



# BIKE Passaic County

Proposed County Bicycle Network Memorandum

June 30, 2022





## Table of Contents

Proposed County Bicycle Network.....	3
Methodology.....	3
Step 1: Passaic County Draft Priority Network.....	4
Step 2: Completeness Check to Create the Priority Network .....	7
Step 3: Proposed County Bicycle Network .....	11
Proposed County Bicycle Network, Northwest .....	13
Proposed County Bicycle Network, Southeast .....	16
End Notes .....	18

## List of Figures

Figure 1: Passaic County Draft Priority Network, Northwest .....	5
Figure 2: Passaic County Draft Priority Network, Southeast .....	6
Figure 3: Passaic County Priority Network, Northwest .....	9
Figure 4: Passaic County Priority Network, Southeast .....	10
Figure 5: Bicycle Facility Type Selection .....	11
Figure 6: Proposed County Bicycle Network, Northwest .....	15
Figure 7: Proposed County Bicycle Network, Southeast .....	17

## Proposed County Bicycle Network

The BIKEPassaicCounty proposed county bicycle network implements the Vision Statement: a connected, countywide system of paths, trails, and on-street facilities increases access to destinations, enhances community health, promotes equity, and improves the experience of biking, with special emphasis on the most vulnerable users.

Development of the network took place over a series of steps, using data-driven and GIS mapping methodologies, planning and design guidance resources, manual field assessment of existing conditions, extensive outreach to stakeholders, and collaborative review and refinement of findings and recommendations.

This process draws upon the applicable guidance including the BIKEPassaicCounty Pattern Book, New Jersey Complete Streets Design Guide, and related resources. Together, these resources create a uniform process for evaluating and selecting appropriate facility types, while the Pattern Book also helps ensure consistency and connects details among the various facility types. A bike lane should look and function the same regardless of the context or community so that bike riders and drivers are able recognize it, use the facility, and interact in a safe and predictable manner.

### Methodology

Development of the proposed county bicycle network used a three-step process:

#### Step 1: Passaic County Draft Priority Network

This first step was to develop the draft priority network, which is from the *Moving Passaic County* concept of “priority bicycle and pedestrian corridors.” The goal of the priority network is to provide for bicycle travel within each town, between neighboring towns, across the County, and continuing through to neighboring counties. Step 1 of emphasizes County-owned roadways and lands for siting and hosting of bicycle facilities but does not specify facility types.

#### Step 2: Completeness Check to Create the Priority Network

The second step was a completeness check of the draft priority network (step 1). The completeness check is an assessment of network connectivity, access, and mobility, with the goal to fill in network gaps and overcome barriers. The result is the priority network, which is focused on completing connections and providing local and regional access.

#### Step 3: Proposed County Bicycle Network with Bicycle Facility Types

The third and final step assigned recommended bicycle facility types to the priority network to create the proposed county bicycle network. The facility types include on- and off-street and range from bike lanes to shared-use paths and trails. This process yielded a comprehensive, county-wide bicycle network and facility type

recommendations based specifically on Passaic County context and conditions, and ranges from on-street bicycle lanes to off-street side paths and trails.

