intersection Safety Index) measures the safety of pedestrians at street crossings based on traffic control devices, number of lanes, vehicle speeds, land use and vehicular traffic levels. Ped ISI values are calculated for each approach on an intersection. Blank entries are locations where traffic levels were not available and the calculation could not be performed. The maximum Ped ISI is used to show the least safe crossing condition at each intersection.

	Side	Street	From	To	Recommendations
S7b			**Stage 2:** Fairfax County Pkwy	**Stage 2:** Wiehle Ave	**Stage 2:** As redevelopment occurs, acquire right-of-way to continue the path to provide access to office buildings
S8	N	Sunrise Valley Dr	Fairfax County Pkwy	W&OD Trail	Phased development of pedestrian and bicycle facilities (see S9 and B5) Widen existing sidewalk to and 10-foot wide shared use path to accommodate pedestrians and occasional cyclists
S9	S	Sunrise Valley Dr	Glade Dr	South Lakes Dr	Phased development of pedestrian and bicycle facilities (see S8 and B5) Construct 6-foot wide sidewalk with 4-foot buffer and associated curb ramps (to closely follow implementation of recommendation S8)
S10	E	Reston Pkwy	DIAAH access ramps (near new crossing)	South Lakes Dr	Construct sidewalk and associated curb ramps

i. Northwest Quadrant Office Buildings

Many office buildings west of the station entrance and north of Sunrise Valley Drive are within walking distance of the new Metrorail station (labeled (A) in Figure 3-21). Approximately 100 pedestrian trips each day are projected for these complexes. As an example, the main office building on Mercator Dr is about 2000 feet on a straight line from the station entrance. Two potential paths could be used to access this building and the other nearby offices:

1. A southern route approximately 3200-feet long, primarily along Sunrise Valley Dr and Edmund Halley Dr
2. A northern route approximately 2100-feet long requiring a new path that parallels the DIAAH

1) Southern Route

The southern pedestrian route follows existing streets including Edmund Halley Dr and Sunrise Valley Dr and requires pedestrians to walk approximately 3200 feet, 160% of the airline distance. Because this route is so much longer than a straight-line route would be, it is unlikely that pedestrians will use it. Those pedestrians who still wish to access the buildings in this area will likely walk through the parking lots and landscaping to make their walk shorter. Providing a more direct, formalized route would encourage more pedestrians to use the Metrorail station to access these buildings.

Plans for the station developed as part of the rail projects' FEIS and the Record of Decision (ROD) include the extension and expansion of Edmund Halley Dr to include pedestrian and bicycle facilities from the station entrance south to Sunrise Valley Dr (S6). Small streets (like Mercator Dr) and private office driveways and access roads should also have sidewalks to provide direct access to the buildings,

although these facilities may need to be provided by the individual parcel owners. Updated curb ramps and improved, high-visibility crosswalks at all roadway and driveway intersections along the north side of Sunrise Valley Dr will be required for this route (approximately two new crosswalks and six upgraded curb-ramps). Additionally, a pedestrian countdown signal should be installed on the northern approach at the intersection of Sunrise Valley Dr and Mercator Dr (I12).

2) Northern Route

A more direct route to access these same office buildings would require the construction of a 10-foot wide shared use path parallel to the DIAAH from the station entrance as far west as Fairfax County Parkway (S7b). This path (just 2100-feet long to the offices on Mercator Dr) would provide access to the rear sides of most of the office buildings in this area. Connections from the path to the buildings themselves would be necessary, and a significant amount of right-of-way would need to be acquired. No street crossings would be necessary due to the location of the path; however safety measures would be necessary for pedestrians and bicyclists very close to a major highway facility. Despite the projected cost (in both construction and right-of-way) of this improvement, this path is recommended as the preferred option because of the drastic improvement in travel time provided to pedestrians and bicyclists (over 5 minutes saved in the example used here.)

ii. Northeast Quadrant Office Buildings

Figure 3-22: Parking lots near the southern entrance to the Reston Parkway station.

Access to the office buildings closest to the station entrance (those between Edmund Halley Dr and Reston Parkway) requires pedestrians to walk through vast expanses of parking lots as shown in Figure 3-22. A dedicated pedestrian walkway through this flat and uninteresting scenery would improve pedestrian safety by creating one consolidated and highly visible path for employees in the area to use. Where pedestrian flows would intersect internal roadways and driveways with high levels of traffic, signage - including warnings and stop signs - may be necessary to provide safe passage. In addition, pedestrian access between parcels must be provided where it is currently impeded by landscaped barriers. Direct access to the southern parcels in this area would eliminate the need for long detours around landscaped obstacles and treks through trees or shrubs.

iii. East of Reston Parkway

To the East of Reston Parkway, but still within ½ mile of the station, are several office buildings, restaurants, stores and a hotel clustered together at the Reston International Center, approximately 2000 feet from the station entrance (airline distance). These parcels are owned by JBG and a large-scale

redevelopment is currently planned for this area. Additionally, substantial residential development exists in the area south o Sunrise Valley Dr and east of Colt's Neck Rd. Two primary potential paths exist that are drastically different in length and infrastructure requirements:

1. An approximately 5400-foot long southern route along Sunrise Valley Dr
2. An approximately 2100-foot long northern route requiring new paths and a new crossing of Reston Parkway

1) Southern Route

This route follows existing streets on Edmund Halley Dr and Sunrise Valley Dr and is over one mile long (approximately 5400 feet) as shown in Figure 3-23 and would take the average pedestrian approximately 27-minutes. Sidewalks will be necessary on both sides of Sunrise Valley Dr including new construction on the south side of the street (S9). Three major intersections will require infrastructure actions in order to improve pedestrian safety and accessibility along this route, including:

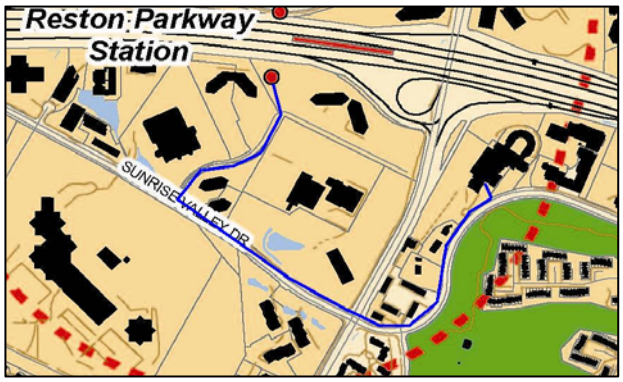


Figure 3-23: Southern Route to Reston International Center

- Sunrise Valley Dr & Edmund Halley Dr (I15): High visibility crosswalks, pedestrian countdown signals and pedestrian median refuges should be added to all approaches. In addition, ADA-compliant curb ramps will need to be constructed at all four corners of the intersection.
- Sunrise Valley Dr & Reston Pkwy (I13): has been noted as one of the most unsafe intersections in the study area. High visibility crosswalks, pedestrian countdown signals and upgraded curb-ramps are necessary on all approaches at this intersection. Channelized right turns with a pedestrian island should be constructed for the east and north approaches. All of the existing crosswalks should be re-aligned to provide shorter crossing distances for pedestrians, and a crosswalk needs to be added on the northern approach. In addition, the radius of the right turn lane on the eastern approach needs to be decreased substantially by extending the curb.
- Sunrise Valley Dr & Colts Neck Rd (I14): pedestrian countdown signals and high visibility crosswalks are necessary for all approaches of this intersection and the curb-ramps should be upgraded where necessary. With the addition of a crosswalk on the western approach, the stop bar should be re-aligned to protect crossing pedestrians. The median on the eastern approach should be extended to include a pedestrian refuge.

In addition, a small section of the sidewalk on the north side of Sunrise Valley Dr between Reston Parkway and Colt's Neck Rd (which is currently incomplete) will need to be completed (S8).

2) Northern Route

A more direct route could be provided by constructing a pedestrian path alongside the DIAAH ramps to and across Reston Parkway. A 10-foot shared use path parallel to the access ramps with an 8-foot buffer is recommended for this route (S7a). Construction of a new crossing of Reston Parkway would be required, and the most likely location is near the entrance to the DIAAH (I31). This route would shorten the walking distance to about 1900 feet and decrease the walking time by approximately 17 minutes as

compared with the southern route. This facility is already included on the Fairfax County Trails Plan[10]. Several obstacles would need to be overcome in order to construct a crossing at this location including:

1. Heavy traffic volumes moving in many directions
2. Elevation differences between Reston Parkway and the surrounding parcels
3. New right in/right out lane under construction on the west side of Reston Pkwy in this immediate vicinity
4. Right-of-way acquisition

The on/off ramps for the DIAAH are located in this area, which requires complicated signal phasing to accommodate high traffic volumes. Implementing a pedestrian crossing at this location would require a pedestrian signal phase as well, which could substantially increase the total cycle time and cause additional delays and backups for drivers. In order to minimize these effects, a two-stage crossing is recommended at this location that only requires traffic to be stopped in one direction at a time. The elevation difference between Reston Parkway and the surrounding parcels would require significant stairs and ramps to adhere to ADA design guidelines while providing access to an at-grade crossing of Reston Parkway. The infrastructure improvements at this intersection (I31) include:

- Western approach:
  - Eastbound on-ramp: high visibility crosswalk, warning signage, and upgraded curb ramps should be installed.
  - Eastbound off-ramp: pedestrian countdown signal and upgraded curb ramps should be installed. The right turn radius should be significantly decreased in order to slow vehicle speeds and decrease the crossing distance for pedestrians.
- Southern approach: A crossing of Reston Parkway will require three high visibility crosswalks, two pedestrian median refuges and a two-stage pedestrian countdown signal that stops traffic on northbound Reston Parkway and the eastbound on-ramp.

There is some potential, and also some community support for a grade separated crossing at this location. Previous experience and significant research have shown that pedestrians are unlikely to use grade separated crossings unless they do not have to go out of there way at all; there are no significant grade changes; and there are activities at the crossing level on both sides of the crossing. The development of a grade separated crossing at this location, whether a bridge or a tunnel, should meet all of the appropriate requirements before such a facility is designed. Further discussion of this crossing and potential partnering opportunities with local developers can be found in Appendix G.

Additionally, sidewalk facilities in the area of the ramps need to be improved. Safety improvements, including buffers, guardrails, warning signage and pavement markings should be considered carefully in the entire area. Sidewalks should be constructed on the east side of Reston Pkwy from Sunrise Valley Dr to the new crossing at the DIAAH ramps (S10), however they currently will not be continued across the DIAAH. Therefore all pedestrians attempting to cross the DIAAH on Reston Parkway will have to walk on the western side of the street until such time as the Reston Parkway bridge is reconstructed to include

[10] *Countywide Trails Map*, Fairfax County Department of Planning and Zoning. Approved July, 2002. <www.fairfaxcounty.gov/dpz/comprehensiveplan/maps/trailsplanmap.pdf>

pedestrian facilities on both sides. Clear and prominent signage on the eastern sidewalk facility should be included that indicates the need for northbound pedestrians to cross Reston Parkway at this intersection so that no one continues north on the east side where no sidewalk exists.

iv. Southern Office and Residential

Several office buildings south of Sunrise Valley Dr are within walking distance of the station entrance, including the US Geological Survey (USGS) facility. Beyond the office buildings, south of South Lakes Dr, are residential communities that may produce pedestrian trips if safe, convenient facilities are available.

1) Office Buildings

Accessing the office buildings in this area requires paths on both sides of Sunrise Valley Dr, including the construction of new sidewalks on the south side of the street (S9) and the widening of the sidewalk to a 10-foot wide multi-use trail on the north side (S8). In addition, crossing opportunities should be provided at multiple locations including Edmund Halley Dr (I15), Mercator Dr (I12) and near any major driveways. Sidewalks will also be necessary along USGS Drive and other driveways all the way to the building entrances. These pathways on private property will most likely have to be provided by the property owners.

