

Appendix H: Silver Spring to Glenmont Bikeway

This concept plan details the development of a bikeway between the Glenmont Metrorail station and downtown Silver Spring via downtown Wheaton. While the original intent of the plan was to introduce the county to the neighborhood greenway concept, the presence of Interstate-495 in the plan area presents several design challenges that make a continuous neighborhood greenway complicated and costly to implement. Therefore, this short-term concept includes segments of sidepaths and conventional bike lanes, rather than one continuous neighborhood greenway along the corridor. The Bicycle Master Plan, however, could recommend a continuous neighborhood greenway between Glenmont and Silver Spring, as a long-term recommendation.

While sidepaths and bike lanes are recognized bikeway types, neighborhood greenways do not yet exist in Montgomery County. Also known as bicycle boulevards or slow streets, neighborhood greenways are streets with low volumes of motorized traffic (less than 2,000 vehicles per day), slow vehicular speeds (less than or equal to 25 mph) and are designed to give priority to bicycling and walking.

Neighborhood greenways use signs, pavement markings and speed and volume management measures to discourage through-trips by motor vehicles and create safe, convenient crossings of busy arterial streets. Specific infrastructure treatments can be installed to help bridge gaps in the low-stress street network to slow traffic and/or improve safety. Some of these treatments may be:

- Traffic diverters (full or partial) at key intersections to reduce cut-through traffic while permitting passage by pedestrians and bicyclists.
- Assigning priority to the neighborhood greenway at intersections with stop controls at two legs so bicyclists can ride with few interruptions.

- Neighborhood traffic circles and mini-roundabouts at minor intersections to slow traffic but allow bicyclists to maintain momentum.
- Measures to reduce traffic speeds, including speed humps, speed cushions, chicanes and neckdowns.
- Wayfinding signage to guide bicyclists to the neighborhood greenway and key destinations along it.
- Shared lane markings (sharrows) where appropriate to alert drivers to the path bicyclists need to take on a shared roadway.
- Crossing improvements at the intersection of major streets, including traffic signals, median refuges and curb extensions, to facilitate safe walking and bicycling crossings.

