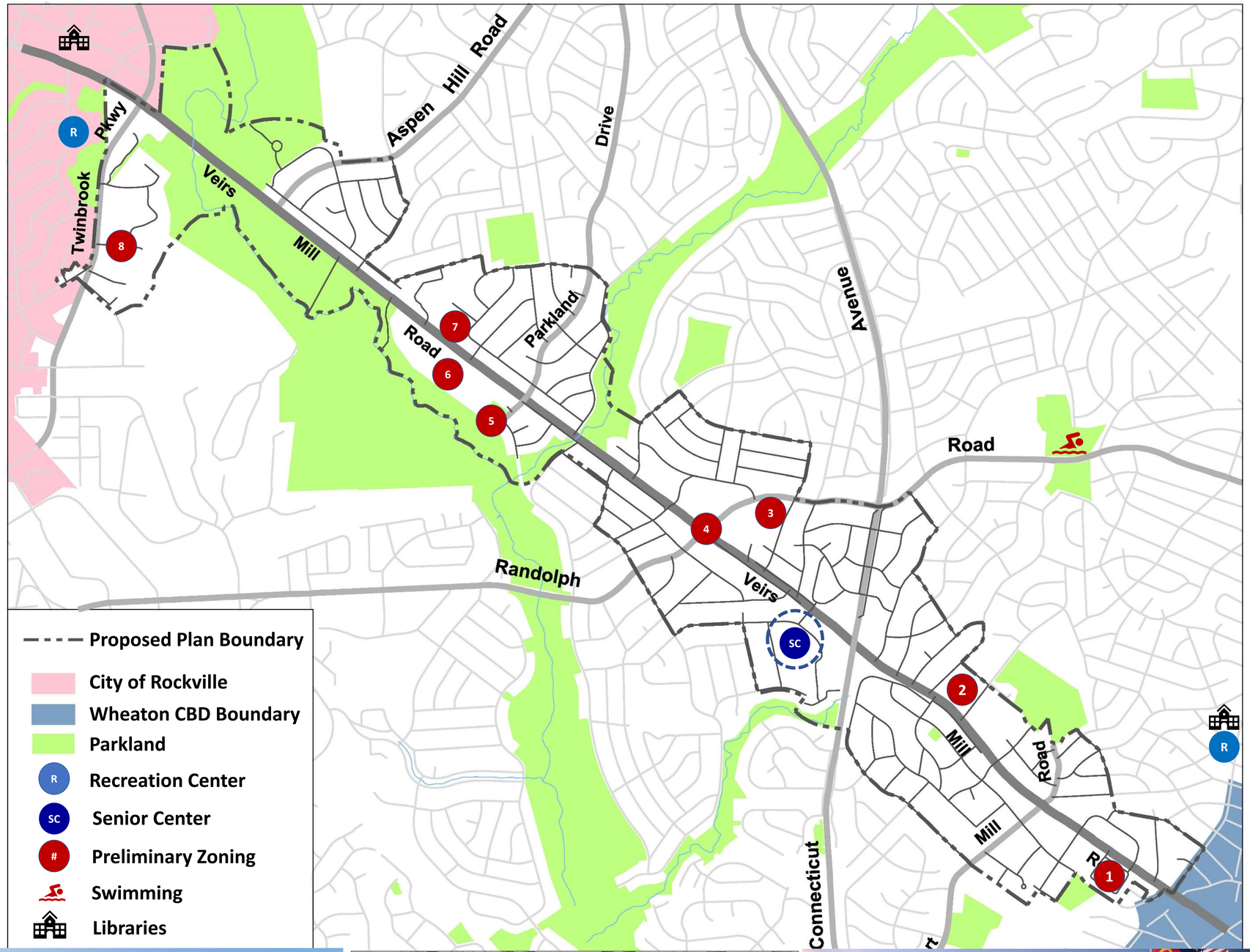
Land Use, Zoning and Community Facilities



PRELIMINARY RECOMMENDATIONS

Corridor Wide

- Preserve and maintain the existing residential scale and character.
- Retain majority of existing multi-family residential development as a continued source of market affordable housing.
- Rezone select properties near the commercial center, Metrorail, or future Bus Rapid Transit stations to achieve variation in housing types and ensure appropriate transitions to the existing residential scale.
- Encourage continued community partnerships with the Department of Housing and Community Affairs and the Montgomery Housing Partnership to advance neighborhood development and revitalization.
- Improve connectivity between transit and community facilities, including schools, parks, senior centers, libraries and institutional uses.

Newport Mill District

1. Rezone the Town and Country Townhouses from RT-10 to the Townhouse Medium Density (TMD) zone.
2. Rezone the Montclair Manor Townhouses from RT-12.5 to the Townhouse Low Density (TLD) zone.

Connecticut / Randolph District

3. Rezone the Bushey Drive property from R-60 to a Commercial Residential Neighborhood (CRN) zone to allow the construction of medium density residential uses near the commercial center.
4. Rezone the properties at the northeast quadrant of the Veirs Mill Road and Randolph Road intersection, Stoneymill Square and Veirs Mill Village to a Commercial Residential Town (CRT) zone to allow mixed-use development which provides neighborhood serving amenities and additional housing options.

Provide an improved gateway to the Holiday Park Senior Center from Veirs Mill Road.

Introduce activities for youth and other community members at the Holiday Park Senior Center during off-peak hours.

Robindale District

5. Rezone the MCNPPC property from R-H to R-200, consistent with the zoning for the Rock Creek Regional Park.
6. Rezone the Rock Creek Terrace Apartments from R-H to R-10.
7. Rezone the existing properties between Robindale Drive and the Shrine of Saint Jude Church on Veirs Mill Road from R-60 to a Commercial Residential Neighborhood (CRN) zone.