Figure 3-24: Two alternative paths to the USGS facility

A shorter alternative (the blue dashed line in Figure 3-24) would be to provide pedestrian pathways connecting on a more direct route from Sunrise Valley Dr to the USGS buildings. Also necessary would be the crossing improvements at Sunrise Valley & Edmund Halley Dr (I15) including crosswalks, pedestrian countdown signals, ADA-compliant curb ramps and median refuge islands previously discussed. Walking distance to the USGS facility could be decreased by over 500 feet by the provision of this type of direct path, shortening walking time by more than two minutes. Safety and security on these types of off-street paths through non-populated areas should be a primary concern, and consistent lighting and clear sightlines should be incorporated into any design. Because of these concerns and the cost of right-of-way acquisition, this path may not be feasible and the alternate path should be improved.

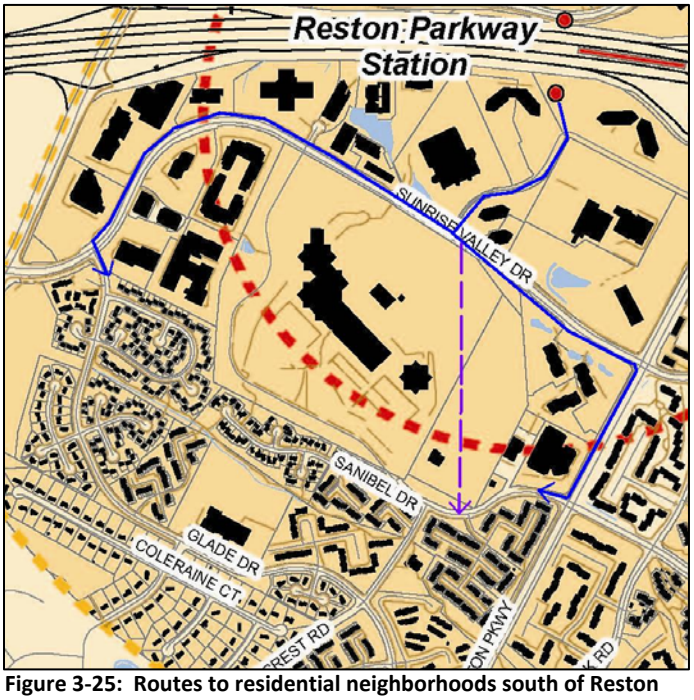


Figure 3-25: Routes to residential neighborhoods south of Reston Parkway station

2) Residential Neighborhoods

Three primary routes could provide access the residential neighborhoods south of the USGS facility. Two paths would utilize the existing street network, while one would require the

construction of a new off-street path through the grounds of the USGS facility. Reston Parkway provides access to the eastern portion of the neighborhoods, while Sunrise Valley Dr provides access to neighborhoods to the west (see Figure 3-25). Pedestrian improvements along these routes would be primarily on local residential streets, and will not be addressed specifically in this report. However, additional improvements on the major streets would be necessary.

The eastern route along Reston Parkway is approximately 4800 feet long to access the closest residential area and would require a 24-minute walk[11]. It would take longer to access homes further from Reston Parkway. The following improvements are required along this route:

- Reston Pkwy from Sunrise Valley Dr to South Lakes Dr (S10): Construct sidewalk on the east side of Reston Pkwy.
- All of the intersection and crossing improvements previously discussed for the intersection of Sunrise Valley Dr & Reston Pkwy (I13).
- Reston Pkwy & South Lakes Dr (I16): Upgrade curb-ramps and install high visibility crosswalks and pedestrian countdown signals at all approaches.
- Construct sidewalk on the south side of Sunrise Valley Dr between Glade Dr and Reston Pkwy (S9).

The western route along Sunrise Valley Dr is about 5500 feet long and to access the closest residential neighborhood on Glade Dr and would require a walk of at least 28 minutes for residents. This route requires some of the same infrastructure improvements, but requires additional improvements at Sunrise Valley Dr & Glade Dr (I17):

- Install high visibility crosswalks and pedestrian countdown signals and upgrade/construct curb ramps on all approaches.
- Pedestrian median refuges should be constructed on both the eastern and western approaches.
- The southern and western crosswalks should be re-aligned to shorten the crossing distance for pedestrians.
- On the northern approach, the right turn radius should be substantially decreased by removing the existing acceleration lane.

Neither of these paths is likely to experience very heavy volumes, however the facilities should be provided to encourage pedestrian activity and ensure the safety of pedestrians and bicyclists.

Accessing the residential neighborhoods south of the USGS facility directly would require the construction of a pedestrian path from at least Sunrise Valley Dr to South Lakes Dr (the dashed purple line in Figure 3-25**.** This path requires only one street crossing at Sunrise Valley Dr and Edmund Halley Dr (I15) and the construction of sidewalks along all neighborhood streets wherever they are currently absent. This direct path is approximately 3900 feet long to the closest neighborhoods is substantially shorter than paths utilizing the existing street network. However, it would involve significant right-of-way acquisition and may not be well used due to the low (or non-existent) level of activity that occurs along the path. Security and safety are always a concern on these types of off-street pedestrian paths.

v. Southern Access to Reston Town Center

The DIAAH acts as a major barrier between the north and south sides of Reston today, with only four existing crossing locations in the two-mile stretch between Fairfax County Parkway and Hunter Mill Rd.

[11] Estimates of walking time are based on 3.5 ft/sec walking speed and an additional 1 minute delay at each street crossing.

Access across this highway, especially for pedestrians and bicyclists is essential to provide a continuous network of pathways. Especially important is access to Reston Town Center, which should be accessible on foot to residents and employees south of the DIAAH. Two potential routes for this connection exist in the Reston Parkway Station area:

- Reston Parkway: Sidewalks only on west side of the street across the DIAAH.
- Metro Station: during service hours, the station walkways will serve as a path across the DIAAH without requiring fare payment.

The Reston Parkway path includes sidewalks only on the West side of the street, with no possibility of expansion on the east side without the very costly reconstruction of the existing bridge across the DIAAH. (The bridge is planned for eventual reconstruction, and should be constructed to include pedestrian and bicycle facilities on both sides.) The improvements previously discussed for the intersection of Reston Parkway and the access ramps (I31) should be implemented including high visibility crosswalks, warning signage and ADA-compliant curb ramps.

During Metrorail's service hours (between 19 and 22 hours per day) both entrances to the Reston Parkway station will be open. A mezzanine area within the station will connect the bridges from either station entrance without requiring payment of a fare. This connection allows pedestrians and bicyclists to cross the DIAAH on a safe, well-lit and monitored path during most hours of the day. This crossing opportunity provided by the rail project should not be overlooked, as the construction of an additional grade-separated crossing of the DIAAH in the station area would cost millions of dollars and not provide significant increases in connectivity. Additional discussion of pedestrian and bicycle crossings of the DIAAH can be found in Appendix G.

b. Bicycle Access

Bicycles are a vital access mode for people who live beyond walking distance from the Metro station, which is the case for much of the residential area south of the proposed Reston Parkway station. Additional bicyclists are expected to use the existing W&OD trail and the Fairfax County Parkway trail to access the Metrorail system. Dedicated facilities in the form of off-street paths and on-street bike lanes can provide access to homes that would otherwise have to use private cars for their travel. Bicycle access should be provided from four major areas to the Metrorail station: the W&OD trail, the Fairfax County Parkway Trail, the office buildings and the residential neighborhoods. Table 3-9 highlights the major bicycle improvements recommended for this quadrant.

Table 3-9: Bicycle Improvements for Reston Parkway - South

	Side	Street	From	To	Recommendations
B5	Both	Sunrise Valley Dr	W&OD Trail	Fairfax County Pkwy	Phased development of pedestrian and bicycle facilities (see S8 and S9) Construct 4-foot bike lanes (to be complemented in conjunction with recommendation S9)
B6	both	Edmund Halley Dr	Station Entrance	Sunrise Valley	Construct 10-foot shared use path on one side as part of the construction of the station

i. Southern Access to Trails

As the primary bicycle facility in the Reston area, bicyclists should be able to access the W&OD trail from the areas south of the DIAAH. Several opportunities to cross this barrier exist in the immediate station vicinity, including:

- Fairfax County Parkway: existing off-street bike path on the east side on the street.
- Reston Parkway: no dedicated facility, narrow sidewalk on west side of street.
- Metro Station: during operating hours, bicyclists would also be able to cross the DIAAH through the Metro Station without paying a fare.

Additionally, for eastbound bikers, no crossing of the DIAAH would be necessary as access to the W&OD Trail via an at-grade crossing is available on Sunrise Valley Dr east of Cross School Rd. Currently, sidewalk exists only on the north side of Sunrise Valley Dr. To encourage bicycle access, a dedicated bicycle facility is necessary from the W&OD trail at least to Edmund Halley Dr, as shown in Figure 3-26. Based on the demand for pedestrian and bicycle facilities along this route, a phased implementation of facilities is recommended for this route. The first phase requires the widening of the existing sidewalk on the north side of Sunrise Valley Dr to a 10-foot wide shared use path to accommodate pedestrians and occasional bicyclists (S8). The existing sidewalk is paved asphalt and is wider than five feet in some sections; therefore little additional right of way may be required for this path. The second phase of this project (to be completed shortly after the first phase) would be to construct a 6-foot wide sidewalk on the south side of Sunrise Valley (S9) and then on-street bike lanes (B5) on both sides of the street.

Figure 3-26: Proposed location for a dedicated bicycle facility on Sunrise Valley Dr

Some initial analysis of the existing design of Sunrise Valley Dr has been conducted as shown in Figure 3-27.

T = Through, L = Left, R = Right	
Sunrise Valley Dr east of Glade Dr	LANE CONFIGURATION T T L T T R 4' 11' 11' 6' 11' 11' 11' 4' 11' Proposed Roadway = 80' Existing Roadway = 75'

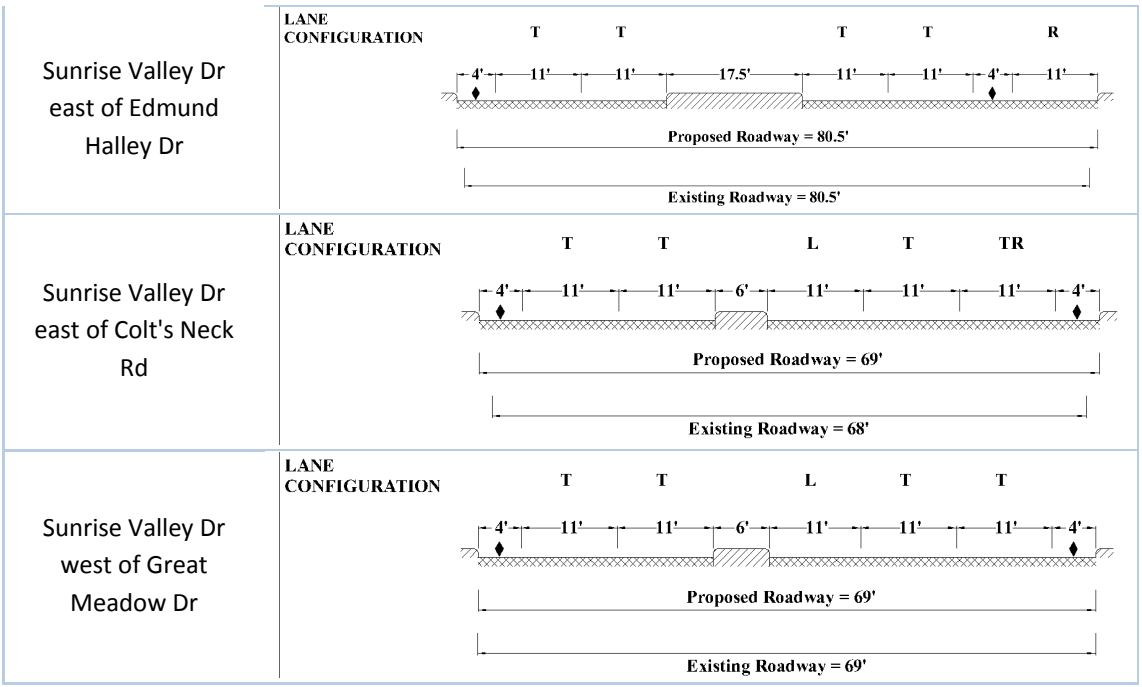


Figure 3-27: Potential Cross Sections of Sunrise Valley Dr with Bicycle Lanes

This analysis indicates that some portions of this proposal could be conducted with minor (or no) modifications to the cross-section of the street. Figure 3-28 shows that along the whole section of Sunrise Valley Dr under consideration only minor modifications to the street width would be necessary except for a few locations (primarily near major intersections) where significant widening of the pavement (more than two feet) would be necessary. In addition to providing access to the W&OD trail for residents on the south side of Reston, these facilities would also provide and east-west bicycle link across the south side of the study area and connect the Fairfax County Parkway Trail to the Reston Parkway Metrorail station. A direct connection from this trail to the bike lanes and shared use path on Sunrise Valley Dr should be provided as part of this improvement.