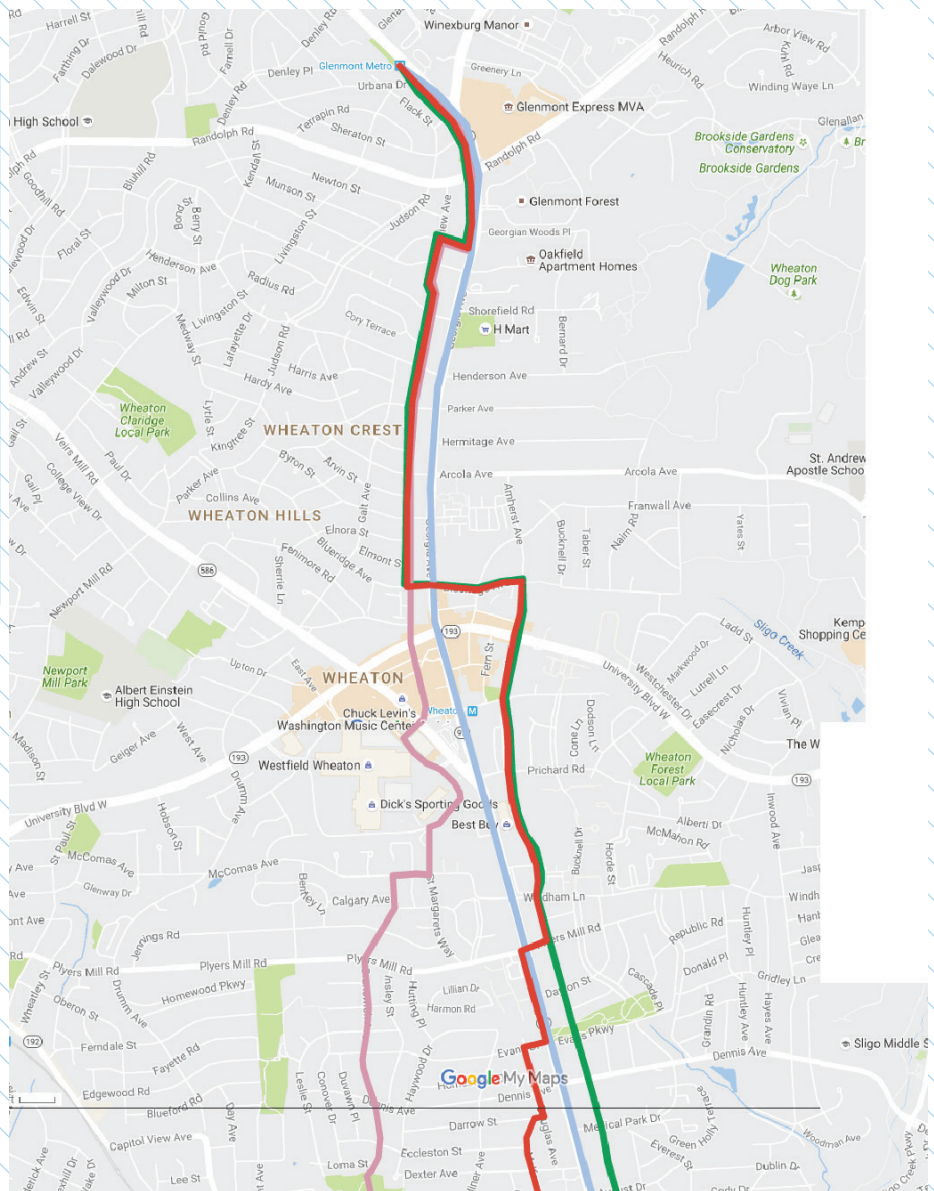
Many of the recommendations in this concept plan are detailed in the design toolkit in the appendix to the Bicycle Master Plan.

SECTIONS OF THE CONCEPT PLAN

- 1 Routes Considered
- 2 Comparison of Routes
- 3 Preferred Routes
- 4 Bikeway Treatments for Preferred Route

ROUTES CONSIDERED

Potential routes considered are shown in the map shown to the right. The table that follows describes each potential route and its advantages and disadvantages.



03

COMPARISON OF ROUTES

NAME	DESCRIPTION	ADVANTAGES	DISADVANTAGES
Georgia Avenue	The Glenmont Greenway and Grandview Avenue from Wheaton to Glenmont. Sidepath along Georgia Avenue from the Wheaton Metrorail Station to Spring Street via I-495 bicycle-pedestrian bridge.	<ul style="list-style-type: none"> • Flattest route. • Most direct route. • Bicycle-pedestrian bridge crossing I-495 already exists. 	<ul style="list-style-type: none"> • Building an off-street bikeway would require substantial construction and moving utilities, in addition to potential additional right-of-way purchases. • Without redevelopment, many existing driveway and curb cuts on Georgia Avenue around Seminary Road make a low-stress off-street facility difficult to construct. • Without ample setbacks and landscaping, a sidepath along Georgia Avenue will be an uncomfortable, unpleasant experience due to adjacent automotive traffic.
Westside	The Glenmont Greenway and Grandview Avenue from Wheaton to Glenmont. From the Wheaton Metrorail Station to Spring Street along local streets and a new shared-use bridge crossing I-495 at Forest Glen Park.	<ul style="list-style-type: none"> • Creates an additional I-495 crossing for pedestrians and bicyclists, increasing the number of routing options for these modes. • Generally relies on low-stress neighborhood streets to connect the central business districts (CBDs). 	<ul style="list-style-type: none"> • Complicated, indirect route between Wheaton and Silver Spring. • Significant grade changes north of I-495. • New bridge is a costly expense.
Eastside	The Glenmont Greenway and Grandview Avenue from Wheaton to Glenmont. From the Wheaton Metrorail Station to Spring Street along Woodland Drive and other local streets.	<ul style="list-style-type: none"> • Creates an additional I-495 crossing for pedestrians and bicyclists, increasing the number of routing options. • Closely follows Georgia Avenue; very direct. • Generally relies on low-stress neighborhood streets to connect the CBDs. 	<ul style="list-style-type: none"> • New bridge is a costly expense. • Certain sections of the route would need to wait for redevelopment for right-of-way to become available. • Two blocks of Woodland Drive are one-way streets. • One block of Woodland Drive from Dennis Avenue to Evans Parkway is steep.
2nd Avenue	The Glenmont Greenway and Grandview Avenue from Wheaton to Glenmont. Short sidepath on Georgia Avenue south of Wheaton. Along 2nd Avenue and other local streets from Wheaton Metrorail Station to Spring Street via I-495 bicycle-pedestrian bridge.	<ul style="list-style-type: none"> • Bicycle-pedestrian bridge crossing I-495 already exists. • Generally relies on low-stress neighborhood streets to connect CBDs. • Closely follows Georgia Avenue; very direct. 	<ul style="list-style-type: none"> • More route jogs than some other alignments. • Multiple Georgia Avenue crossings may dissuade some users from using this alignment.