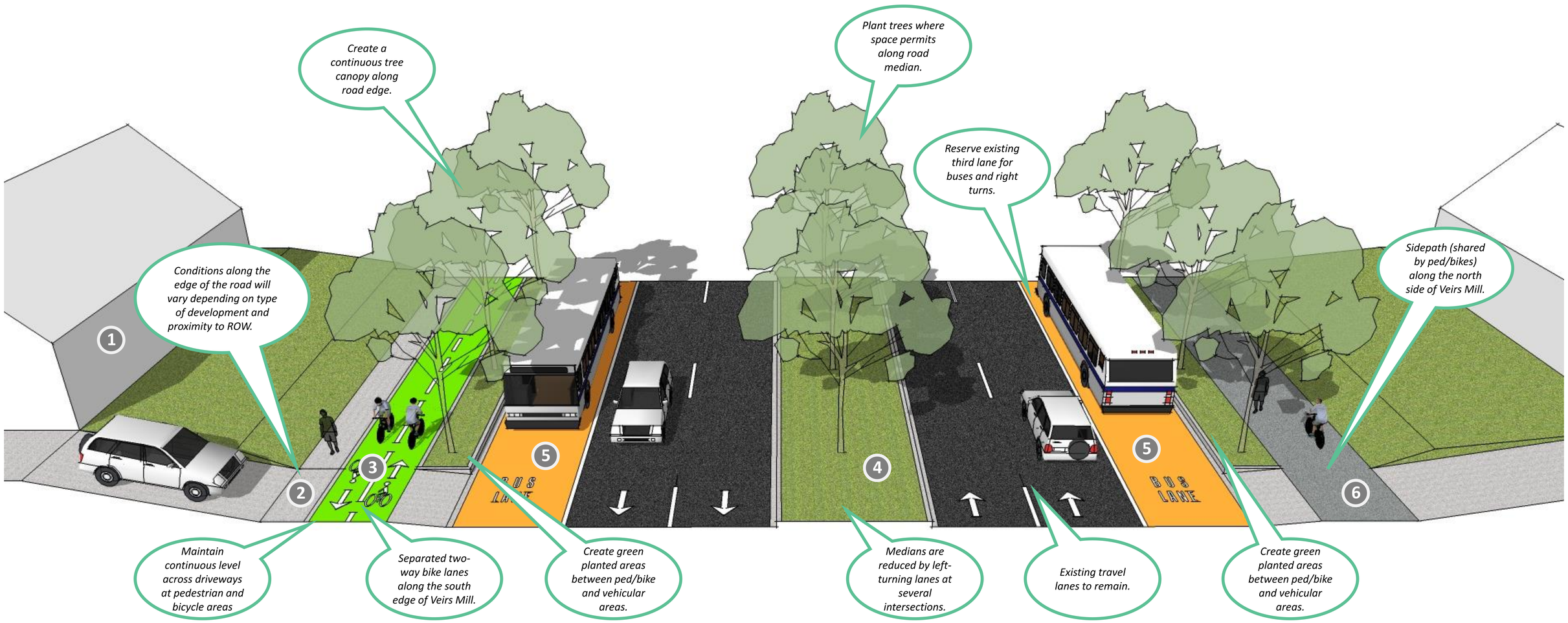
Twinbrook District

8. Develop a zoning strategy for the Halpine Park LLC properties which preserves a portion of the existing market affordable housing and produces higher density housing consistent with the context of the neighborhood in closer proximity to Metrorail.

Images of the Holiday Park Senior Center (below left) and the site plan and renderings (below center and right) of the Future Wheaton Library and Recreation Center

Implement “complete streets” along Veirs Mill Road

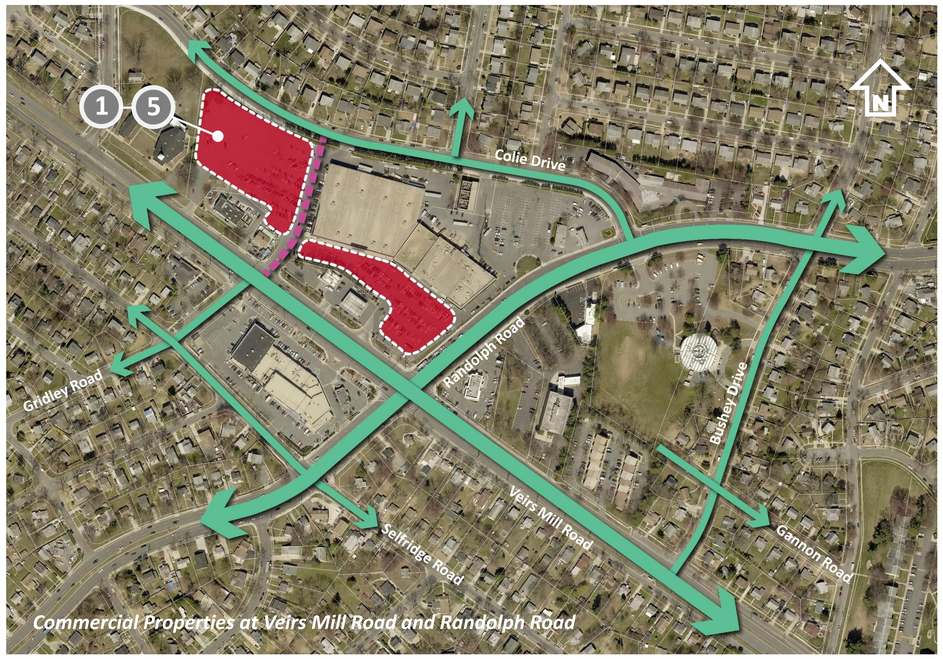
Implement a complete streets approach to create a safe, walkable and bicycle friendly environment on Veirs Mill road through the introduction of adequate sidewalks with landscaped buffers, street trees and protected bicycle facilities along the length of the



(**1**) Existing residential development to remain (**2**) Provide continuous sidewalks protected by a green buffer with trees (**3**) Implement a two way separated bicycle lane along the south side – configuration to vary depending on available space (**4**) Improve landscaping along median where feasible (**5**) Dedicated bus and right-turn lane for the long-term bus rapid transit alternative (**6**) Provide a sidepath along the north side of Veirs Mill (**7**) Mixed-use development may occur along Veirs Mill Road over the long term, where commercial properties exist today.

Commercial Properties

Promote short and long-term improvements on commercial properties to create neighborhood serving centers that include open spaces for public use. Create connections to adjacent existing neighborhood streets to improve connectivity and walkability.

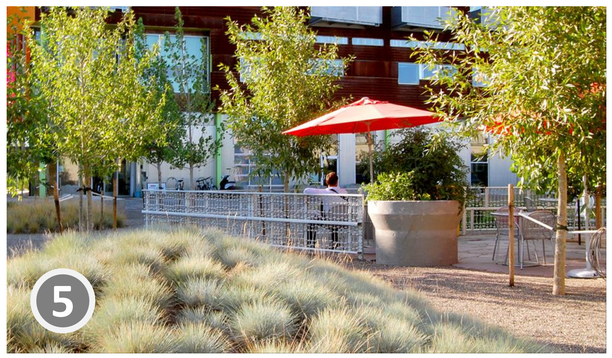


Short Term

Focus on surface parking lots to identify potential areas where open spaces for public use could be established. Improve streetscape, storm water management, and existing storefronts.

Long Term

Mixed-use redevelopment with residential uses, new internal street connections, and open spaces for public use.



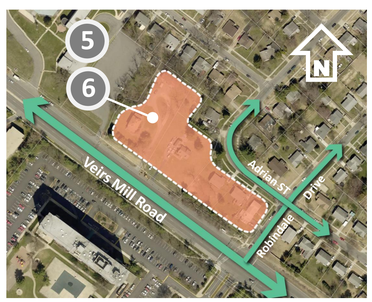
Example of retrofitted parking lot to accommodate parking and occasional events.
(**1**) Overall view (**2**) Overall view during event (**3**)(**4**) Retrofits to add drainage, landscaping, and landscape panels between parking spaces (**5**) Seating area within new landscape.