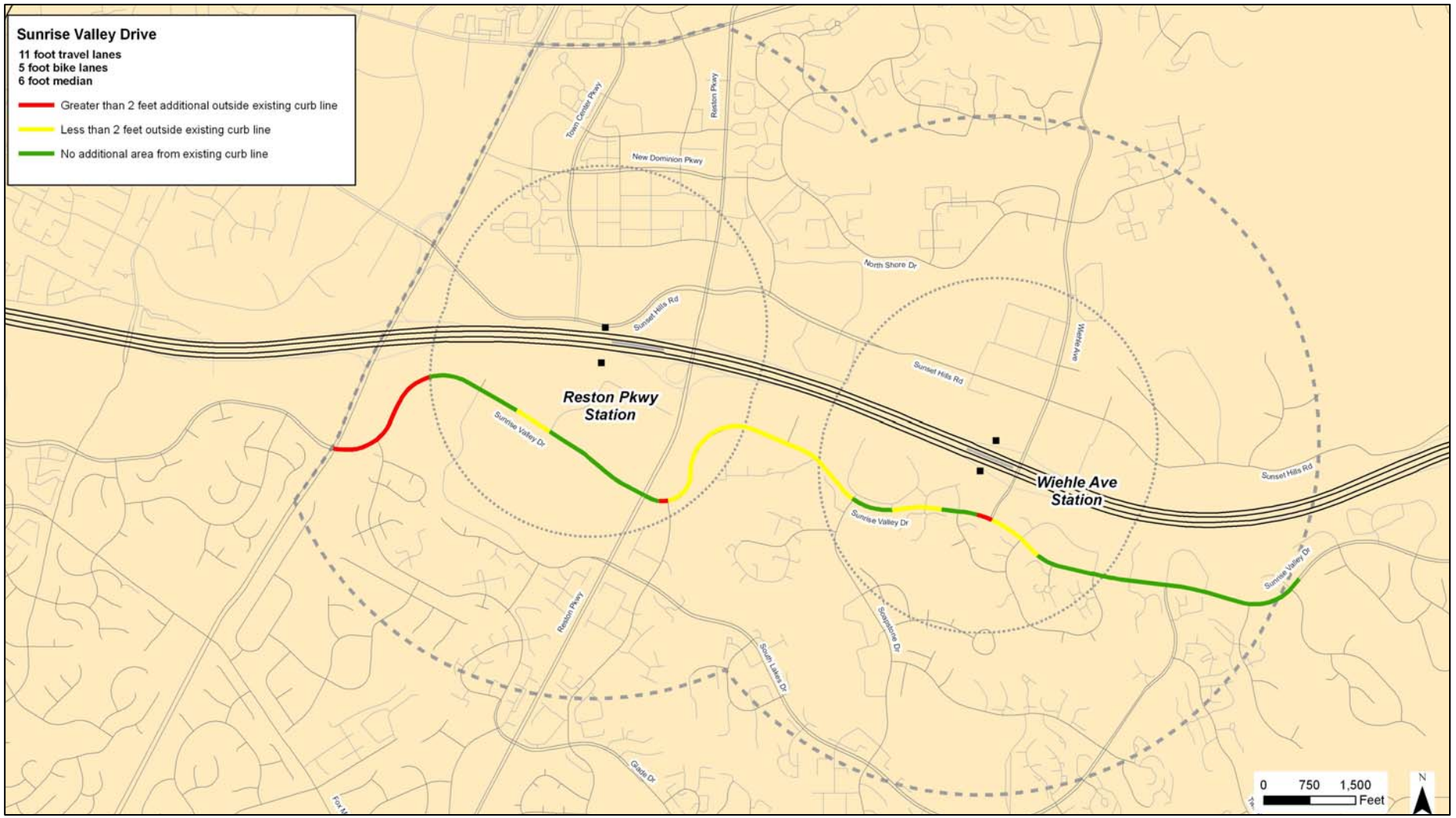
ii. Metro Station to Office Buildings

The office complexes in this area are primarily located along Sunrise Valley Dr. Bicycle facilities will be required on both Sunrise Valley Dr and Edmund Halley Dr. A shared use path on one side of Edmund Halley Dr is already planned as part of the mitigation efforts described in the FEIS and ROD. The shared use path and bike lanes described in the previous section (S8, S9 and B5) would provide sufficient access to all of the office complexes in the area.

iii. Residential Neighborhoods

Bicycle access to the southern residential neighborhoods is available using the same routes as for pedestrians: Reston Parkway or Sunrise Valley Dr. On Reston Parkway, no dedicated bicycle facility exists and high levels of vehicle traffic and constrained geometry make construction of a dedicated facility very difficult. However, bicyclists can use the sidewalks on both sides of Reston Parkway. On Sunrise Valley Dr, extending the recommended bike lanes and shared use paths (S8, S9 and B5) to Fairfax County Parkway would provide the necessary access.

Figure 3-28: Street width required to include bike lanes on Sunrise Valley Dr



D. Wiehle Avenue Station – North

The area north of the Wiehle Avenue Metrorail station is populated mainly by office buildings, most of which are surrounded by parking lots. The major existing origins/destinations in this area include Isaac Newton Square, Plaza America, some residential neighborhoods and the W&OD Trail. The buildings in Isaac Newton Square, just north of Sunset Hills Rd, share a common parking lot and access points and have high potential for redevelopment to higher density, mixed use development. To the north, within one mile of the station are the residential neighborhoods of Tall Oaks and Lake Anne. To the west, the Plaza America shopping center is the biggest retail draw in the area with substantial retail and office space. The W&OD trail also travels through the station area, with several at-grade crossings very close to the station entrance.

a. Pedestrians

The major pedestrian destinations in this area will be Isaac Newtown Square and Plaza America as shown in Figure 3-29.

A. Isaac Newton Square development
B. Plaza America
C. Office complexes east of Wiehle Avenue

In addition, the new mixed-use development that is proposed for the existing Park-and-Ride lot will generate many pedestrian trips and the internal pathways in this development must be considered during the design process. Many other office buildings are located within a short walk of the Metro Station entrance which may also be candidates for future redevelopment, and will also require pedestrian access regardless of if they are redeveloped or not. Plaza America, the major retail draw in the area is also a potential pedestrian destination as both employees and shoppers might use Metro to access this retail center. Individual office buildings located in various locations within ½ mile of the station entrance should also be accessible to pedestrians. Table 3-10 highlights the major intersection improvements recommended for this quadrant and Table 3-11 highlights major sidewalk improvements.

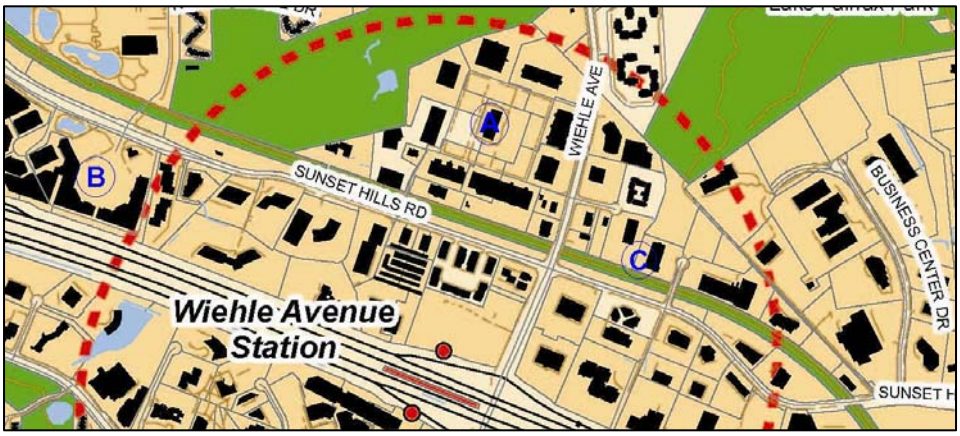


Figure 3-29: Pedestrian destinations in Wiehle Avenue - North

Table 3-10: Intersection Improvements for Wiehle Ave - North

No	Location	Airline Distance to Station Entrance (ft)	Max. Pedestrian ISI[12]	Recommendations
I18	Wiehle Ave & Station Entrance	500	4.4	**North:** Extend median to include pedestrian refuge; **South:** Extend median as much as possible, wide curb lanes to accommodate bikes; **All approaches:** Upgrade curb-ramps, pedestrian countdown signals, high visibility crosswalk
I19	Wiehle Ave & Isaac Newton Sq N	2,300	5.0	**South:** Potential infill of striped lane area; **East:** Upgrade curb ramps, high visibility crosswalk; **North:** Channelize right turns, median pedestrian refuge, high visibility crosswalk, pedestrian warning signs, pedestrian knockdown signs; **West:** High visibility crosswalk, upgrade curb ramp
I20	Wiehle Ave & Isaac Newton Sq S	1,600	3.0	**South:** pedestrian median refuge; **All approaches:** upgrade curb ramps, high visibility crosswalks, pedestrian countdown signals
I21	Wiehle Ave & Sunset Hills Rd	1,000	4.0	**North:** Decrease right turn radius; extend median to include pedestrian refuge; **East:** Raised median; **South:** Decrease right turn radius; **West:** Channelize right turns, decrease right turn radius; **All Approaches:** Upgraded curb ramps, re-align crosswalks, high visibility crosswalks, pedestrian countdown signals
I22	Sunset Hills Rd & Isaac Newton Sq W	1,300	2.6	**East:** Upgrade curb ramps, decrease right turn radius; **North:** Decrease right turn radius, upgrade/construct curb ramps; **West:** Construct curb ramps; **South:** Construct/upgrade curb ramps; **All Approaches:** High visibility crosswalks, pedestrian countdown signals
I23	Sunset Hills Rd & Plaza America	3,300	4.0	**East:** Re-align crosswalk, high visibility crosswalk, pedestrian countdown signal, extend median to include pedestrian refuge; **North:** High visibility crosswalk, pedestrian countdown signal; **All Approaches:** upgraded curb ramps
I32	Wiehle Ave & Westbound DIAAH ramps	500	4.7	**West:** High visibility crosswalk, pedestrian countdown signal, upgrade curb ramps

Table 3-11: Sidewalk Improvements for Wiehle Ave - North

	Side	Street	From	To	Recommendations
S3	N	Sunset Hills	Reston Pkwy	Business Center Dr	Construct 6’ sidewalk with 4’ buffer and associated curb ramps
S11	Both	Isaac Newton Sq W	Station Entrance	Isaac Newton Sq S	Construct 6’ sidewalk with 4’ buffer with access to Isaac Newton Sq and W&OD trail
S13	Both	Isaac Newton Sq S	Wiehle Ave	Isaac Newton Sq W	Construct 6’ sidewalk (in conjunction with redevelopment of Isaac Newton Sq if possible) and 4’ buffer
S14	New	Inter-parcel Connection	Roger Bacon Dr	Business Center Dr	Construct 6’ wide sidewalks with 4’ buffer along with new roadway construction

[12] Pedestrian ISI (Intersection Safety Index) measures the safety of pedestrians at street crossings based on traffic control devices, number of lanes, vehicle speeds, land use and vehicular traffic levels. Ped ISI values are calculated for each approach on an intersection. Blank entries are locations where traffic levels were not available and the calculation could not be performed. The maximum Ped ISI is used to show the least safe crossing condition at each intersection.

i. Metro Station to Isaac Newton Square

Isaac Newton Square, located only 1900 feet north of the station entrance north of the W&OD Trail and west of Wiehle Ave, is the largest concentration of offices and associated services in the immediate station vicinity. More than 500 pedestrian trips are expected to access this development on a daily basis in 2030. Two primary potential pedestrian routes exist to reach this area: an eastern route along Wiehle Avenue or a western route along Isaac Newton Sq W.