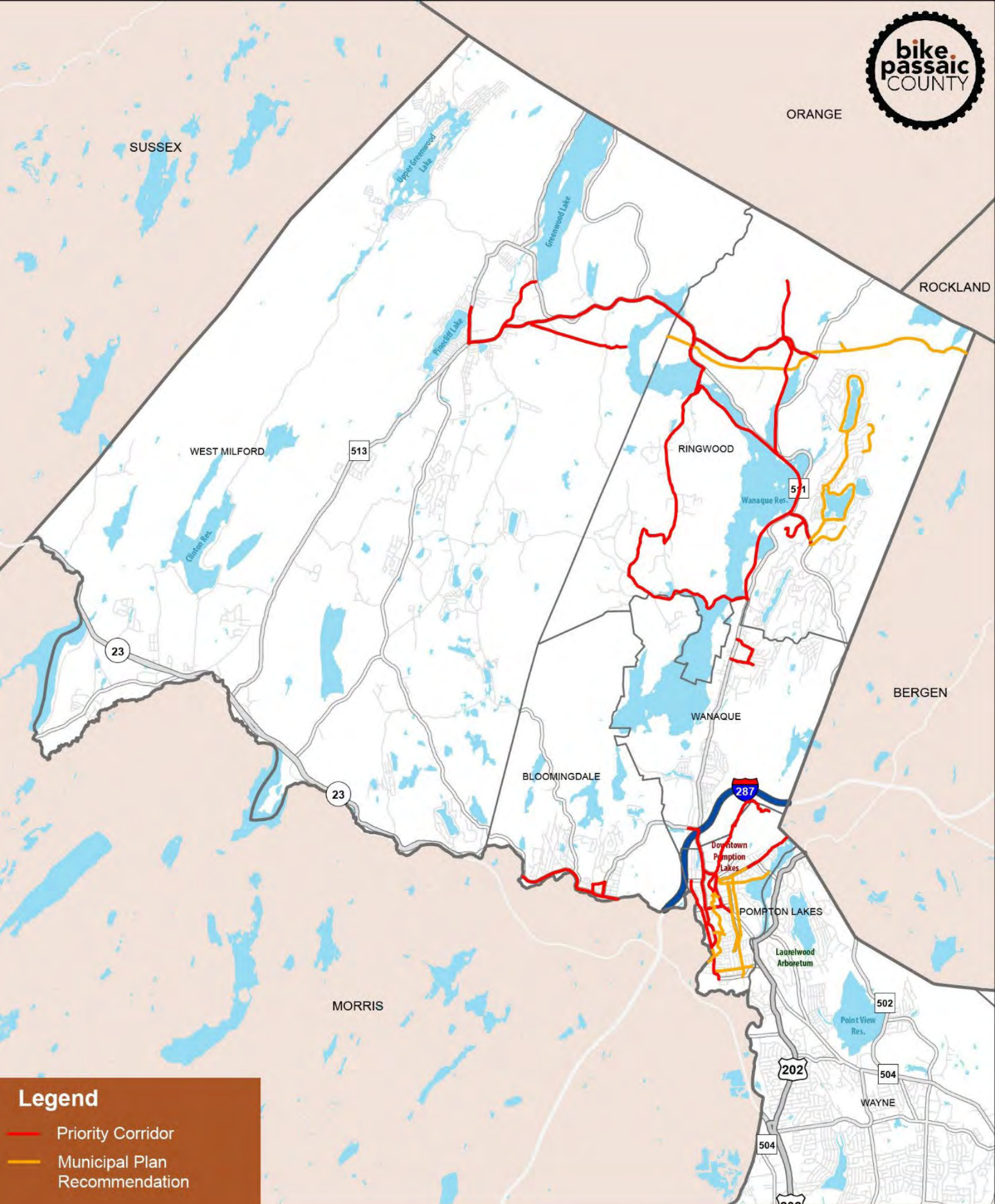
### Step 1: Passaic County Draft Priority Network

Passaic County assembled the draft priority corridors, drawing from previous plans and studies, various mapping and data resources, collaborative efforts, and knowledge of the local and regional roadway and trails networks.

The County began its review *Moving Passaic County (2012)* which introduced the concept of “priority bicycle and pedestrian corridors.” These are considered priority routes for bicycle and pedestrian travel because they strategically link and interconnect the major neighborhoods, districts, destinations and attractions in Passaic County.

However, these 2012 priority corridors reflect conditions from at least a decade ago and do not reflect the current data resources and assessments, including recent crash data, crash hotspots, bicycle LTS, and the island effect, as described and documented in the existing conditions assessment. The existing conditions assessment reveals that the County must look beyond both the 2012 priority corridors to adequately meet everyday access and mobility needs, due to the high traffic volumes and travel speeds; crash occurrence and hotspots; and high-stress condition of many County-owned roadways.

The Passaic County Draft Priority Corridors are depicted in and on the following pages.