(**1**) Mixed-use development (**2**) Open spaces for public use (**3**) Internal streets lined with active uses (**4**) Lower-scale residential uses (**5**) Integrated mobility alternatives

Urban Design

Diversity in residential alternatives

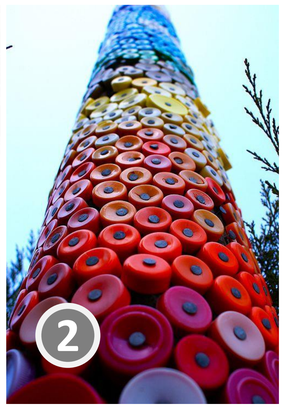
Support increasing single-family residential uses and redevelopment in multi-family complexes and key single-family properties to support bus rapid transit and overall walkability goals. Maintain prevailing residential scale when introducing additional density on predominantly single-family residential blocks.



(**1**) Higher density multi-family development closer to Twinbrook Metro(**2**) Existing units in park setting to be preserved (**3**) New development should engage adjacent Rock Creek Park and build connections where feasible (**4**) New multi-family should provide a centralized area for public use (**5**)(**6**) Promote alternatives for higher-density low-rise housing prototypes on key properties along Veirs Mill Road.

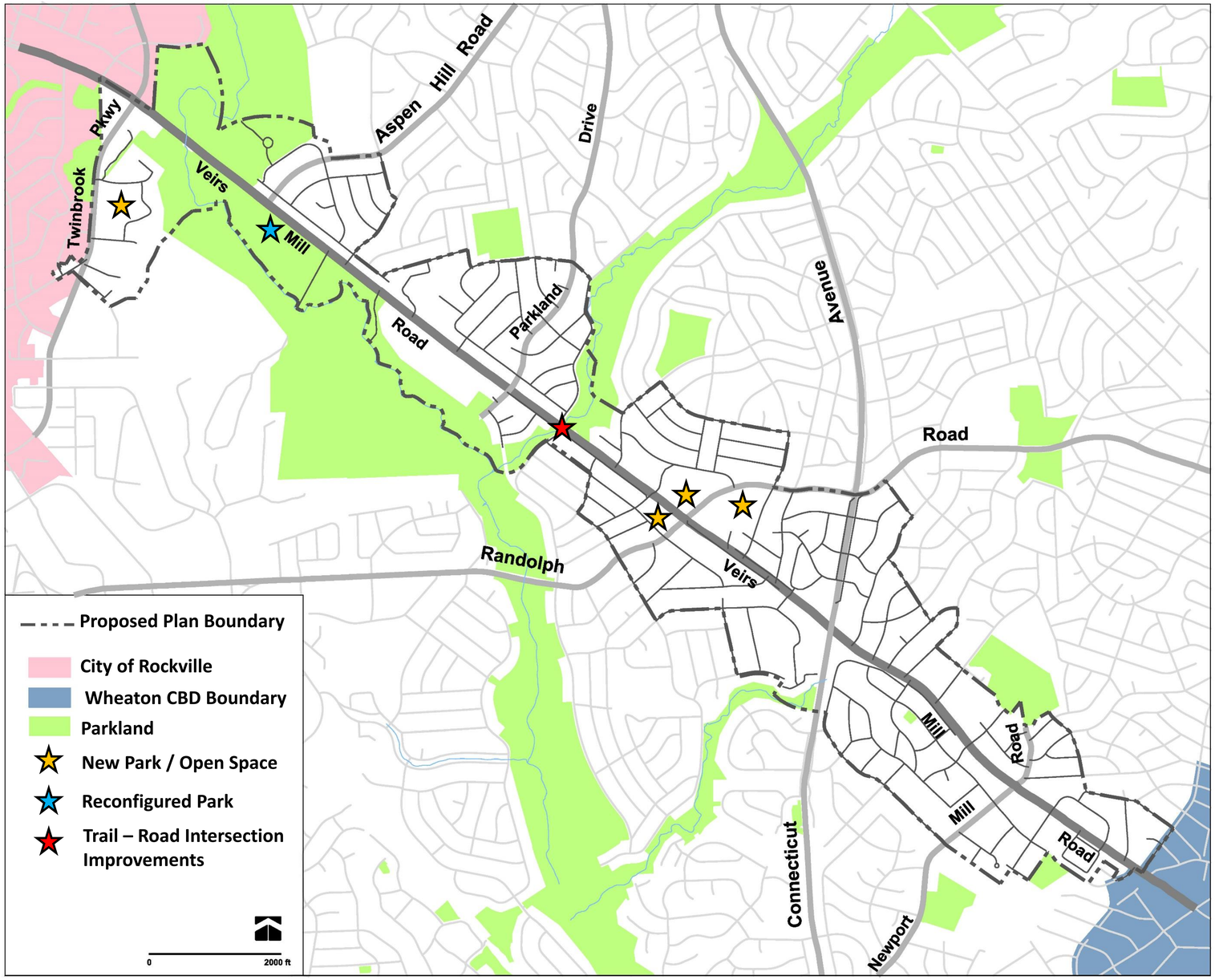
Create Local Character

Promote partnerships to create local identity at frontage roads and future bus rapid transit station areas with strategies such as enhanced tree canopy, improved pedestrian areas, landscaped medians that include native species, and seeking opportunities for public art.



(**1**) Enhanced median landscape including native species and storm water management (**2**) Partner with utility company to enhance appearance of electrical pols in the short term (**3**) Plant street trees along residential sidewalks where missing (**4**) Introduce separated bicycle facilities (**5**) Explore opportunities for public art at bus shelters and bus rapid transit shelters (**6**) Promote creative temporary use of frontage road space for community events.

Parks, Trails and Open Space



PRELIMINARY RECOMMENDATIONS

Corridor Wide

- Improve the visual presence of community destinations such as parks, trails, open spaces and community facilities within and adjacent to the plan area through enhanced connections and wayfinding.

Connecticut / Randolph District

- Create a minimum ½ acre Neighborhood Green Urban Park at the Bushey Drive property when the Montgomery County Department of Recreation Administrative Offices are redeveloped. The park should include neighborhood amenities including play structures and shaded seating.
- Create a Neighborhood Green, a minimum of ¾ acre, at the Stoneymill Square property when it redevelops. The Neighborhood Green should include hardscape elements and lawn areas to serve as a gathering space and focal point for the Connecticut / Randolph District. It should be formally planned with visibility from Veirs Mill Road and the future Bus Rapid Transit station.
- Create a minimum ¼ acre Neighborhood Green Urban Park at the Veirs Mill Village property when it redevelops. The park should offer a flexible lawn area, integrated play structures and shaded seating.
- Identify opportunities to connect to Matthew Henson State Park from the east

Robindale District

- Redesign Parklawn Local Park when the Bus Rapid Transit and/or improved pedestrian and bicycle facilities are constructed to include an improved frontage along Veirs Mill Road, improved parking and ingress/egress, activation of the park with a playground or dog park, renovation of the fields to improve drainage and relocation of the Rock Creek Trail.