Figure 3-30: Eastern route to Isaac Newton Square

1) Eastern Route (Wiehle Ave)

This route requires pedestrians to walk north on Wiehle Ave and then onto Isaac Newton Sq S or N to access the office buildings as shown in Figure 3-30. At approximately 3000-feet long, it requires a walk of approximately 16 minutes[13] for the average pedestrian and is projected to be the path for approximately 125 pedestrians each day. The first element of this route (and a key element in providing pedestrian access to the whole station area) is the development of a separated pedestrian path from the station entrance to Wiehle Avenue that provides protection from the high levels of automobile and bus traffic that are expected at the station. In addition, six-foot wide sidewalks along both sides of Isaac Newton Sq S will be necessary (S13), which may need to be provided by the landowner as redevelopment occurs or in conjunction with the reconstruction of Isaac Newton Square S/ Roger Bacon Drive recommended in Chapter 2 in order to avoid the need for right-of-way acquisition. Other intersection improvements will also be necessary at the following locations:

- Wiehle Ave & Station Entrance (I18): Upgrade all curb ramps and install pedestrian countdown signals and high visibility crosswalks on all approaches. The median on the northern approach should be extended into the crosswalk to create a pedestrian refuge. If possible, the right-hand lanes on Wiehle Ave should be designed as wide curb lanes to accommodate bikes.
- Wiehle Ave & Sunset Hills Rd (I21): The curb ramps should be upgraded, the crosswalks should be re-aligned and replaced with high visibility crosswalks and pedestrian countdown signals should be installed on all approaches. The right turn radii should be decreased on the northern, southern and western approaches. The median on the northern approach should be extended into the crosswalk to include a pedestrian refuge. On the eastern approach, the paved median should be raised to provide a potential safe place for crossing pedestrians to wait. Eastbound right turns should be channelized according to the design presented at the beginning of this report.
- Wiehle Ave & Isaac Newton Sq S (I20): upgrade curb ramps and install high visibility crosswalks and pedestrian countdown signals on all approaches. Additionally, the median on the southern approach should be extended into the crosswalk to create a pedestrian refuge.

[13] Estimates of walking time are based on 3.5 ft/sec walking speed and an additional 1 minute delay at each street crossing.

- Wiehle Ave & Isaac Newton Sq N (I19): To shorten the crossing distance for pedestrians, the curb area should be extended to fill in the striped lane area on the southern approach. The curb ramps should be upgraded and a high visibility crosswalk should be installed on the eastern approach. Southbound right turns should be channelized according to the design presented at the beginning of this report. Also on the northern approach, a high visibility crosswalk and pedestrian median refuge should be constructed with pedestrian warning and knockdown signage. Upgraded curb ramps and a high visibility crosswalk should be installed on the western approach.

2) Western Route

The western route is slightly more direct (especially to the western buildings) and is only about 2500 feet long, requiring a walk of approximately 12 minutes for the average pedestrian. This route requires the construction of a direct pedestrian connection between the station entrance and Sunset Hills Rd as shown in Figure 3-31. Along with construction of the station, the private driveway south of Sunset Hills Rd and opposite Isaac Newton Sq W is scheduled to be expanded and improved to accommodate additional traffic including bikes, pedestrians and buses. Six-foot wide sidewalks (at a minimum) should be included on both sides of this new facility. This connection requires pedestrians to cross Sunset Hills Rd and the W&OD trail along Isaac Newton Sq W. Other infrastructure improvements that would be required include:

- 6'-wide sidewalks with 4' buffer along the north side of Sunset Hills Rd from at least Wiehle Ave to Isaac Newton Sq W (S3).
- Sunset Hills Rd & Isaac Newton Sq W (I22): High visibility crosswalks and pedestrian countdown signals should be installed on all approaches, in addition to upgraded or newly constructed ADA-compliant curb ramps. Decrease the right turn radius on both the eastern and northern approaches.
- Isaac Newton Sq W (S11): Construct 6'-wide sidewalks on the both sides of the roadway from at least Sunset Hills Rd to Isaac Newton Sq S. The street is currently a privately owned street that should be brought up to VDOT standards and accepted into the public street system including sidewalks, possibly during redevelopment of the Isaac Newton Sq development as described in Chapter 2. The addition of sidewalks will also provide increased sight distance and visibility at the W&OD Trail crossing (X4).

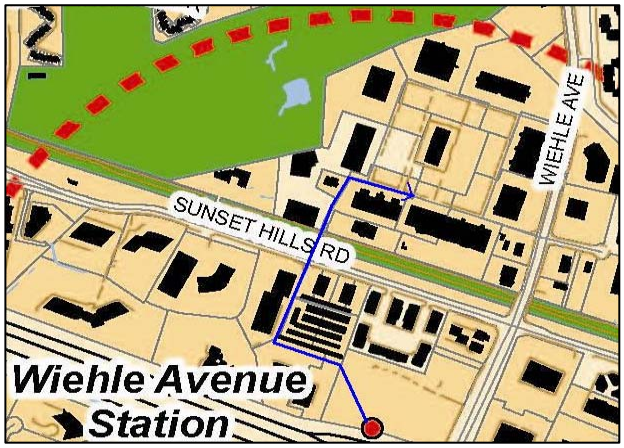


Figure 3-31: Western route to Isaac Newton Square

ii. Metro Station to Plaza America

Plaza America is distinctly oriented toward Sunset Hills Rd, which necessitates pedestrian access from Sunset Hills as shown in Figure 3-32. Up to 200 pedestrians may utilize this path each day. A path paralleling the DIAAH south of the shopping center would not provide appropriate access and should not be considered for reasons already discussed. Necessary infrastructure improvements along the Sunset Hills Rd route include:

- 6'-wide sidewalks along the north side of Sunset Hills Rd from at least Wiehle Ave to Plaza America (S3). See Figure 3-33.
- Sunset Hills Rd & Plaza America Entrance (I23): All curb ramps at the intersection should be upgraded to meet ADA design standards. The median on the eastern approach should be extended into a re-aligned high visibility crosswalk in order to provide a pedestrian refuge to shorten the crossing distance for pedestrians. Pedestrian countdown signals should be installed across the northern and eastern approaches. A high visibility crosswalk is also recommended for the northern approach. Crossings should be discouraged on the western approach.

Figure 3-32: Pedestrian route to Plaza America

Figure 3-33: Missing sidewalk along the north side of Sunset Hills Rd.

The individual office buildings located just south of Sunset Hills Rd and the Fannie Mae facility at Sunset Hills Rd and American Dream Way can be served by these same facilities, with the addition of sidewalks along at least one side of the minor streets and private driveways which access the buildings.

iii. Eastern Office Buildings

In 2030 over 800 pedestrians are expected to access the Metrorail station from the office buildings to the east of Wiehle Ave each day. Access is provided primarily by Sunset Hills Rd; however more direct connections are possible. Figure 2-21 in the previous chapter illustrates potential roadway extensions that would enhance the street grid in the area. Pedestrian facilities should be constructed in conjunction with each of these roadway projects. Development of inter-parcel pedestrian connections between the office buildings from this driveway would provide the most direct, shortest and cheapest connections to the office buildings south of the W&OD Trail, as shown in Figure 3-34.

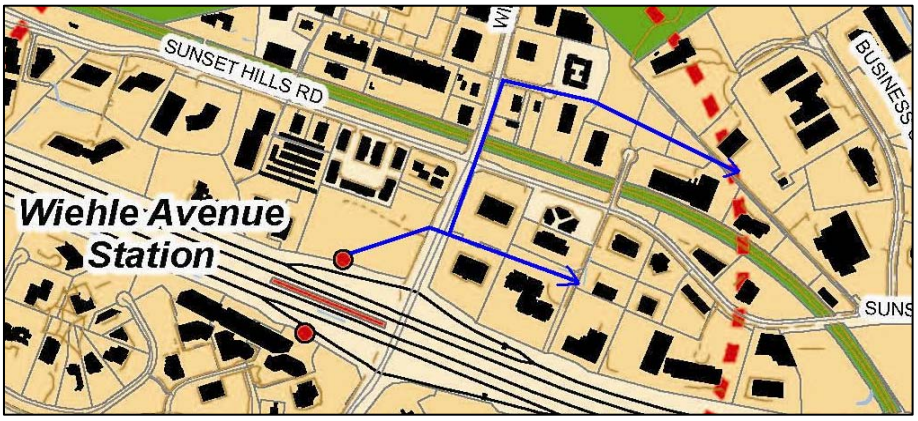


Figure 3-34: Recommended Inter-parcel pedestrian connections in Wiehle Ave - North

iv. Access around the Station Area

Access around the station area in this quadrant will be provided primarily by the improvements that have already been detailed in this section. The second major source of pedestrian connections will have to be private landowners building sidewalks, paths, and inter-parcel connectors along private roads, driveways and parking lots as benefits for their tenants who desire pedestrian access to the Metrorail system. Redevelopment will provide the county with the opportunity to ensure that these pedestrian elements are built in the future. The development of new roadways which include pedestrian facilities which connect minor streets will help to create a more complete street grid and allow for more direct and therefore shorter, pedestrian travel throughout the station area.

An additional element needed to ensure full pedestrian connectivity in this quadrant is access from the destinations in the northern half of the station area to those destinations south of the DIAAH. Access across this barrier will be available at three locations:

- Wiehle Ave: existing sidewalks on the west side of the street.
- Metrorail Station: during hours of operation, pedestrians can use the Metro Station walkways to cross the DIAAH without paying a fare.
- W&OD Trail: Limited number of access points makes using this path only convenient for pedestrians traveling to/from locations directly adjacent to an access point. Unlit at night.

The only one of these facilities available and adequately lit at all times is Wiehle Ave. In order to ensure safety of pedestrians using this facility, especially at night, a high visibility crosswalk, a pedestrian countdown signal and upgraded curb ramps are needed across the westbound on ramps on Wiehle Ave (I32).

b. Bicyclists

The range of potential origins and destinations in the Wiehle Avenue station area for bicyclists is significantly larger than for pedestrians. Both Isaac Newton Square and Plaza America are potential destinations, in addition to bicyclists accessing the station from neighborhoods located to the north of the station along Wiehle Ave. In addition, any number of neighborhoods are accessible via the W&OD trail.

Table 3-12 indicates the major right-of-way improvements recommended for bicycle access to the Wiehle Avenue Station in this quadrant. There are also several at-grade crossings of the W&OD trail in this quadrant, and safety issues for bicyclists in these areas must be addressed with the recommendations listed in Table 3-13.

Table 3-12: Bicycle Improvements for Wiehle Ave - North

	Side	Street	From	To	Recommendations
B7	E	Wiehle Ave	Station Entrance	Fairway Dr	Construct 10-foot bike trail with 4-foot buffer
B11	Both	Private Rd opposite Isaac Newton Sq W	Sunset Hills Rd	Station entrance	Wide curb lanes
B15	S	Sunset Hills	Plaza America	Isaac Newton Sq W	Widen existing sidewalk to and 10-foot wide shared use path to accommodate pedestrians and occasional cyclists

	Side	Street	From	To	Recommendations
B16		New Connector	W&OD Trail	Near Plaza America at existing goat trail	Formalize existing goat trail connection to W&OD trail near Plaza America with a paved asphalt trail

Table 3-13: Trail Crossings for Wiehle Ave - North

No.	Crossing Street	Existing Condition	Recommendations
X1	Wiehle Ave	At-Grade	**Stage 1:** Yield lines, yield signage, potential user-activated flasher, improved median refuge; move crossing to intersection with Sunset Hills Rd **Stage 2:** Grade-separated crossing
X2	Sunset Hills Rd	At-Grade	Raised 10-foot median refuge, upgraded curb ramps
X3	Michael Faraday Ct	At-Grade	High visibility crosswalk, upgrade curb ramps, warning signage
X4	Isaac Newton Sq W	At-Grade, stop controlled	High visibility crosswalk, warning signage

i. Plaza America

Figure 3-35: Shared-use trail west of Plaza America

As previously noted, access to Plaza America from the Metro Station is provided by Sunset Hills Rd and along the W&OD Trail. The path along the south side of Sunset Hills Rd is an asphalt shared-use path to the west of Plaza America (see Figure 3-35) but is only a 5-foot sidewalk between the shopping center and Wiehle Ave (see Figure 3-36). In order to provide bicycle access to Plaza America, the existing sidewalk on the south side of Sunset Hills Rd should be widened to a 10-foot shared-use asphalt path between Plaza America and Isaac Newton Square W (B15). This trail will provide access both to the Metrorail station via the northern entrance to the station area and to the W&OD Trail. This entrance (directly opposite Isaac Newton Square W) is already planned for an expansion that should include shared bus/bike lanes (B11).