After considering estimated cost of construction, feasibility and topography, the study team selected the 2nd Avenue route to pursue as a short-term bikeway between the Glenmont Metrorail Station and downtown Silver Spring.

Starting at the Glenmont Metrorail Station, the bikeway travels south along the Glenmont Greenway, located on the west side of Georgia Avenue between the Metro parking garage and the sidewalk. After crossing Randolph Road the bikeway turns right (west) onto Maston Street and then left (south) onto Grandview Avenue. Entering the Wheaton CBD, it turns left (east) onto Blueridge Avenue, crosses Georgia Avenue, and then turns right (south) onto Amherst Avenue and crosses University Blvd. The bikeway heads right (west) onto Plyers Mill Road, crosses Georgia Avenue a second time, and travels left (south) along the west side of Georgia Avenue for a block. It then turns right (west) onto Evans Drive and left (south) onto Douglas Avenue, then heads right (west) on Darrow Street and left (southwest) onto McKenney Avenue. It turns right (west) onto Hildarose Drive, left (south) onto Greeley Avenue, and right (west) onto Clark Place, and then left (south) onto Darcy Forest Drive. The bikeway turns left (east) onto Forest Glen Drive, traveling along the north side of the road, and then turns right (south) onto the west side of Georgia Avenue. It travels straight along the Interstate-495 bicycle-pedestrian bridge / underpass, heads right (west) onto Lansdowne Way via a u-turn to the right and a left turn, turns left (south) on 2nd Ave, left (east) on Riley Rd for 50 feet to turn right (south) through Montgomery Hills Park, and then right (west) on Seminary Pl for 50 feet to turn left (south) on Seminary Rd. It then crosses Linden Lane and continues straight (south) onto 2nd Avenue, crosses 16th street, and terminates at Spring Street.

05

BIKEWAY TREATMENTS FOR PREFERRED ROUTE

This section details the improvements recommended to create a low-stress bikeway between Glenmont and downtown Silver Spring. A comprehensive wayfinding plan should also be completed to direct users to the neighborhood greenway and help them navigate it. Proposed treatments are described starting at the Glenmont Metrorail Station and heading south to downtown Silver Spring.

The Glenmont Greenway

Treatment: Sidepath

From the Glenmont Metrorail Station, the bikeway travels south along the Glenmont Greenway on the west side of Georgia Avenue and will pass over Randolph Road when the ongoing interchange project is complete.

This analysis presupposes that the reconstructed Randolph Road intersection has adequate crossing facilities and signal timing, which provides sufficient bicyclist crossing time.