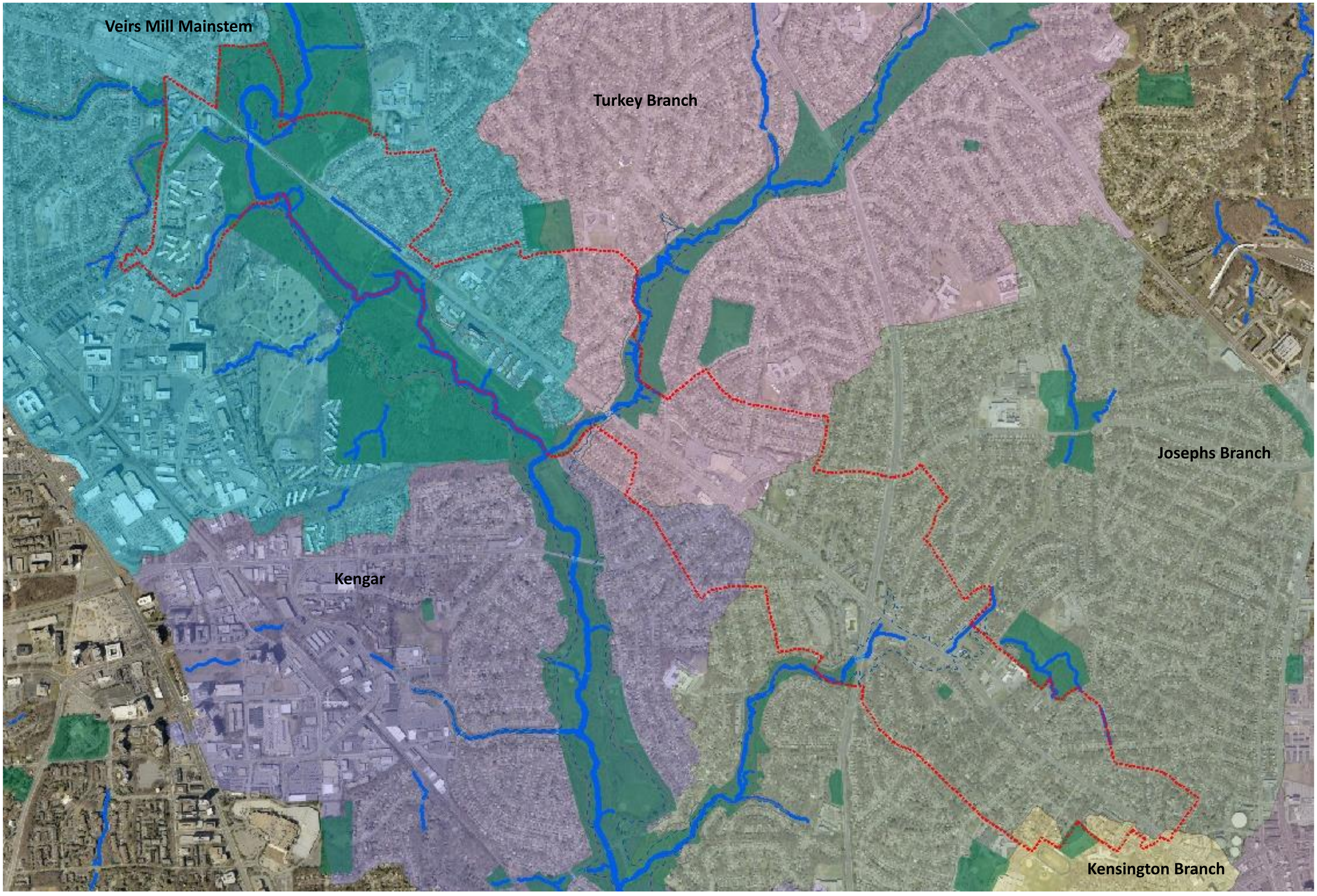
Twinbrook District

- With redevelopment of the Halpine Apartments:
  - Provide a paved trail connection to the new Twinbrook Trail connector to the Rock Creek Trail.
  - Provide a Neighborhood Green Urban Park, at least ½ in size, to include play structures, shaded seating and a flexible lawn area.

Examples of Neighborhood Green Include:

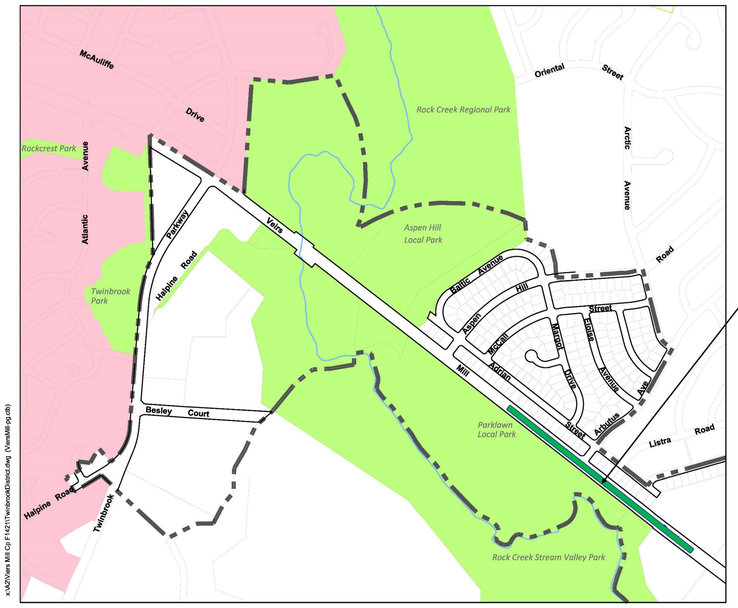
- *TAXI Development, Denver CO – Public Open Space – Converted Freight Yard (Left)*
- *Mosaic District Central Green, Merrifield VA (Center and Right)*

Environment



Environment

Twinbrook District



Enhance median with stormwater management and/or street trees

Opportunities to add treecover and/or stormwater management

Robindale District

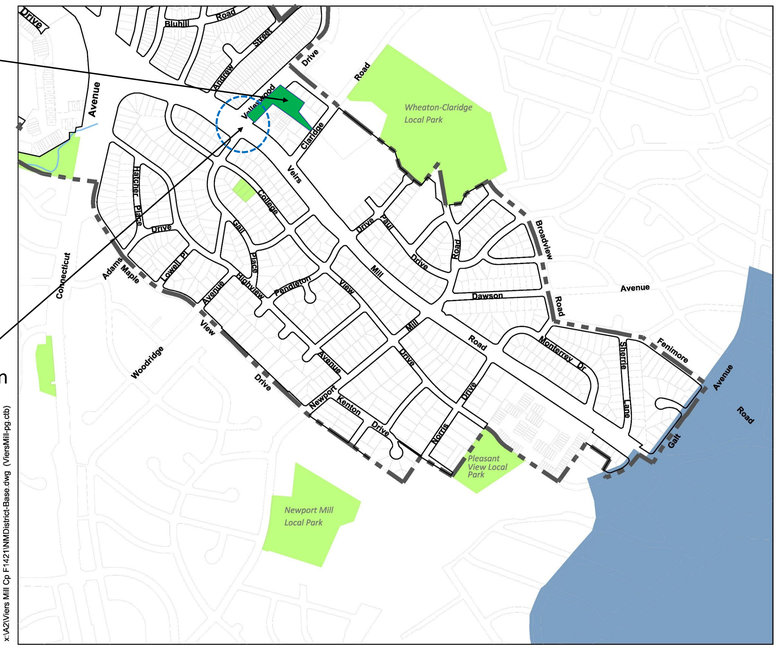
Opportunities to add treecover and/or stormwater management