Figure 3-36: Sidewalk east of Plaza America

Figure 3-37: Existing informal connection from W&OD Trail near Plaza America.

The closest W&OD Trail access points from Plaza America are at Old Reston Ave and Isaac Newton Square, which are each more than ¼ mile from the shopping center. American Dream Way, directly opposite the main entrance to Plaza America, is grade-separated when it crosses the W&OD Trail and there is a steep grade differential that would make construction of access ramps at this point difficult. However, slightly west of the main entrance, is a flat area that shows evidence of use as an informal access point, as shown in

Figure 3-37. In order to provide the most direct connections possible for bicyclists accessing Plaza America, it is recommended that this "goat trail" be formalized into a paved connection (B16). This trail access would connect with the proposed recommended sidewalk on the north side of Sunset Hills Rd and allow bicyclists and pedestrians to cross directly to Plaza America. The existing path on the south side of the road and the recommended 6-foot wide sidewalk on the north side (S3) should provide sufficient access for bicyclists if supplemented by additional access directly from the W&OD trail, including the at-grade crossing at Old Reston Ave and the ramp connection at American Dream Way. Bicycle access to and from the station directly to Sunset Hills Rd should be provided on the northern station entrance.

ii. Lake Anne & Tall Oaks Residential Neighborhoods

Bicycle access should be provided to the two closest residential neighborhoods to the station, which are both located to the north of the station off of Wiehle Ave. Lake Anne, which includes single family homes and townhouses, in addition to the Hidden Creek Country Club and the Lake Anne Village Center is located along North Shore Dr between one mile and 1.5 miles from the station. Tall Oaks, with more multi-family units and additional retail at the Tall Oaks Village Center is located east of Wiehle Ave approximately one mile from the station.

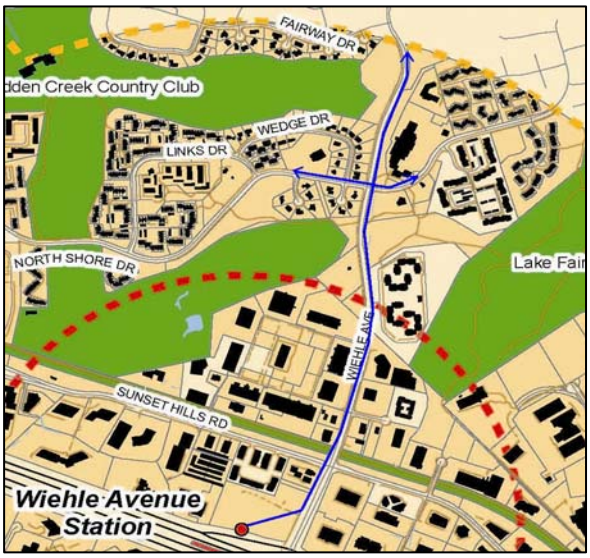
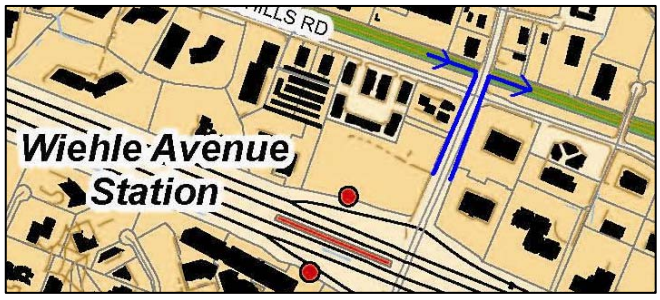


Figure 3-38: Bicycle access to Lake Anne & Tall Oaks

In order to provide bicycle access from these northern neighborhoods (and potential employment sites near them) a dedicated bicycle facility will be necessary along Wiehle Ave as shown in Figure 3-38. In combination with the existing sidewalk on the east side of Wiehle Ave, a ten-foot wide off-street bike path on the east side of the street (B7) should provide sufficient capacity for cyclists in the area. This path and associated curb-ramp improvements would be necessary from the station entrance north to Fairway Dr. Once this trail has been constructed, Wiehle Avenue will have a shared-use trail on the east side and the existing sidewalk on the west side.

iii. W&OD Trail

The most direct bicycle access between the W&OD Trail and the Wiehle Ave Metrorail Station is at the crossing of the trail and Wiehle Ave. This crossing is currently an at-grade crossing; however, it is recommended in this section that the trail ultimately be raised to provide grade separation (X1). While the trail crossing with Wiehle Ave remains an at-grade crossing, a bicycle path connection from the trail to the station entrance will be needed. The sidewalks along Wiehle Ave between the station entrance and the connection to the W&OD Trail should be wider than in other areas to accommodate



larger numbers of bicyclists. Once grade separation of the trail crossing occurs, access between the W&OD Trail and the Wiehle Ave station should occur primarily at the Isaac Newton Square W crossing, with no access point at Wiehle Avenue. This will help divert bicyclists away from the very busy and potentially dangerous intersection of Wiehle Avenue and Sunset Hills Rd.

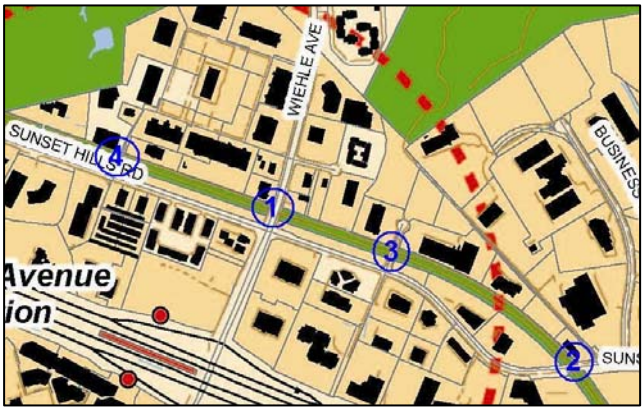


Figure 3-39: Trail Crossings in Wiehle Ave - North

iv. Trail crossings

There are four major at-grade crossings of the W&OD Trail within the area surrounding the station: Wiehle Avenue, Sunset Hills Rd, Michael Faraday Ct and Isaac Newton Sq W. Different traffic levels and site conditions make each of these crossings different; while all include a crosswalk, none of them include signals and all pose potential safety risks to both bicyclists and drivers.

1) Wiehle Avenue

The at-grade crossing at Wiehle Ave occurs less than 100 feet north of Sunset Hills Rd and may be the most dangerous in the Reston area (see Figure 3-40). A crosswalk and a few warning signs are the only safety features of this crossing; there is no signal because of the close proximity to Sunset Hills Rd to the south and the firehouse immediately to the north. Signage along the trail requires bicyclists to stop for traffic, and a small median (not ADA-compliant and barely large enough for a single bike) is included on Wiehle Ave. Large volumes of automobile traffic, turning movements at the nearby intersection, queuing of vehicles along Wiehle Ave and occasional interactions with the firehouse make crossing Wiehle Ave difficult, dangerous and can often take a long time to accomplish safely.

Figure 3-40: W&OD Trail Crossing at Wiehle Ave

A grade-separated crossing is the best potential solution for the dangerous situation at the Wiehle Ave crossing (X1-Stage 2). This will most likely involve raising the trail over the roadway and will eliminate conflicts between bicyclists and vehicles, allow bicyclists to travel through Reston without stopping at this crossing and improve safety for all modes of travel at Wiehle Ave and Sunset Hills Rd. Construction costs, especially considering the presence of the overhead high-tension power lines, will be a major obstacle to overcome. It will take a significant amount of time to plan, design and construct the recommended grade-separated crossing. In the meanwhile, there are several infrastructure actions that can be undertaken on a more immediate timescale in order to improve the safety of bicyclists now (X1-Stage 1):

- Yield lines to create a buffer around the crossing.
- Addition yield signage.
- Potentially a user-activated flasher to increase the visibility of crossing bicyclists.

- Improved and expanded median refuge that meets ADA design criteria with sufficient capacity for multiple bikes.
- Modified signal timing at Wiehle Ave & Sunset Hills Rd that might coordinate right-turn-on-red movements with the presence of bicyclists at this crossing or eliminate them altogether.

Fairfax County is currently studying some of these options separately from this project. It is anticipated that some actions will be made prior to moving forward on plans for creating a grade-separated crossing. If this grade-separated crossing is implemented, no connections to Wiehle Avenue should be constructed. The main access route between the Wiehle Avenue station and the W&OD should be at the crossing of Isaac Newton Sq W, which is discussed in the section 4 below.

2) Sunset Hills Road

Figure 3-41: Existing at-grade crossing at Sunset Hills Rd (X2)

The at-grade crossing of the W&OD Trail and Sunset Hills Rd is located just over ½ mile from the station, west of Clay Lane. Vehicle traffic along this portion of Sunset Hills Rd is lighter than closer to the station; however vehicle speeds are slightly higher. The mid-block crossing is indicated only by a standard crosswalk and no signals, signage or lighting indicate that the location is different. Two travel lanes and a wide paved median tend to cause speeding through this area during uncongested periods. Due to the lower vehicle volumes and the surrounding land uses, a grade-separated crossing is not recommended at Sunset Hills Rd. However, in order to improve the safety and visibility of bicyclists on the W&OD trail, several actions are recommended at this location (X2), including:

- Upgrading the curb-ramps on both sides of Sunset Hills Rd.
- Additional signage or reflective lighting to increase the visibility of the crosswalk.
- Construction of a 10-foot wide raised pedestrian/bicyclist median refuge.

3) Michael Faraday Ct

This at-grade crossing of the W&OD Trail is located just north of Sunset Hills Rd (X3). Michael Faraday provides access to several office buildings and a school in the immediate station vicinity and has low levels of vehicle traffic traveling at generally low speeds. During off-peak times, traffic volumes are extremely low. For these reasons, a grade-separated crossing is not appropriate and a signal is unnecessary. Visibility and safety are still concerns at this crossing, and therefore a high-visibility crosswalk, warning signage for both bicyclists and drivers and ADA-compliant curb ramps should be installed. Should Michael Faraday be expanded as part of the development of a street-grid network scheme and converted into a through street with higher traffic volumes, the needs of this crossing should be reexamined.

4) Isaac Newton Square W

This at-grade crossing of the W&OD Trail has been identified as one of the least safe in the Reston area, and is located just north of the intersection of Sunset Hills Rd and Isaac Newton Sq W. The roadway is privately owned, and does not meet VDOT design standards. The crossing is stop-controlled, and both vehicular and bicycle traffic is required to stop at the crossing, however sight distance for both bicycles and vehicles is still an issue.

Figure 3-42: Existing W&OD crossing at Isaac Newton Sq W (X2)

The Northern Virginia Regional Parks Authority (NVRPA) would like to improve this trail crossing by bringing Isaac Newton Sq W up to VDOT standards and accepted into the public street network and it is recommended for expansion as part of the internal street grid detailed in Chapter 2. The addition of sidewalks with a buffer on both sides of this street will help improve sight distance at the crossing. Improved warning signage should also be included. Other traffic calming devices may prove beneficial at this location to slow vehicles and draw driver attention to the crossing bicyclists. A speed table might be a good option to slow vehicles down while increasing the visibility of bicyclists. These actions will help control traffic speeds and will provide the safest and fastest access to the station from the W&OD Trail. Once the crossing at Wiehle Avenue is grade separated, this will become the primary access point for bicyclists traveling to the Wiehle Ave station.

E. Wiehle Avenue Station – South

The area south of the Wiehle Ave station has not been densely developed and mostly comprises individual office buildings and the parking lots that surround them. Also in this area are several residential neighborhoods of single family homes; these neighborhoods will be closer to a Metrorail station than any others in Reston and may be the source of many riders at the Wiehle Ave station.