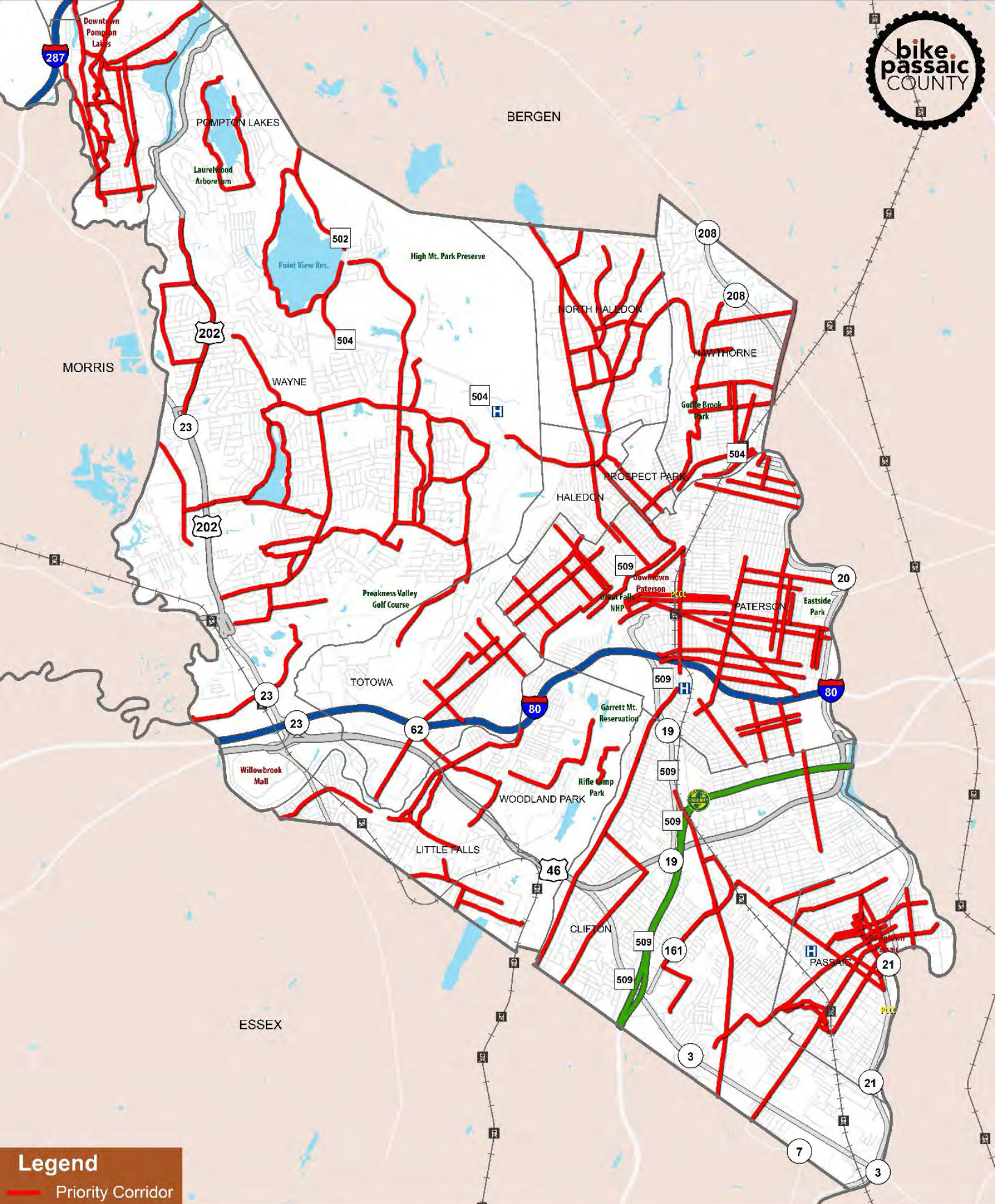


**Legend**

- Priority Corridor
- Municipal Plan Recommendation

Figure 1: Passaic County Draft Priority Network, Northwest

0 1 2 Miles



**Legend**  
— Priority Corridor

Figure 2: Passaic County Draft Priority Network, Southeast



## Step 2: Completeness Check to Create the Priority Network

The goal of Step 2 is to complete the priority network to provide adequate mobility, connecting people to the places they need to go. Mobility should not stop at municipal boundaries, and neither should non-motorized travel networks.