- Roads intersecting the Glenmont Greenway (Sheraton Drive, Judson Road and Urbana Drive) should have signage installed beneath their existing stop signs that advises drivers to look for two-way bicycle traffic on the greenway. See example (right).

Mason Street

Treatment: Neighborhood Greenway

The bikeway turns west onto Mason Street and then south onto Grandview Avenue.

- Install a marked crosswalk at the intersection of Georgia Avenue and Mason Street.

- This crosswalk will aid northbound bicyclists transitioning from to Mason Street to the Glenmont Greenway by improving motorist awareness of crossing activity.

Grandview Avenue from Mason Street to Arcola Avenue

Treatment: Neighborhood Greenway

- Construct a traffic circle at the intersection of Mason Street and Grandview Avenue.
 - This traffic circle will reduce motor vehicle speeds while allowing bicyclists to travel smoothly through the intersection.
- Install speed cushions.
 - This treatment will slow motorized traffic without impeding bicyclists.
- Switch stop signs from north/south to east/west at Lindell Street, Henderson Avenue, Parker Avenue, and Arcola Avenue.
 - This improvement prioritizes the neighborhood greenway as the through movement, making it more convenient and quicker to use.
 - With the removal of the reorientation of the stops signs along Grandview Avenue, traffic calming may be needed.
- Tighten the curb radius at the northwest corner of Weisman Road and Grandview Avenue.
 - This tightened radius will slow southbound right turns and northbound left turns, making the intersection safer for all road users.



Two-way bicycle traffic signage (Recommendation 1)

- ① Spot Recommendations
- M** Glenmont Metrorail Station
- Proposed Bikeways
 - — — — Separated Bikeways
 - — — — Shared Roads