The major barrier to bicyclists and pedestrians accessing the Reston Parkway station from the south is Sunrise Valley Dr. Currently, there are only four marked crosswalks in the 1.3 mile stretch between Soapstone Rd and Barton Hill Rd, and no sidewalks on the south side of the street. To help pedestrians and bicyclists access the station without making long detours to a marked crossing or crossing unsafely at an unmarked locations, five additional crossings are recommended for this stretch of Sunrise Valley Dr for an average distance of approximately 750 feet between marked crossings.

a. Pedestrians

There are four potential areas that are likely to produce pedestrian traffic in this area shown in Figure 3-43**,** including:

A. Office buildings west of Wiehle Ave
B. Office buildings east of Wiehle Ave
C. Residential neighborhoods south of Sunrise Valley Dr
D. Northern Wiehle Ave station area

Figure 3-43: Pedestrian destinations in Wiehle Ave - South

These destinations primarily require actions along Sunrise Valley Dr, Wiehle Avenue and local neighborhood streets, however some alternatives would require additional infrastructure. Table 3-14 highlights the major pedestrian intersection improvements that are recommended for this quadrant, while Table 3-15 highlights the major sidewalk improvements.

Table 3-14: Intersection Improvements for Wiehle Ave - South

No	Location	Airline Distance to Station Entrance (ft)	Max. Pedestrian ISI[14]	Recommendations
I24	Sunrise Valley Dr & Commerce Park Dr	1,100	4.7	**North:** upgraded curb ramps, high visibility cross walk; **West:** upgrade curb ramps, high visibility crosswalk, pedestrian warning and knockdown signs, pedestrian median refuge;
I25*	Sunrise Valley Dr & Wiehle Ave	700	3.4	**East:** Reduce right turn radius; **North:** Re-align right turn channelization, reduce right turn radius; **North & West:** upgrade curb ramps, high visibility crosswalks, pedestrian countdown signals
I26*	Sunrise Valley Dr & Soapstone Rd	2,200	3.3	**East:** Extend median to include pedestrian refuge; **West:** Extend median to include pedestrian refuge; **South:** Construct curb ramps, decrease right turn radius; **North:** Median pedestrian refuge; **All Approaches:** High visibility crosswalk, pedestrian countdown signal, upgrade curb ramps
I27	Sunrise Valley Dr & Great Meadow Dr	800	4.7	**East:** High visibility crosswalk, median pedestrian refuge, pedestrian warning and knockdown signs, flashing beacons; **West:** High visibility crosswalk, median pedestrian refuge, pedestrian warning and knockdown signs, flashing beacons; **South:** High visibility crosswalk; **All Approaches:** update curb ramps
I28	Sunrise Valley Dr & Upper Lake Dr	2,400	4.7	**North:** crosswalk, upgrade curb ramps
I33	Wiehle Ave & Eastbound DIAAH ramps	600	4.7	**West:** Decrease right turn radius, high visibility crosswalk, upgrade curb ramps, pedestrian countdown signal

[14] Pedestrian ISI (Intersection Safety Index) measures the safety of pedestrians at street crossings based on traffic control devices, number of lanes, vehicle speeds, land use and vehicular traffic levels. Ped ISI values are calculated for each approach on an intersection. Blank entries are locations where traffic levels were not available and the calculation could not be performed. The maximum Ped ISI is used to show the least safe crossing condition at each intersection.

Table 3-15: Sidewalk Improvements for Wiehle Ave - South

	Side	Street	From	To	Recommendations
S7a	S	DIAAH	**Stage 1:** Edmund Halley Dr	**Stage 1:** International Center	**Stage 1:** Construct a shared-use path along the south side of the DIAAH (including a crossing of Reston Pkwy) 10-feet wide, marked
S7b			**Stage 2:** Fairfax County Pkwy	**Stage 2:** Wiehle Ave	**Stage 2:** As redevelopment occurs, acquire right-of-way to continue the path to provide access to office buildings
S8	N	Sunrise Valley Dr	Fairfax County Pkwy	W&OD Trail	Phased development of pedestrian and bicycle facilities (see S9 and B5) Widen existing sidewalk to and 10-foot wide shared use path to accommodate pedestrians and occasional cyclists
S9	S	Sunrise Valley Dr	Glade Dr	South Lakes Dr	Phased development of pedestrian and bicycle facilities (see S8 and B5) Construct 6-foot wide sidewalk with 4-foot buffer and associated curb ramps (to closely follow implementation of recommendation S8)
S12	W	Soapstone Rd	Sunrise Valley Dr	Hunter's Green Ct	Construct sidewalk
S15	New	Inter-parcel Connection	Wiehle-S Station Entrance	Sunrise Valley Dr	Construct dedicated path from the station entrance

i. Western Office Buildings

Several office buildings are located west of Wiehle Avenue within ½ mile of the proposed Metrorail station and are estimated to attract 500 pedestrian trips each day. The southern station entrance will open directly into the parking lot of the buildings located on Golf Course Sq, and other buildings on Commerce Park Dr can be reached via the network of parking lots. However, these paths are not safe, comfortable or direct enough for pedestrians, and new, pedestrian-oriented infrastructure needs to be built that connects each of these buildings to the station entrance by a dedicated pathway. Safe, direct and clearly marked pathways through the parking lots and between parcels will be an essential element of the pedestrian network in this quadrant in order for people to access other, more distant areas. Because these roadways and parking lots are on private property, it may be necessary to wait until redevelopment occurs to ensure that the land owners build the necessary infrastructure or else Fairfax County will be required to acquire the right-of-way to do so.

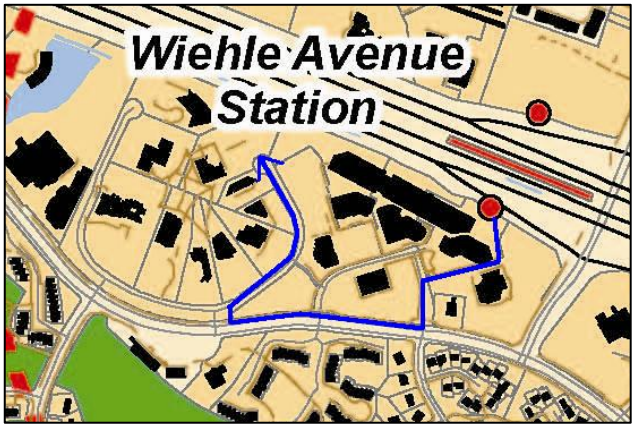
Further to the west are additional office buildings along Association Dr. There are two primary potential paths that exist to access these offices:

1. A southern route along Sunrise Valley Dr that uses the existing street network.
2. A northern route that requires the construction of a new pedestrian pathway along the south side of the DIAAH to provide more direct access to buildings in this area.

1) Southern Route (Sunrise Valley Dr)

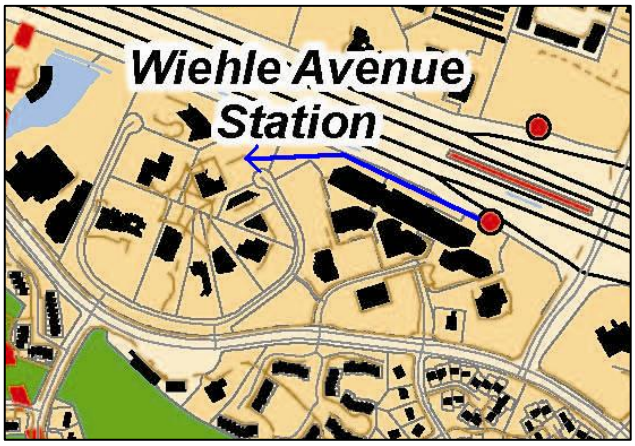
To access the westernmost buildings with ½ mile of the station along Sunrise Valley Dr, a pedestrian connection will be necessary from the station entrance to Sunrise Valley Dr (S15). This pathway will likely need to be a dedicated pathway through existing parking lots and is likely to see considerable

pedestrian traffic. The existing sidewalk along the north side of Sunrise Valley Dr will need to be upgraded to include ADA-compliant curb ramps and high visibility crosswalks at all of the intersections and driveways, especially the intersections of Centennial Park Dr (I27), Commerce Park Dr (I24) and Association Dr (I26). Sidewalks would also be necessary along both sides of Association Dr and any other driveways in the area in order to provide direct access to each of the office buildings. This route can be as long as 3500 feet to reach the furthest buildings and require an approximately 18-minute walk for the average pedestrian[15].



2) Northern Route

To provide more direct access to the many office buildings built backing onto the DIAAH between Reston Parkway and Wiehle Avenue, the construction of a pedestrian and bicycle shared-use path has already been suggested (S7b). This path would run between the two stations parallel to the DIAAH and provide direct access to many office buildings that could prove to be major generators of pedestrian and bicycle traffic. In the future, many of these parcels may be the site of more intense development that may spur additional demand for this type of pedestrian facility, and their designs could encourage non-motorized access by accommodating this recommended pathway. To access the same office buildings along this path would be approximately 1800 feet, less than half the length of the southern route requiring only about a 9-minute walk. Again, acquisition of the right-of-way necessary to complete this project will be difficult but should be pursued due to the benefits and time savings it will provide to pedestrians and bicyclists.



ii. Eastern Office Buildings

Many additional office buildings are located within ½ mile of the station entrance to the east of Wiehle Ave, primarily along Campus Commons Dr, a distance of approximately 1800 feet. Over 600 daily pedestrian trips are projected to access these buildings in 2030. Access to these offices (and those beyond along Preston White Dr) can be provided primarily via Sunrise Valley Dr. Access to these office buildings requires several infrastructure actions, including:

- A pedestrian connection between the station entrance and Wiehle Ave, near the intersection of Sunrise Valley Dr (S7b.)

[15] Estimates of walking time are based on 3.5 ft/sec walking speed and an additional 1 minute delay at each street crossing.

- Wiehle Ave and Sunrise Valley Dr (I 25): Decrease the right turn radius on the northern and eastern approaches and realign the existing right turn channelization. Upgrade all curb ramps and install high visibility crosswalks and pedestrian countdown signals at the western and northern approaches.
- The existing sidewalk along the north side of Sunrise Valley should be complemented by crosswalks and ADA-compliant curb ramps at each driveway and intersection.
- Sidewalks will also be necessary along Campus Commons Dr and any other streets or driveways that access the office buildings.

This route would be approximately 2100 feet long and require an 11-minute walk for the average pedestrian.

iii. Residential Neighborhoods

Several residential neighborhoods are within walking distance of the Wiehle Ave Station south of Sunrise Valley Dr between Soapstone Rd and South Lakes Dr and are projected to create 50 pedestrian trips each day. Pedestrian access to these neighborhoods again requires a connection from the station entrance to Sunrise Valley Dr (S15). Sidewalks along both sides of Sunset Valley Dr will be necessary, which will include the construction of a sidewalk on the south side of the street including ADA-compliant curb ramps at all intersections and the expansion of the north-side sidewalk (as recommended inS8 and S9). Frequent crossings of Sunrise Valley Dr will be necessary as pedestrians access neighborhoods along the entire length of the road. Intersection actions will be necessary at several locations, including:

- Wiehle Ave & Sunrise Valley Dr (I25): pedestrian improvements as detailed above.
- Centennial Park Dr & Sunrise Valley Dr (I27): The eastern and western crossings will both require high visibility crosswalks, pedestrian median refuges, pedestrian warning and knockdown signs, flashing beacons and upgraded curb ramps. The southern approach will also need a high visibility crosswalk and upgraded curb ramps.
- Commerce Park Dr (I24): The northern approach requires upgraded curb ramps and a high visibility cross walk. The western approach requires upgraded curb ramps, a high visibility crosswalk, pedestrian warning and knockdown signs and pedestrian median refuge.
- Soapstone Dr & Sunrise Valley Dr (I26): All four approaches will require high visibility crosswalks, pedestrian countdown signals and upgraded curb ramps. On the eastern, western and northern approaches, the medians should be extended into the crosswalk to include pedestrian refuges. On the southern approach ADA-compliant curb ramps should be constructed and the right turn radius should be decreased. The improvements will be even more necessary with the extension of Soapstone Dr across the DIAAH into the northern station area.
- Upper Lake Dr & Sunrise Valley Dr (I28): On the northern approach the curb ramps should be upgraded and a high visibility crosswalk should be installed.