The priority network is focused on connections and access, rather than specific bicycle facility types, including where people live and work, where they want to and need to travel to, and which roadways provide that necessary connectivity and access. The completeness check includes an assessment of connectivity, access, and mobility of the draft priority network, and seeks to fill in gaps and bridge barriers by adding local and off-street connections.

Each municipality should have a well-developed and accessible bicycle network with adequate connectivity not just locally, but to neighboring municipalities as well. The network should also provide access between critical multimodal trip generators and attractors, including residential areas, work locations, transit stops and rail stations, schools, parks, libraries, downtowns, and other activity centers. To provide adequate access and mobility, the network should bridge over high-stress and physical barriers and fill in gaps identified during the existing conditions assessment. The network should reconnect, to the extent feasible, the many isolated areas identified in the island effect analysis.

The completeness check encountered significant challenges, including the following:

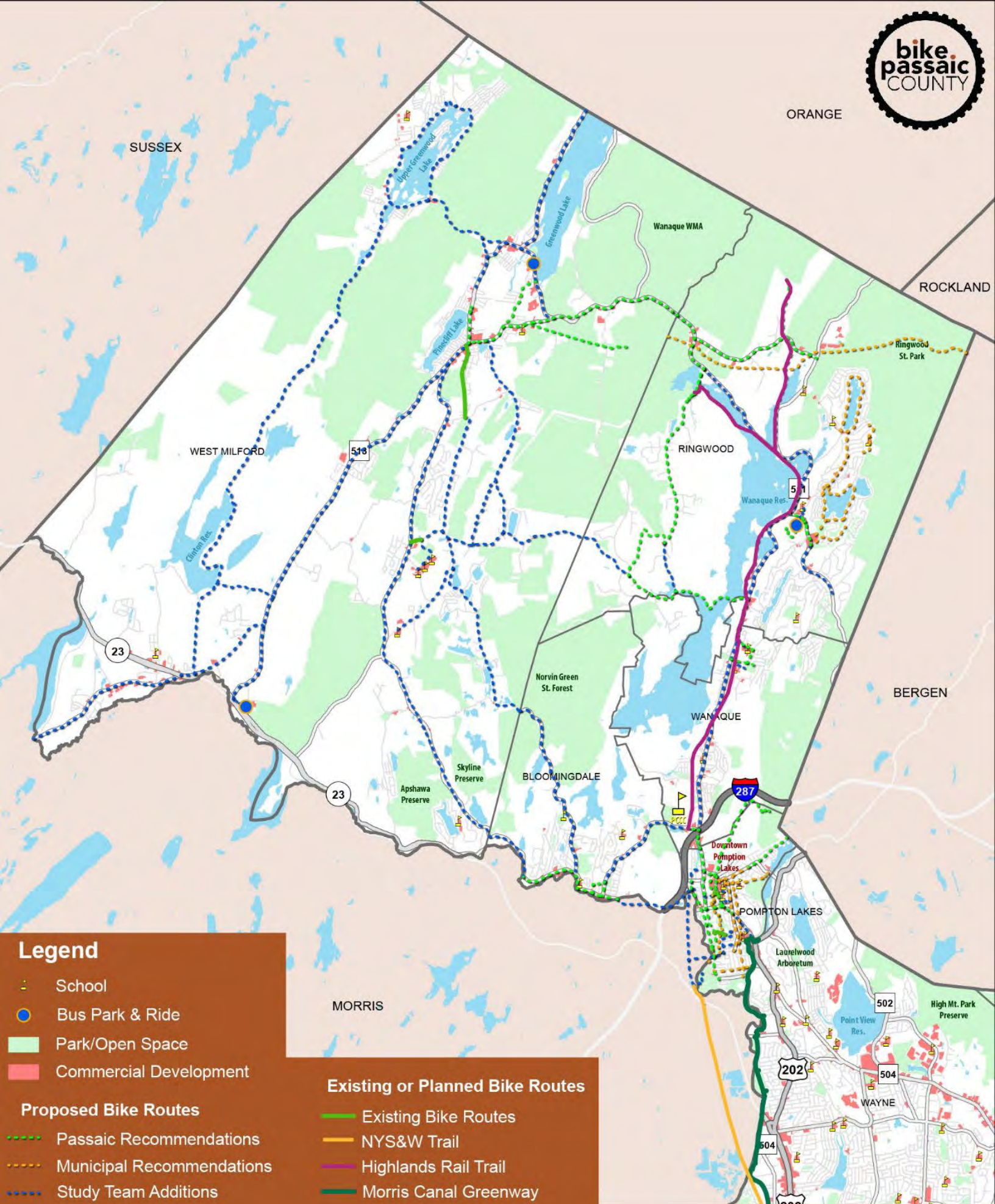
- For northwest Passaic County, the road network is shaped by topography and open space with a mix of residential and rural roads. With the exception of the population centers of West Milford, Ringwood, Bloomingdale, and Pompton Lakes, which feature localized and neighborhood-based street grids, the roads follow natural contours and passes, connecting nodal areas with small residential areas that are often surrounded by commercial areas with retail or dining destinations, and/or a lake or small water body. There are significant grade changes, and the shoulders, if present, are of varying width and are often unpaved and/or roadside swales or culverts.
- The options available to connect commercial areas, open space, recreational trail access points, schools, and park-and-ride facilities, are therefore severely limited. The Highlands Rail Trail, for example, provides an off-road north-south backbone, which was a major anchor within this part of the county. Regional connectivity options had to be examined from among both on-road and off-road possibilities.