Connecticut/Randolph District

Opportunities to retrofit existing parking areas with treecover and/or stormwater management

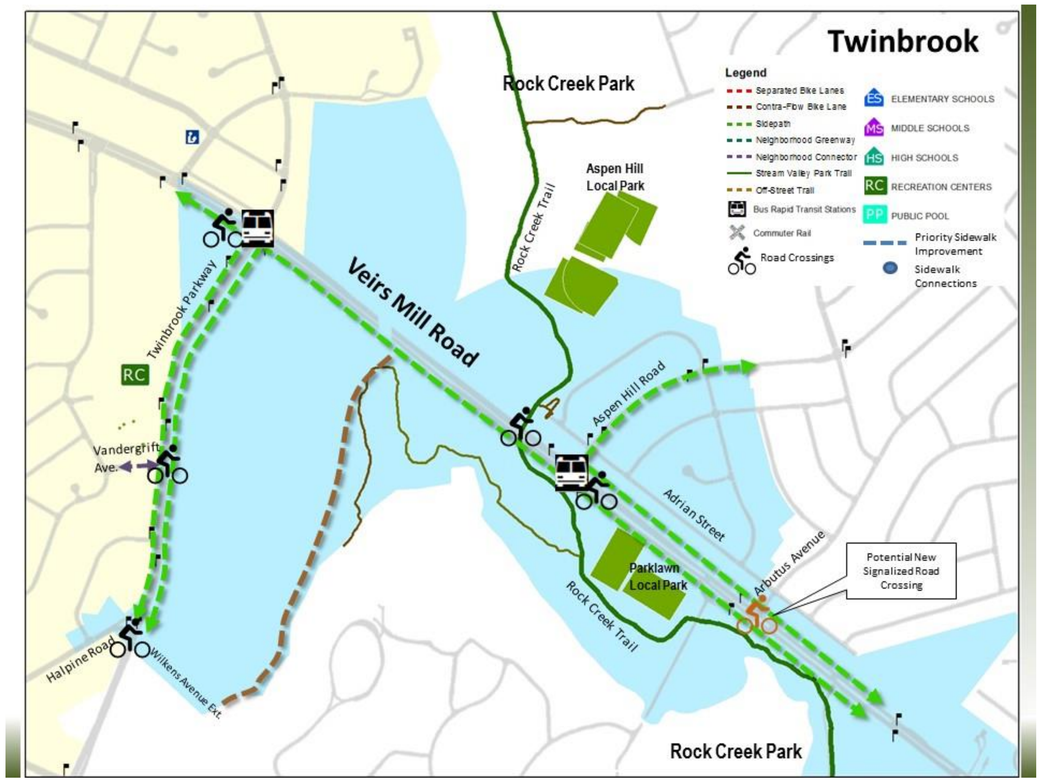
Potential for stream enhancement and flood reduction