The pedestrian facilities along Soapstone Rd will also require some upgrades including ADA-compliant curb ramps and crosswalks at Golf Course Sq, Durand Dr and Purple Beech Dr. Many of the smaller neighborhood streets in the area will also need to be provided with sidewalks on at least one side of the street. Many actions will be necessary to provide direct access to these residential neighborhoods, specifically including:

- 6-foot wide sidewalks on the south side of Sunrise Valley Dr from Indian Ridge Rd to South Lakes Dr (S9)
- Sidewalk on the west side of Soapstone Rd from Sunrise Valley Dr to Hunter's Green Ct (S12)
- Crosswalks and ADA-compliant curb ramps along Sunrise Valley Dr across:
  - Soapstone Rd (south side only)
  - Association Dr (both sides)
  - Commerce Park Dr (south side)
  - Great Meadow Dr (south side)
  - Campus Commons Dr (north side)
  - Headlands Circle (south side)
  - Upper Lake Dr (north side)

iv. Access across the Dulles International Airport Access Highway

As redevelopment occurs in the Wiehle Avenue station area, especially the joint development planned for the existing park-and-ride lot adjacent to the northern station entrance, pedestrian access across the DIAAH will be necessary. Access across this barrier can be provided at several locations in the station area:

- Wiehle Ave: Includes sidewalks on the western side of the roadway.
- Metrorail Station: During Metro hours of operation, the station walkways can be used to cross the DIAAH without requiring payment of a fare.
- Soapstone Rd extension: A proposed roadway extension of Soapstone Rd north across the DIAAH should include dedicated pedestrian facilities on both sides of the street, in addition to shared bus/bike lanes for bicycle access (B12).

The only one of these facilities that currently exists is the Wiehle Avenue sidewalk. Improved facilities are required at the intersection with the eastbound DIAAH exit ramps (I33) in order to ensure the safety of pedestrians crossing the ramp. Improvements include:

- Decrease right turn radius for exiting vehicles.
- Install a high visibility crosswalk.
- Upgrade curb ramps.
- Install a pedestrian countdown signal.

b. Bicyclists

There are a wide range of residential and office locations located with bicycling distance of the station entrance. The major destinations for bicyclists in this quadrant are the office buildings along Sunrise Valley Dr and the residential neighborhoods to the south. Table 3-16 highlights the major bicycle improvements recommended for this general area.

Table 3-16: Bicycle Recommendation for Wiehle Ave - South

	Side	Street	From	To	Recommendations
B5	Both	Sunrise Valley Dr	W&OD Trail	Fairfax County Pkwy	Phased development of pedestrian and bicycle facilities (see S8 and S9) Construct bike lanes (to be complemented in conjunction with recommendation S9)
B10		NEW Connector	Sunrise Valley Dr	Wiehle Ave Station Entrance	Construct bike path
B12	Both	Soapstone Connector	Sunrise Valley Dr	Sunset Hills Rd	Construct shared bus/bike lanes on the proposed roadway extension
B17	Both	Soapstone Rd	Sunrise Valley Dr	South Lakes Dr	Construct bike lanes

Figure 3-44: Bicycle access along Sunrise Valley Drive

i. Sunrise Valley Offices

Many office buildings are located along Sunrise Valley Dr between Fairfax County Pkwy and Hunter Mill Rd. Access to these offices for bicyclists is limited, as the main bicycle facility in the area (the W&OD trail) runs primarily north of the DIAAH, although there is an at-grade crossing of the trail east of the station on Sunrise Valley Dr. A dedicated bicycle facility is necessary along this entire length to provide an east-west bicycle connection on the south side of Reston as shown in Figure 3-44. As recommended previously in this report, both an off-street shared used path and on-street bike lanes should be implemented on Sunrise Valley Dr in phases. The first phase would require the widening of the existing sidewalk on the north side of the street to at least a 10-foot shared use path (S8). Shortly thereafter, in conjunction with the construction of sidewalk along the south side of the street (S9), on street bike lanes should be constructed on both sides of Sunrise Valley Dr between the W&OD Trail crossing and the Fairfax County Parkway Trail (B5). This combination of facilities will ensure the speed and visibility of bicyclists, limit conflicts with pedestrians and accommodate requests by community members.

ii. Residential Neighborhoods

There are many residential neighborhoods within the range of bicyclists from the Wiehle Ave station, both via the W&OD Trail and the surface street network. The construction of the shared-use path and the bike lanes recommended in this section will provide access to the majority of neighborhoods in the area. Two other minor arterials, Soapstone Rd and South Lakes Dr are potential access routes for

bicyclists accessing the Metrorail station. Bike lanes are recommended for the proposed Soapstone Connector, which would provide a link to the station from the south side of Reston. In conjunction with the construction of this facility, bike lanes should also be installed on both sides of the existing Soapstone Rd from Sunrise Valley Dr to South Lakes Dr. These bike lanes will provide a north-south link for bicyclists and a seamless bicycle connection from the neighborhoods to the Metrorail station. As the volume of bicyclists grows, off-street bicycle facilities, specifically shared-use trails, may need to be provided along South Lakes Dr as well.

The major link necessary to create a complete bicycle network with access to the Metrorail station will be a dedicated bicycle connection from Sunrise Valley Dr to the station entrance. This path would be in addition to any pedestrian pathway built in this location, and would necessarily travel on private property, creating some significant right-of-way issues that must be worked out with the land owners. Again, redevelopment in the immediate station vicinity could provide an excellent opportunity for developing this important bicycling link.

F. Implementation

This chapter has recommended a number of actions at many locations throughout the study area that will improve safety and accessibility for pedestrians and bicyclists. Each of these projects must compete with each other and with the recommended roadway and transit improvements for scarce resources including time and funding. Many of the recommendations which concern the immediate safety of bicyclists and pedestrians should be implemented as soon as possible, well in advance of the coming of Metrorail service. Many of these improvements can benefit the current residents and employees of Reston and should be constructed regardless of whether or not the Dulles Metrorail Extension continues forward. Some of the recommendations need not be completed until the start of Metrorail service. A few of the recommendations should be pursued as redevelopment in the area occurs and opportunities become available. The following sections deal with how the recommendations included in this report should be implemented. First the estimated cost of the recommended improvements is addressed, as funding often determines the implementation schedule. Finally, the recommendations are prioritized based on the values expressed by the community and other quantifiable measures. A full multi-modal prioritization of recommendations can be found in Chapter 5.

a. Cost

In reality, cost plays a very important role in the actual implementation of transportation improvements as funding is typically the scarcest resource. Based on the projects recommended in the previous sections, rough cost estimates were developed for each of type of recommendation. These estimates are in 2007 dollars, and prices can be expected to increase annually. Table 3-17 shows the estimated cost for each type of intersection improvement, the quantity of each recommended in this report and the total estimated cost. These costs include the capital construction and installation costs for each item, but annual budgets will also need to include monies for maintaining (and in some cases operating) these facilities.

Table 3-17: Estimated Intersection Improvement Costs

Improvement	Quantity	Cost per Unit	Contingency & ROW (50%) per Unit	Total Cost
Pedestrian Countdown Signal	77	$ 8,000	$ 4,000	$ 924,000
Upgrade curb ramps	105	$ 1,000	$ 500	$ 157,500
Construct Curb Ramps	32	$ 2,000	$ 1,000	$ 96,000
Improved Crosswalk	58	$ 1,200	$ 600	$ 104,400
Median Refuge	41	$ 25,000	$ 12,500	$ 1,537,500
Channelized Right Turns	6	$ 100,000	$ 50,000	$ 900,000
Warning Signage	14	$ 300	$ 150	$ 6,300
Decrease Curb Radius	22	$ 15,000	$ 7,500	$ 495,000
New Crosswalk	44	$ 600	$ 300	$ 39,600
New Signal	1	$ 300,000	$ 150,000	$ 450,000
Signal Timing	15	$ 15,000	$ 7,500	$ 337,500
Automatic Flashers	1	$ 20,000	$ 10,000	$ 30,000
Other Costs				$ 306,000
Total				**$ 5,383,800**

If each of the more than 400 intersection improvements that were recommended in this report were constructed today in 2008, the total project cost would be approximately $3.6 million. The largest portion of this cost would be devoted to new signals for vehicles and pedestrians and the realignment and construction of channelized right turn lanes. Additionally, some right-of-way acquisition will be necessary for some of these projects. Since right-of-way was not studied in detail as part of this project it is impossible to determine right-of-way costs with any certainty. Overall, a 50% contingency is provided for pedestrian projects to account for right-of-way costs, utilities work, traffic control during construction and other unforeseen items. This adds an additional $1.8 million, for a total intersection improvement cost of approximately $5.4 million. Appendix D includes the total estimated cost for each of the 33 intersections and 6 trail crossings that were analyzed in detail.

There are also numerous actions that were recommended for sidewalks, trails and bike lanes for many locations within the study area. Table 3-18 shows the length of the recommended sidewalk, trail and bike lane improvements and their unit costs. Again, the costs are expected to escalate over time due to inflation and general price increases in the construction industry.

These improvements, if constructed in 2008 would cost an estimated total of $13.4 million, the majority of which would be for over 9 miles of new sidewalks. Again, including a 50% contingency for right-of-way and other costs requires an additional $6.7 million, for a total pathway and bike lane cost of just over $20 million. For the recommended intersection, pathway and bike lane actions to be implemented would require over $25.4 million for pedestrian and bicycle improvements, including more than $8.5 million for contingencies.

Table 3-18: Estimated Pathway and Bike Lane Improvements

Improvement	Length (ft)	Unit Cost	Unit Contingency & ROW (50%)	Total Estimated Cost
Sidewalks	49,100	$150	$75	$11,047,500
Bike Paths	31,600	$120	$60	$5,688,000
Bike Lanes	48,800	$20	$10	$1,464,000
Bike Lanes- curb changes	24,400	$50	$25	$1,830,000
Total				**$20,029,500**

One additional pedestrian/bicycle recommendation that was made in this report has not been included in these cost calculations. Grade-separation of the W&OD Trail at Wiehle Ave is a highly recommended project that would substantially improve safety for bicyclists and drivers in this congested area. Based on similar projects that have been constructed previously, this bridge crossing is estimated to add an additional $2 million to the total project cost. This brings the total cost of all of the recommended pedestrian and bicycle actions to $27.4 million.

b. Prioritization

Each of the pedestrian and bicyclist projects that are recommended in this chapter is important in order to provide the best possible access to the proposed Metrorail stations and around the station areas. Prioritization of these projects is necessary as it would be impossible to construct all $27 million worth of projects at once. Many considerations have gone into the prioritization of the various recommendations to create an implementation plan that addresses the areas of highest concern first.