- In the southeast, numerous additions were made, emphasizing local and neighborhood connectivity, as compared to the regional and county-wide focus of the draft priority network. Many of these additional miles in the southeast are short facilities that enhance local connectivity between proposed network routes and provide links between residential areas, schools, and other destinations. For example:
  - In Haledon, portions of Central Avenue and West Haledon Avenue were added to connect surrounding residential areas to Haledon Public School, and regional bicycle facilities such as Pompton Road and Haledon Avenue, and the commercial district along Haledon Avenue.
  - In Wayne, the addition of Magnolia Place connects the George Washington School to a large residential area and regional facilities at Lake Drive West, Osborne Terrace, and Packanack Lake Road.
- Many of these additions achieve the goal of reconnecting, to the extent feasible, the many isolated areas identified in the island effect analysis.

The completeness check in Step 2 added 101 miles to the draft priority network (209 miles), for a total priority network of 310 miles across the 16 Passaic County municipalities.

The priority network includes proposed facilities on state, county, and local roadways. The majority of these additions were made to northwest Passaic County, adding 74 miles to the bicycle network. This is due primarily to the limited roadway network in the northwest, and the need to utilize local residential streets and off-street and trail options to enhance connectivity.

In the southeast, 27 miles were added to the bicycle network (4). Many of these additional miles are short facilities provided to enhance local connectivity between proposed network routes and also to provide linkages from the priority network to residential areas, schools, and other destinations.



**Legend**

- School
- Bus Park & Ride
- Park/Open Space
- Commercial Development

**Proposed Bike Routes**

- Passaic Recommendations
- Municipal Recommendations
- Study Team Additions

**Existing or Planned Bike Routes**

- Existing Bike Routes
- NYS&W Trail
- Highlands Rail Trail
- Morris Canal Greenway