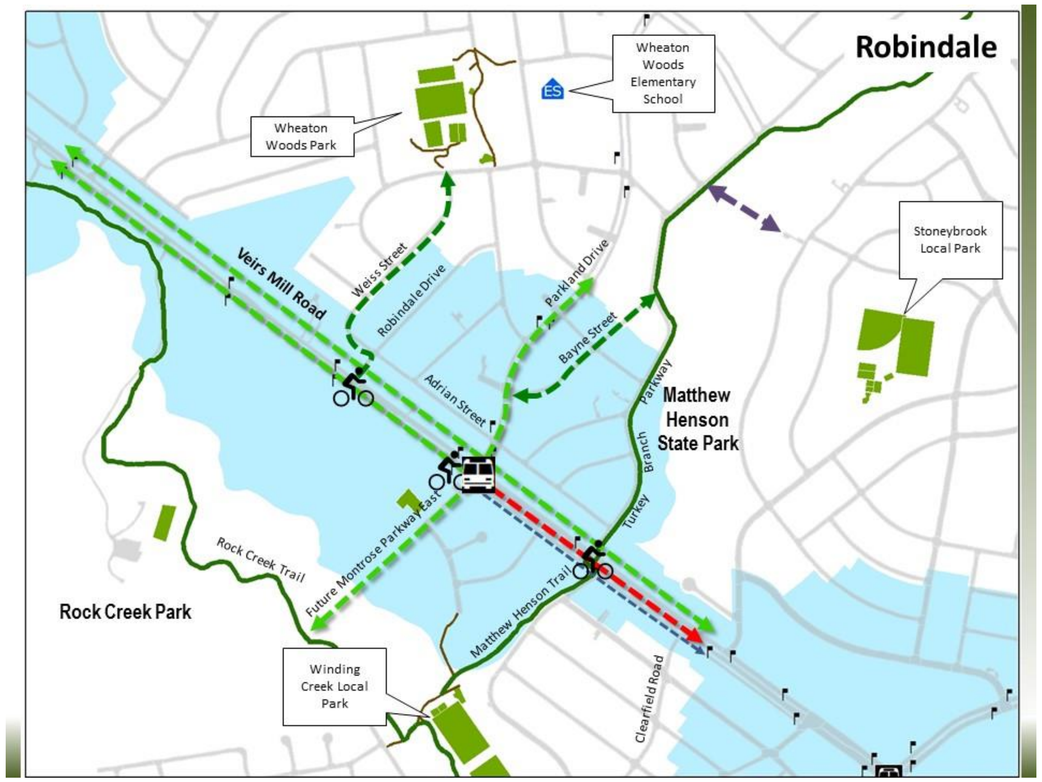
Newport Mill District

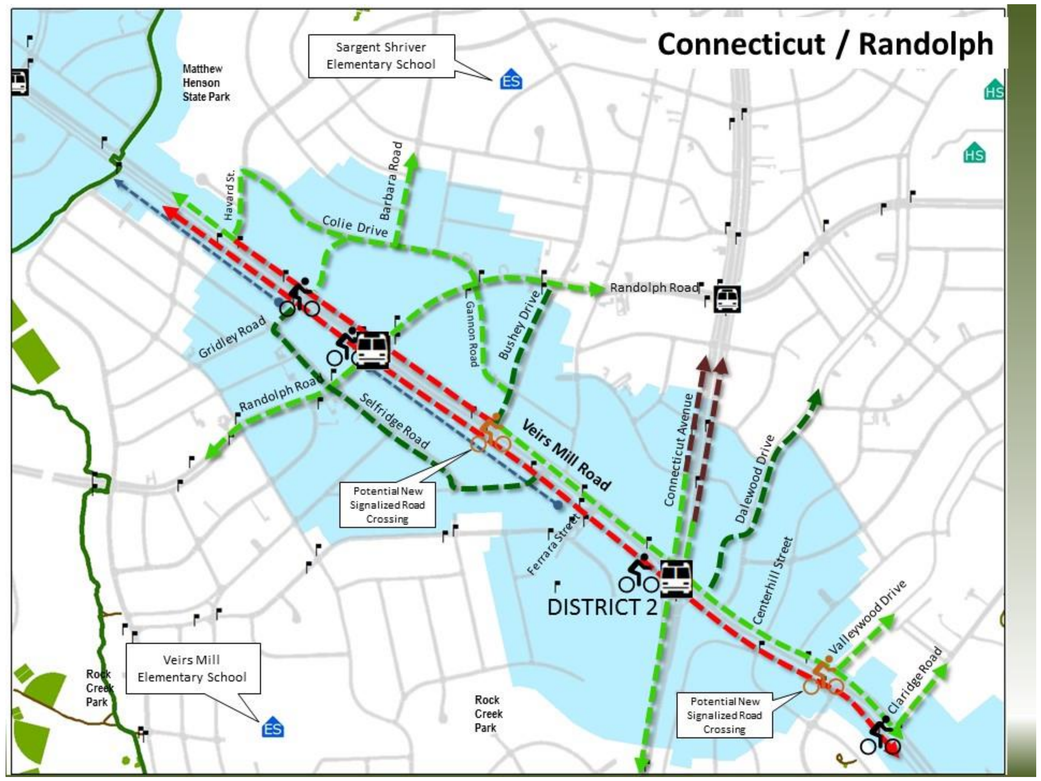


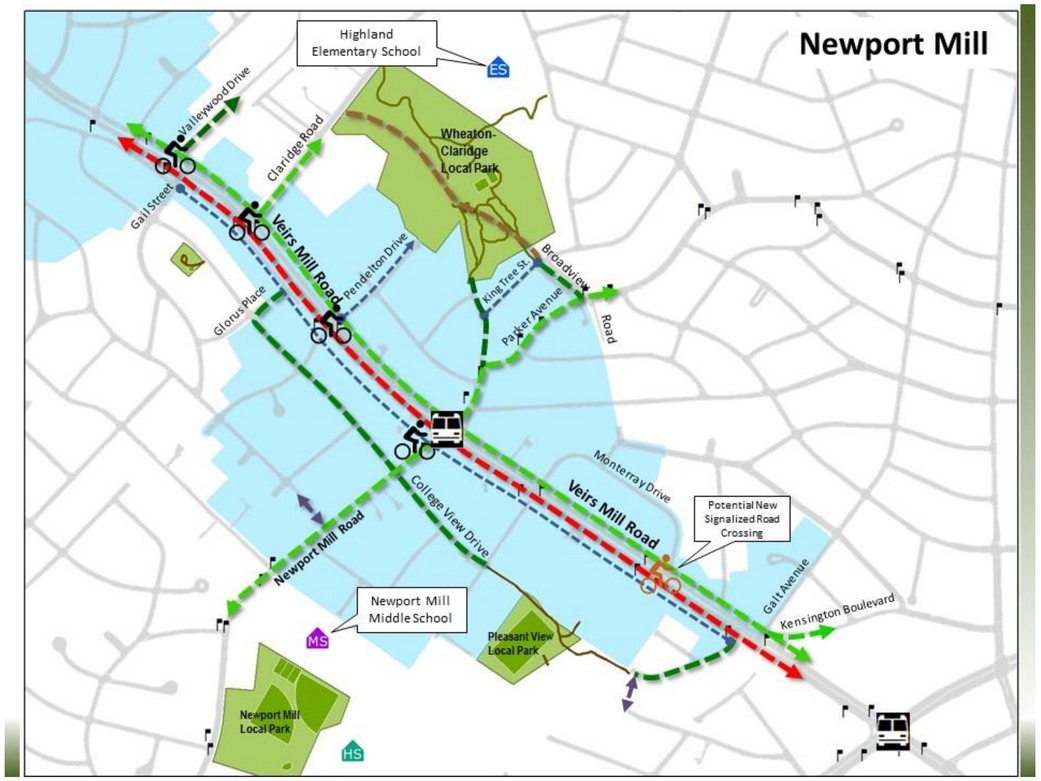
Transportation

Preliminary Bikeway and Sidewalk Recommendations



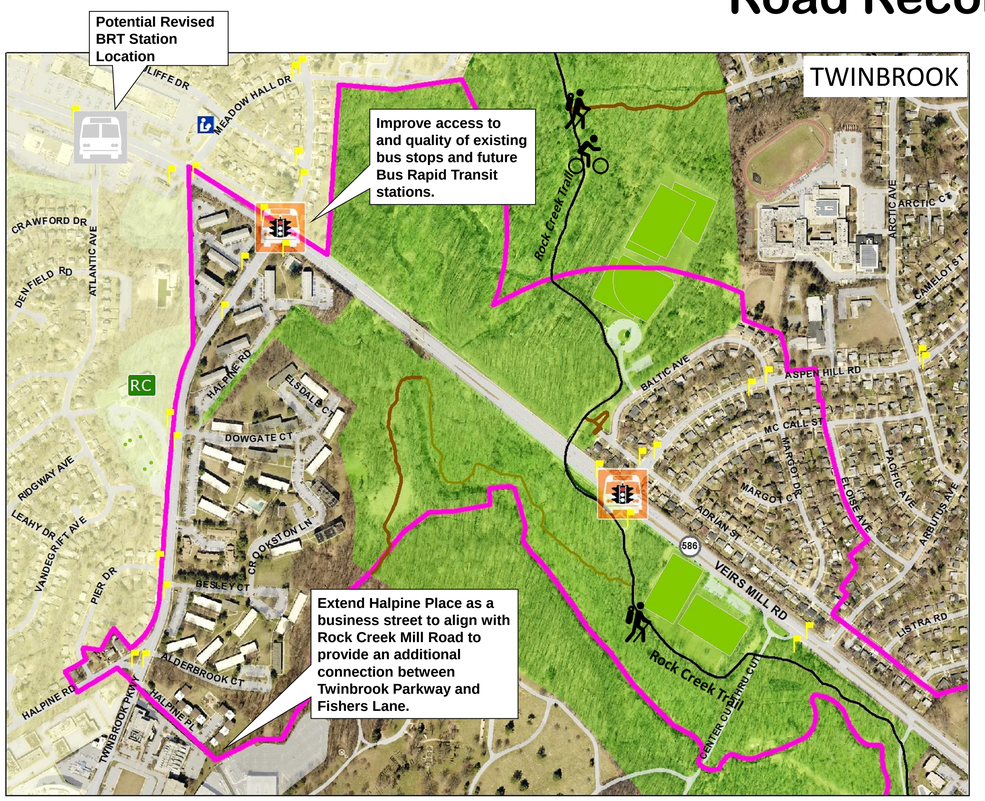


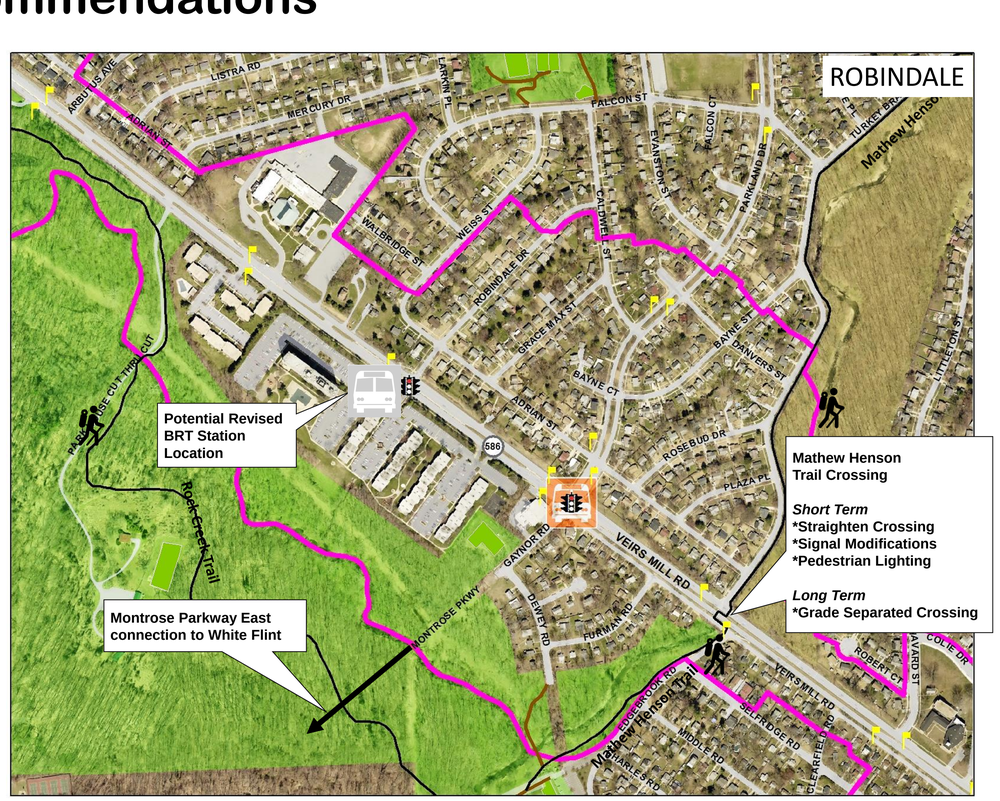


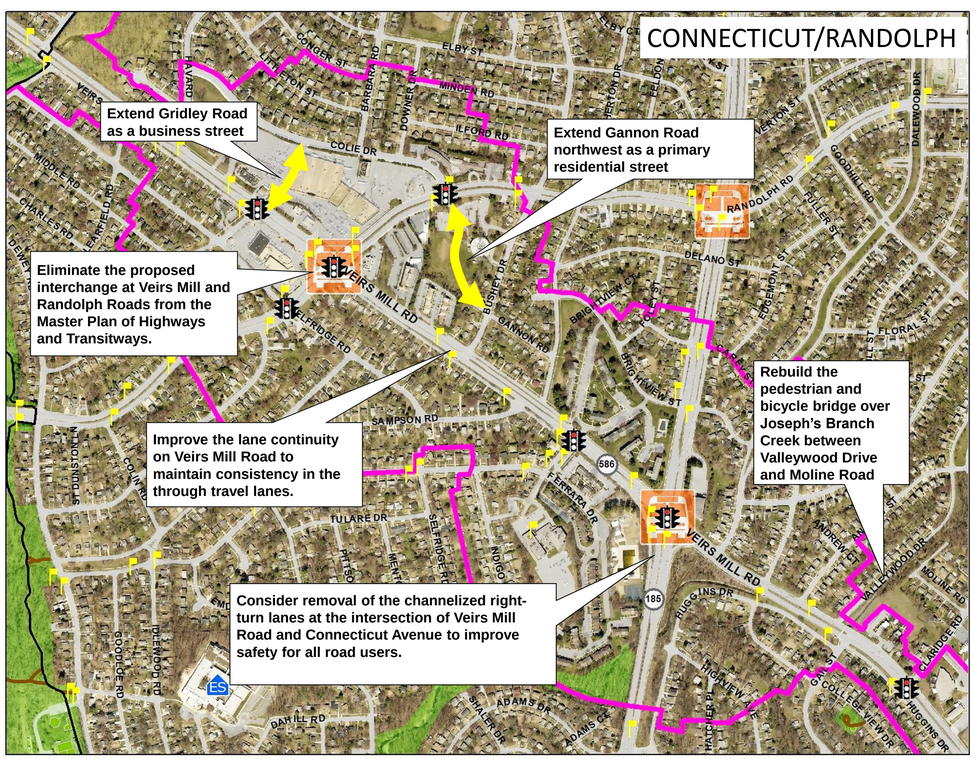


Transportation

Road Recommendations







Other Recommendations

- Introduce new signals on Veirs Mill Road
- New safety signage
- Reduce speed limit
- Introduce curb extensions to reduce pedestrian crossing distances
- High visibility crosswalks
- Improve road design with travel lane modifications and lane reductions
- Reduce intersection radii
- Study limiting through movements as some locations
- Long-Term Exclusive BRT Lanes

LEGEND

- Signalized Intersections
- Planned Bus Rapid Transit Stations
- Bus Stops (Ride-On and WMATA)

Sample Bikeway Classifications

NEIGHBORHOOD GREENWAY

Neighborhood greenways are streets with low motorized vehicle traffic volumes and speeds, designed and designated to give walking and bicycling priority. They use signs, pavement markings and speed and volume management measures to discourage through trips by motor vehicles and create safe, comfortable crossings of busy arterial streets.

NEIGHBOR-HOOD GREENWAYS

TYPICAL APPLICATION

- Neighborhood greenways use existing low-stress streets that parallel a major corridor.
- Roads with speeds less than or equal to 25 mph and volumes less than 3,000 ADT.
- If these conditions are not met, the treatments explained on pages 42 to 46 should be employed to reach these guidelines.

CONSIDERATIONS

- Given Montgomery County's non-grid street network, identification of connected, parallel routes may be difficult in some areas. It may be necessary to re-route short segments of neighborhood greenways along higher-stress routes, in which case separated bikeways, such as sidepaths or separated bike lanes, will be necessary.

GUIDANCE

- Each of the subsequent pages provide additional guidance for implementation:
  - Traffic calming via raised pavement (page 43).
  - Traffic calming via street narrowing (page 44).
  - Traffic diversion (page 45).
  - Crossing treatments (page 46).