A prioritized list of intersection actions has been developed that includes each of the 33 intersections and 6 trail crossings that were studied in detail in this report. These 39 locations were prioritized based on the following criteria:

- Distance to the station (Closer projects were prioritized higher)
- Pedestrian/bicyclist safety (as identified by the PISI calculation)
- Community Input including
  - RMAG Members
  - Public Meeting comments
  - "Reston on Foot" Report[16]

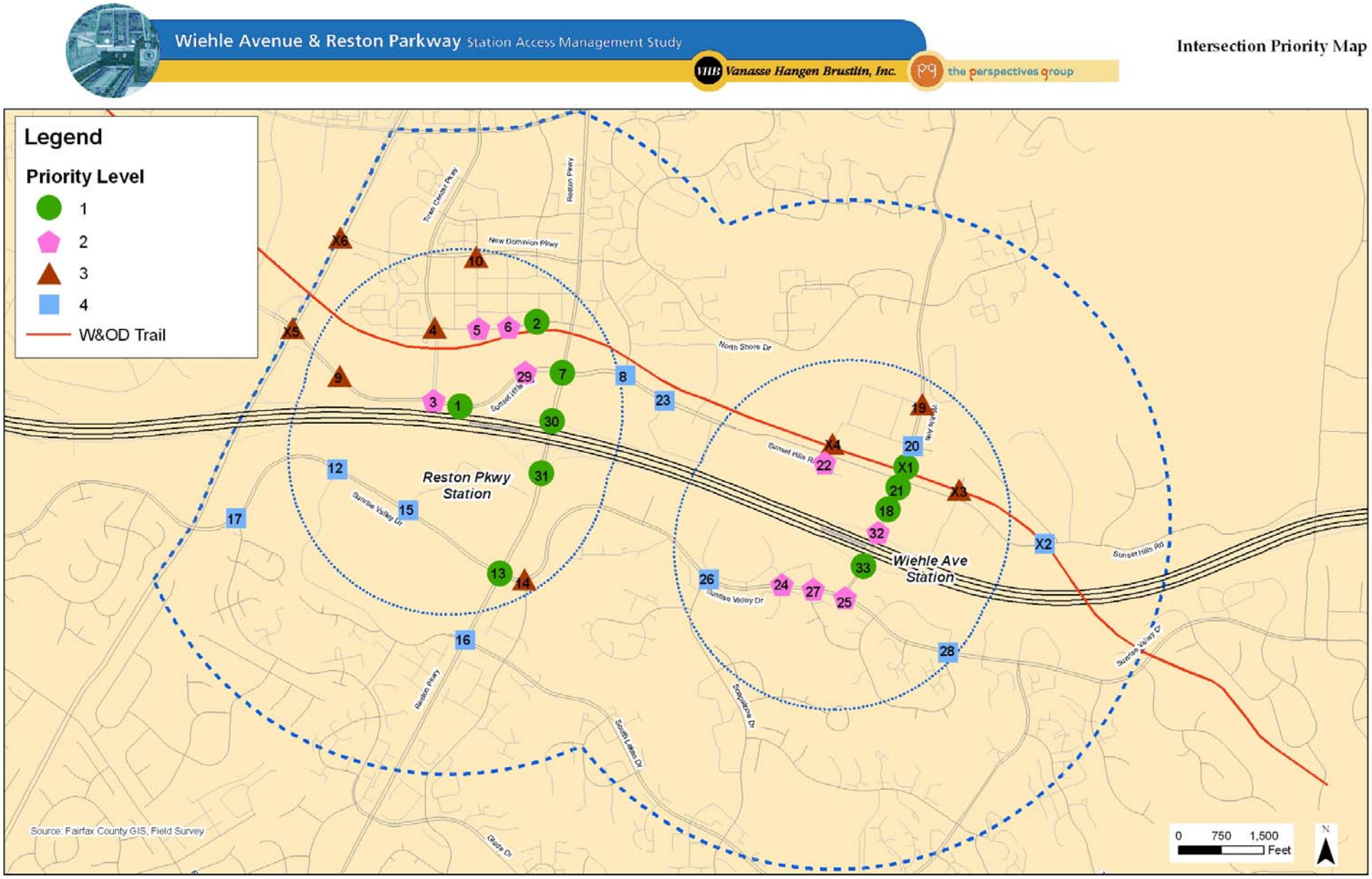
Based on these elements, each of the recommended intersection actions have been assigned to one of four priority groups. Table 3-19 and Figure 3-45 shows these priority groups, which are based primarily on measures of importance and safety, not based on implementation dates. (A multi-modal prioritized listing that includes an implementation timeline can be found in Chapter 5.) Some of the 1st priority recommendations are projects that will take substantial levels of resources to complete, and may not be able to be constructed immediately. Other projects in lower priority groups may be able to be implemented quite quickly; their priority should not prohibit this. Each of these recommended projects is important and should be completed as soon as the resources become available to do so. This prioritization simply provides guidance on where to start.

[16] *DRAFT Reston on Foot: Completing the Pathway and Sidewalk System.* March, 2007. Reston Association.

Table 3-19: Intersection Prioritization

No	Location	Cost	Priority	Comments
2	Bluemont Way & Discovery St @ Pedestrian Bridge	$505,200	1st Priority	Conduct signal warrant before construction
31	Reston Pkwy & Eastbound Dulles Toll Rd ramps	$319,650	1st Priority	In conjunction with DIAAH path
7	Reston Pkwy & Sunset Hills Rd	$230,700	1st Priority	
30	Reston Pkwy & Westbound Dulles Toll Rd ramps	$44,100	1st Priority	
13	Sunrise Valley & Reston Pkwy	$405,300	1st Priority	
1	Sunset Hills @ Station Entrance	$146,700	1st Priority	
33	Wiehle Ave & Eastbound Dulles Toll Rd ramps	$39,300	1st Priority	
18	Wiehle Ave & Station Entrance	$120,300	1st Priority	
21	Wiehle Ave & Sunset Hills Rd	$316,200	1st Priority	
X1	Wiehle Ave & W&OD Trail	$39,750	1st Priority	Stage 1: Immediate implementation; Stage 2: See B14
5	Explorer St & Bluemont Way	$3,900	2nd Priority	
6	Library St & Bluemont Way	$81,600	2nd Priority	
24	Sunrise Valley Dr & Commerce Park Dr	$46,650	2nd Priority	
27	Sunrise Valley Dr & Great Meadow Dr	$83,700	2nd Priority	
25	Sunrise Valley Dr & Wiehle Ave	$228,600	2nd Priority	
3	Sunset Hills & Town Center Pkwy	$191,700	2nd Priority	
29	Sunset Hills Rd & Discovery Sq/Northrup Grumman E Entrance	$157,800	2nd Priority	
22	Sunset Hills Rd & Isaac Newton Sq W	$132,000	2nd Priority	
32	Wiehle Ave & Westbound Dulles Toll Rd ramps	$16,800	2nd Priority	
10	Explorer St & New Dominion Pkwy	$153,600	3rd Priority	
X4	Isaac Newton Sq W @ W&OD Trail	$2,250	3rd Priority	
X3	Michael Faraday Ct @ W&OD Trail	$5,250	3rd Priority	
X6	New Dominion Pkwy @ Fairfax County Pkwy Trail	$20,250	3rd Priority	
14	Sunrise Valley & Colts Neck	$122,400	3rd Priority	
9	Sunset Hills @ Target Driveway	$98,700	3rd Priority	
X5	Sunset Hills Rd @ Fairfax County Pkwy Trail	$350,250	3rd Priority	
4	Town Center Pkwy & Bluemont Way	$132,300	3rd Priority	
19	Wiehle Ave & Isaac Newton Sq N	$217,650	3rd Priority	
16	Reston Pkwy & South Lakes	$61,200	4th Priority	
15	Sunrise Valley & Edmund Halley Dr	$182,700	4th Priority	
17	Sunrise Valley & Glade Dr	$184,800	4th Priority	
12	Sunrise Valley Dr & Mercator Dr	$170,700	4th Priority	
26	Sunrise Valley Dr & Soapstone Rd	$202,500	4th Priority	
28	Sunrise Valley Dr & Upper Lake Dr	$3,900	4th Priority	
8	Sunset Hills & Old Reston Ave	$111,000	4th Priority	
23	Sunset Hills Rd & Plaza America	$92,700	4th Priority	
X2	Sunset Hills Rd @ W&OD Trail	$42,300	4th Priority	
20	Wiehle Ave & Isaac Newton Sq S	$119,400	4th Priority	

Figure 3-45: Priorities of Intersection Actions



The remaining recommendations in this chapter include sidewalks, trails and bike lanes. These facilities have been prioritized based primarily on the level of pedestrian and bicyclist activity expected for each one. Therefore, those projects that are on a main route to a major destination in the station area have been grouped as 1st priority projects. Because fewer bicyclists and pedestrians are expected at locations further from the stations, projects that are close to the stations generally tend to be prioritized higher than those that are far from the stations. Table 3-20 shows the groups for each of the recommended sidewalk, pathway and bike lane projects. Again, implementation of any of these projects should not be solely reliant on this list, and projects should be completed whenever opportunities become available to do so. Redevelopment may provide funding opportunities for some of these projects though proffers or other means. An important step in ensuring that each of these projects can be completed is to include them in the Fairfax County Trails Plan.

Table 3-20: Sidewalk, Trail and Bike Lane Prioritization

No	Recommendation	Cost	Priority	Comments
B1	Bike lanes on Town Center Pkwy from Sunset Hills Rd to Baron Cameron Ave	$411,660	1st Priority	
B10	Construct bike path from southern Wiehle Ave station entrance to Sunrise Valley Dr	$139,680	1st Priority	
B12	Construct shared bus/bike lanes on the proposed Soapstone connector	$253,800	1st Priority	
B13	Construct bike connection from W&OD trail to Bluemont Way at the Reston Town Center Transit Station	$19,440	1st Priority	
B14	Grade Separation of W&OD Trail over Wiehle Ave	$2,016,000	1st Priority	
B2	Bike lanes on Sunset Hills Rd from Town Center Pkwy to Station Entrance	$44,370	1st Priority	
S15	Construct sidewalk from southern Wiehle Ave station entrance to Sunrise Valley Dr	$290,475	1st Priority	
S16	Construct dedicated path through "Gateway Property" for direct connection from Sunset Hills Rd to Bluemont Way	$274,500	1st Priority	To be completed in conjunction with redevelopment
S6	Construct sidewalk along Edmund Halley Dr from the Station entrance to Sunrise Valley Dr	$353,025	1st Priority	
S8	Widen existing sidewalk on N side of Sunrise Valley Dr to 10-foot shared use path	$3,300,840	1st Priority	
B16	Formalize existing goat trail connection to W&OD trail near Plaza America with a paved asphalt trail	$34,380	2nd Priority	
B17	Construct bike lanes on Soapstone Rd from Sunrise Valley Dr to South Lakes Dr	$419,220	2nd Priority	
B3	Bike lanes on New Dominion Pkwy from Fairfax County Pkwy to North Shore Dr	$449,370	2nd Priority	
B4	Bike lanes on Fountain Dr from Freedom Dr to Baron Cameron Ave	$235,260	2nd Priority	
B9	Pave and formalize existing at-grade access ramp to W&OD Trail on E side of Town Center Pkwy; construct a connection on the W side of Town Center Pkwy	$138,600	2nd Priority	
S1	Sidewalk along N side of Sunset Hills Rd from the Station Entrance to Target	$263,700	2nd Priority	
S10	Construct sidewalk on E side of Reston Pkwy from DIAAH ramps to South Lakes Dr	$666,450	2nd Priority	
S11	Construct sidewalk on both sides of Isaac Newton Sq W from Station Entrance to Isaac Newton Sq S	$243,900	2nd Priority	

No	Recommendation	Cost	Priority	Comments
S2	Complete sidewalk on E side of Reston Pkwy from Sunset Hills Rd to New Dominion Pkwy	$388,575	2nd Priority	
S3	Construct sidewalk on N side of Sunset Hills from Reston Pkwy to Business Center Dr	$1,917,000	2nd Priority	
S5	Complete sidewalk along Town Center Pkwy from W&OD Trail to Sunset Hills Rd	$261,450	2nd Priority	
S7a	Construct shared use path along S side of DIAAH from Edmund Halley Dr to International Center	$325,620	2nd Priority	
S7b	Complete shared use path along S side of DIAAH from Fairfax Cty Pkwy to Wiehle Ave	$1,643,940	2nd Priority	
S9	Construct sidewalk on S side of Sunrise Valley Dr from Fairfax County Pkwy to W&OD Trail	$2,760,300	2nd Priority	After implementation of S8
B11	Shared bus/bike lanes on the private roadway opposite Isaac Newton Sq W into the station entrance	$81,540	3rd Priority	By opening of Wiehle Ave station
B15	Widen existing sidewalk on S side of Sunset Hills Rd from Plaza America to Isaac Newton Sq to 10-foot shared use path	$384,120	3rd Priority	
B5	Bike lanes along Sunrise Valley Dr from W&OD Trail to Fairfax County Pkwy	$1,650,420	3rd Priority	After implementation of S9
B6	Bicycle path along Edmund Halley Dr from Sunrise Valley Dr to Station Entrance	$282,420	3rd Priority	By opening of Reston Pkwy station
B7	Construct bike trail on E side of Wiehle Ave from Station Entrance to Fairway Dr	$939,420	3rd Priority	
S12	Construct sidewalk on W side of Soapstone Rd from Sunrise Valley Dr to Hunter's Green Ct	$40,950	3rd Priority	
S13	Construct sidewalk along Isaac Newton Sq S	$530,550	3rd Priority	May be constructed in coordination with redevelopment
S14	Construct sidewalks along with new roadway extension of Roger Bacon Dr	$324,000	3rd Priority	May be constructed in coordination with redevelopment
S4	Construct sidewalk on S side of Bluemont Way from Reston Pkwy to Discovery St	$115,425	3rd Priority	