Figure 3: Passaic County Priority Network, Northwest



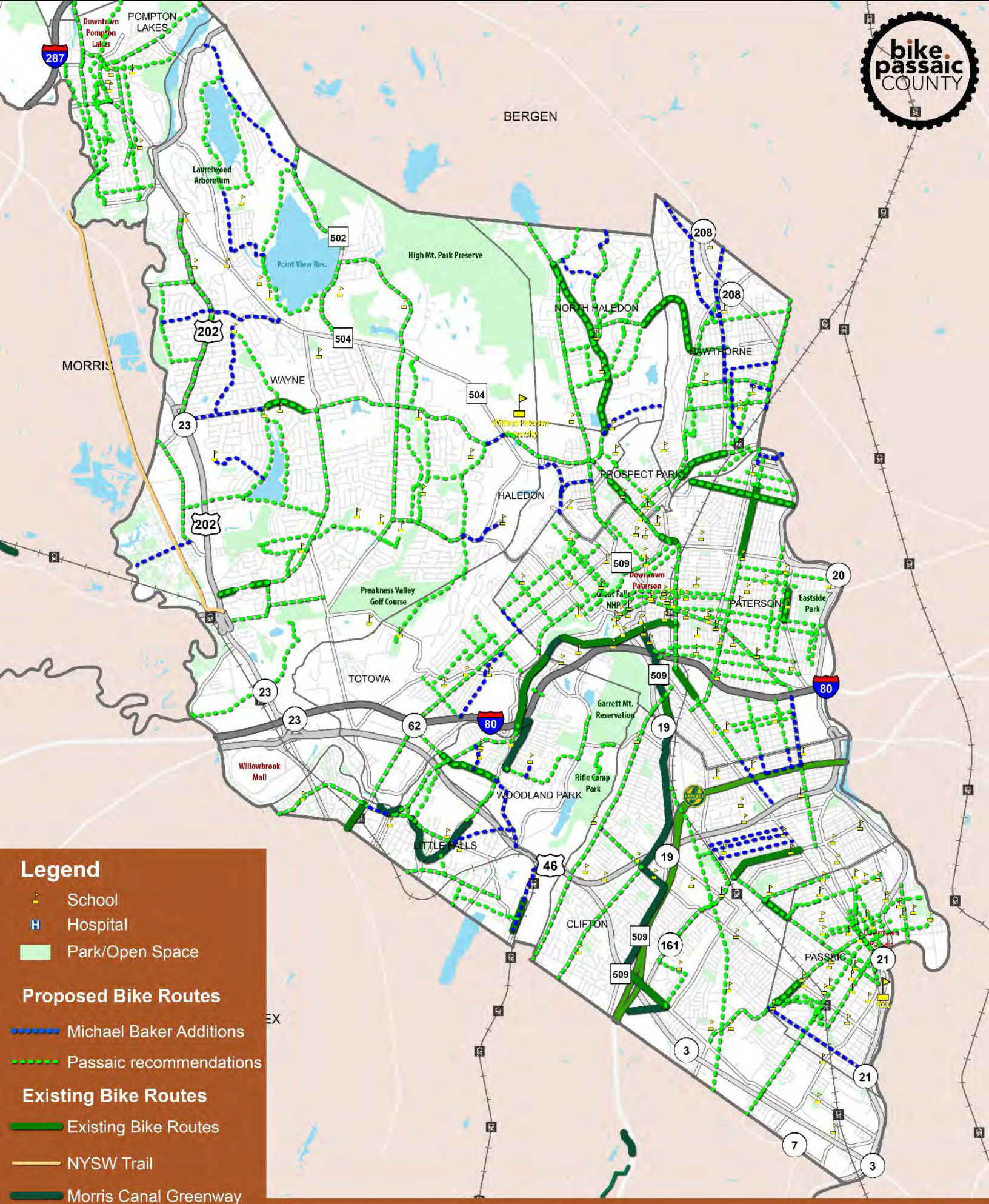


Figure 4: Passaic County Priority Network, Southeast



### Step 3: Proposed County Bicycle Network

In Step 3, facility type recommendations for the proposed county bicycle network were evaluated and selected based on context, existing conditions, and collaborative efforts, to develop a comprehensive, interconnected, and fully integrated bicycle network.

Candidate roadway segments were identified and screened using the Bikeway Selection Guidance Process (pp 106-107) of the New Jersey Complete Streets Design Guide (CSDG), which outlines a three-part process for identification and selection of candidate bicycle facilities and is summarized in Figure 5: Bicycle Facility Type Selection, inset right.

Applicable facility types and context-specific details are further defined in the BIKEPassaicCounty Pattern Book. The Pattern Book summarizes the range of proposed improvements from on-street bicycle lanes to off-street side paths and trails. The CSDG includes a flowchart and step-by-step process to identify appropriate bicycle facilities based on the street and local community context, design features such as posted speed limit, and cross section width, and approximate daily AADT and truck volume percentage.