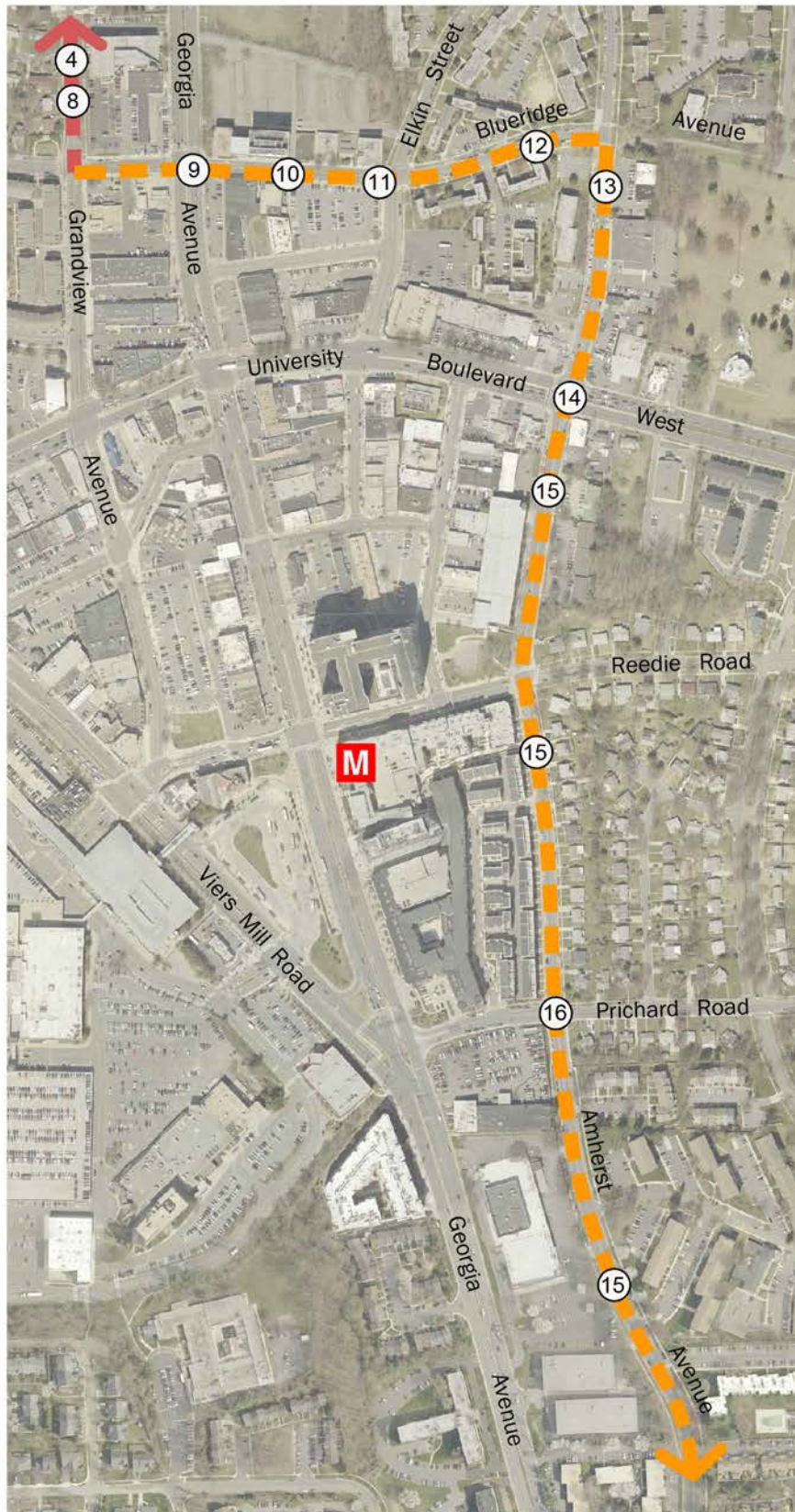


① Spot Recommendations

Proposed Bikeways

- Separated Bikeways
- Shared Roads

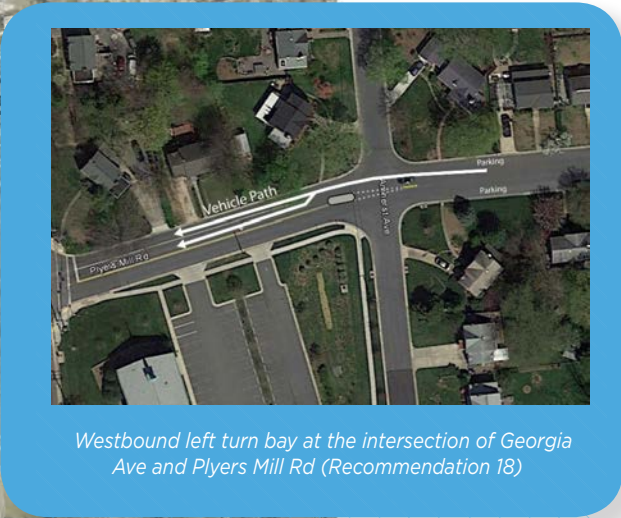
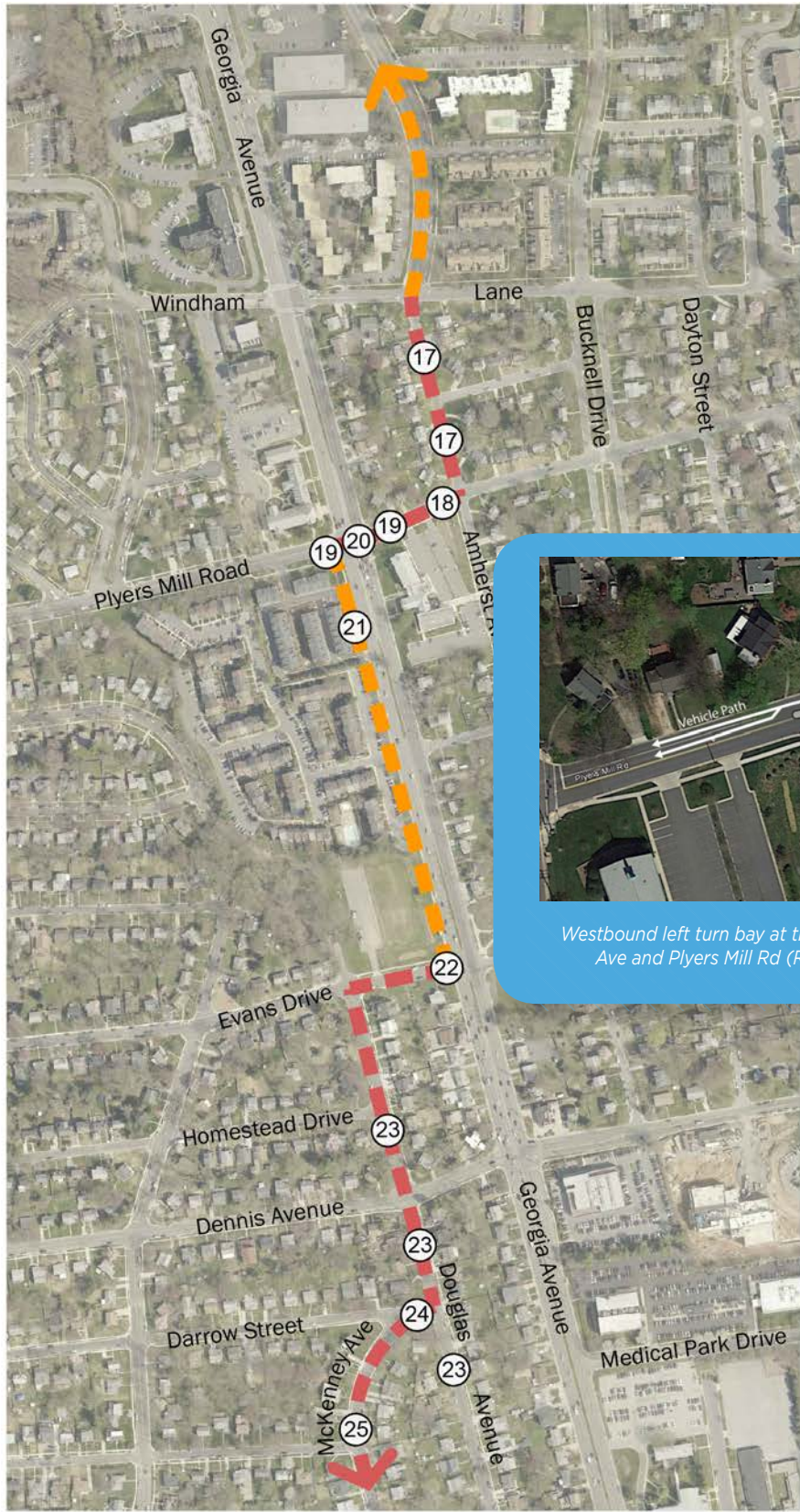




- ① Spot Recommendations
- M** Wheaton Metrorail Station

- Proposed Bikeways
-  Separated Bikeways
 -  Shared Roads





Westbound left turn bay at the intersection of Georgia Ave and Plyers Mill Rd (Recommendation 18)

- ① Spot Recommendations
- Proposed Bikeways
 - — — — Separated Bikeways
 - — — — Shared Roads





Example of Speed Cushions (Recommendation 25)



Existing curb ramps at northwest corner of Georgia Avenue and Forest Glen Road (Recommendation 32)

- ① Spot Recommendations
- M** Forest Glen Metrorail Station

Proposed Bikeways

- Separated Bikeways
- Shared Roads





Existing curb ramps at southwest corner of Georgia Avenue and Forest Glen Road (Recommendation 32)



Connection from Lansdowne to Interstate-495 bridge (Recommendation 33)

- ① Spot Recommendations
- M** Forest Glen Metrorail Station
- Proposed Bikeways
 - Trails
 - Separated Bikeways
 - Striped Bikeways