REFERENCES

IPBI, Alta Planning + Design, Portland State University. Bicycle Boulevard Planning and Design Guidebook. 2009.

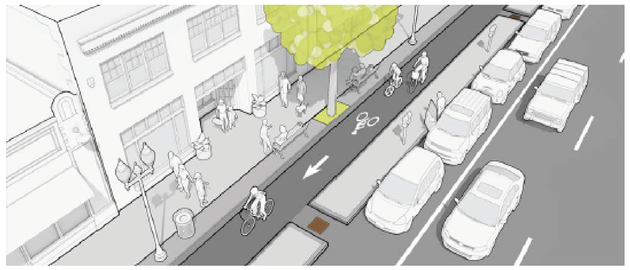
NACTO. Urban Bikeway Design Guide. 2nd Edition.

Portland Bureau of Transportation. Neighborhood Greenway Assessment Report. 2015.

SEPARATED BIKE LANES

Separated bike lanes are exclusive bikeways that combine the user experience of a sidepath with the on-street infrastructure of a conventional bike lane. They are physically separated from motor vehicle traffic and distinct from the sidewalk.

SEPARATED BIKE LANES



TYPICAL APPLICATION

Considered on any road with one or more of the following characteristics:

- Total traffic lanes: 3 lanes or greater.
- Posted speed limit: 30 mph or faster.
- Average daily traffic: 6,000 vehicles or greater.
- Parking turnover: frequent.
- Bike lane obstruction: likely to be frequent.
- Designated as truck or bus routes.

Preferred in higher density areas, adjacent to commercial and mixed-use development, and near major transit stations or locations where observed or anticipated pedestrian volumes will be higher.

GUIDANCE

On roads with two to four through lanes, one-way directional separated bike lanes are preferred to a two-way separated bike lane on one side of the street for the following reasons:

- Follow normal traffic flows, whereas two-way separated bike lanes can create unexpected movements.
- Simpler transitions to other facilities.
- Less likely need for signal modifications.

Separated bike lanes can provide different levels of separation:

- Flexible delineator posts ("flex posts") offer the least separation and are appropriate as an interim solution.
- Raised buffers provide the greatest level of separation from traffic, but will often require road reconstruction.
- On-street parking offers a high-degree of separation, but may require raised buffer treatments at intersections.

See pages 32-41.

CONSIDERATIONS

- More attractive to a wider range of bicyclists than striped bikeways on higher volume and faster speed roads.
- Prevent motor vehicles from driving, stopping or waiting in the bikeway.
- Provide greater comfort to pedestrians by separating them from bicyclists.

REFERENCES

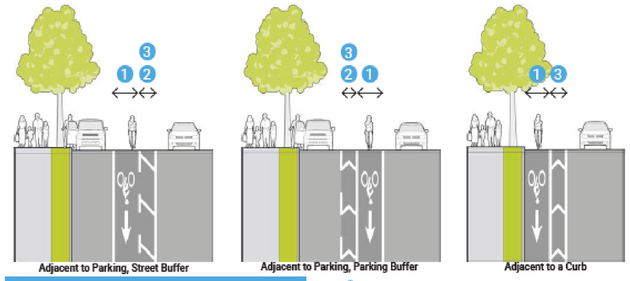
MassDOT. Separated Bike Lane Planning and Design Guide. 2015.

NACTO. Urban Bikeway Design Guide. 2nd Edition.

BUFFERED BIKE LANES

Buffered bike lanes are conventional bike lanes paired with a designated buffer space separating the bike lane from the adjacent motor vehicle travel lane and/or parking lane to increase the comfort of bicyclists.

BUFFERED BIKE LANES



TYPICAL APPLICATION

Considered on any road with one or more of the following characteristics:

- Total traffic lanes: 3 lanes or fewer.
- Posted speed limit: 30 mph or slower.
- Average daily traffic: 9,000 vehicles or fewer.
- Parking turnover: infrequent.
- Bike lane obstruction: likely to be infrequent.
- Where a separated bike lane or sidepath is infeasible or undesirable.

GUIDANCE

1. Minimum buffered bike lane width, exclusive of buffer, is 4 feet with a parking-adjacent buffer and 5 feet with a travel-lane-adjacent buffer or where bike lane is adjacent to curb. Desirable width is 6 feet.
2. Buffers should be broken along curbside parking to allow cars to cross the bike lane.
3. Minimum buffer width is 2 feet. There is no maximum. Diagonal crosshatching should be used for buffers less than 3 feet wide. Chevron crosshatching should be used for buffers greater than 3 feet.

CONSIDERATIONS

- Consider placing buffer next to parking lane where there is high turnover parking.
- Consider placing buffer next to travel lane where speeds are 30 mph or faster, or when traffic volume exceeds 6,000 vehicles per day.
- Preferable to conventional bike lanes when used as a contra-flow bike lane on one-way streets.
- Can be used on one-way or two-way streets.
- Where there is 7 feet of roadway width available, a buffered bike lane should be installed instead of a conventional bike lane.
- If there is sufficent width and a separated bike lane is not being considered, buffers may be installed on both sides of the bike lane.
- Allow bicyclists to ride side by side or to pass slower moving bicyclists.
- Research has documented buffered bike lanes increase safety and the perception of safety.

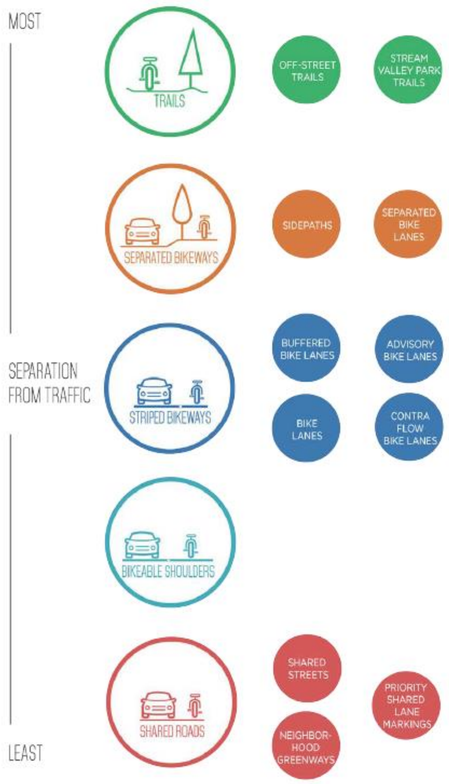
REFERENCES

AASHTO. Guide for the Development of Bicycle Facilities. 2012.

NACTO. Urban Bikeway Design Guide. 2nd Edition.

Portland State University, Center for Transportation Studies. Evaluation of Innovative Bicycle Facilities: SW Broadway Cycle Track & SW Stark/Oak Street Buffered Bike Lanes FINAL REPORT. 2011.

All Bikeway Classifications



Nebel Street Separated Bike Lanes

Curb Extensions

Raised Crosswalks