Figure 5: Bicycle Facility Type Selection

#### **Part 1: Evaluate Candidate Roadway Segment and Local Context.**

Screening and selection of proposed bike improvements proceeds one candidate roadway segment at a time.

Begin by evaluating the roadway segment (i.e. roadway X from point A to point B) and determine the local context and existing roadway attributes: 85th percentile travel speed (or posted speed limit), actual or estimated traffic volume (ADT), truck percentage, presence or absence of parking, available right-of-way width, and other factors.

#### **Part 2: Determine Candidate Facility Type Options.**

Next evaluate the range of potential bicycle facility options for the candidate roadway segment.

Apply the Bikeway Selection Guidance Process from the New Jersey Complete Streets Design Guide (pp 106-7), to the candidate roadway segment using the established design attributes (local context, travel speeds and volumes, truck percentage, and roadway width) to identify the range of potential facilities: i.e. bike lanes, shared-use sidepath, etc.

#### **Part 3: Assess Feasibility and Select Preferred Facility Type.**

Finally, review each of the potential facility options (bike lane, sidepath, etc.) and determine which best fits the local context, existing conditions, and available roadway width.

Together, the Pattern Book and CSDG create a uniform process for evaluating and selecting appropriate facility types, while the Pattern Book also helps ensure consistency and connects details among the various facility types. A bike lane should look and function the same regardless of the context or community so that bike riders and drivers are able recognize it, use the facility, and interact in a safe and predictable manner.

Numerous meetings and collaborative efforts were held to review, refine, and enhance the potential proposed County bicycle network and improvements. Additional comments from the public via surveys, WikiMap entries, and other sources including municipal recommendations, were also evaluated and incorporated in the same manner.

Due to the significant variation in context, place types, and existing conditions between northwest and southeast Passaic County, each was evaluated separately.

## Proposed County Bicycle Network, Northwest

As discussed in the existing conditions technical memorandum, the municipalities of the northwest portion of the county include at least 15 separate islands) that consist of isolated, almost self-contained, nodes of residential and commercial development, schools, parks, and park-and-ride facilities. These individual nodes feature primarily low-stress (LTS 1 & 2) internal street networks and are separated and isolated from one another by higher-stress (LTS 3 & 4) regional roadways that are not inviting to bicyclists, as well as by the topography and numerous water bodies that characterize northwest Passaic County. The result is that in addition to the towns being separated from one another, each individual town is further divided into a series of smaller, internal islands.

Figure 6 depicts the proposed county bicycle network for northeast Passaic County. The legend indicates each facility type with a unique color scheme for each type with existing facilities displayed with solid lines and potential new facilities with dashed lines.

Due to the prevalence of high-stress roadways in the northwest, several off-street facilities are proposed to provide connectivity within municipalities and between municipalities (Proposed County Bicycle Network, Northwest, Figure 28). The planned 7.15-mile Passaic County Highlands Rail Trail (Highlands Rail Trail) serves as an anchor facility for low-stress mobility in the communities east of the Wanaque Reservoir.<sup>i</sup>

- In conjunction with other planned shared use paths – the NYS&W Trail in Morris County and the Morris Canal Pompton Feeder in Passaic County – there is potential to create a roughly 17-mile low-stress bicycle connection from northern Ringwood to the planned Morris Canal Greenway, supporting both local and regional mobility, as well as trail tourism, for years to come.
- To complete this trail network, there is a roughly 3-mile gap to be filled in Wanaque and Pompton Lakes, beginning at the planned southern terminus of the Highlands Rail Trail and extending south to the soon-to-be-constructed NYS&W path. Both on-road (short-term) and off-road (long-term) options are identified in the proposed bicycle network to close this gap.

Within the communities east of the Wanaque Reservoir, the Highlands Rail Trail will be accessible to the existing low-stress street networks that connect to schools, parks, transit access, and other destinations.

- Skyline Drive (CR-692) in Ringwood is an example of a county street that can be enhanced with standard bicycle lanes to simultaneously support local and regional connectivity, by connecting the existing network of residential streets with existing shopping centers, the Ringwood Park & Ride, and ultimately the Highlands Rail Trail.

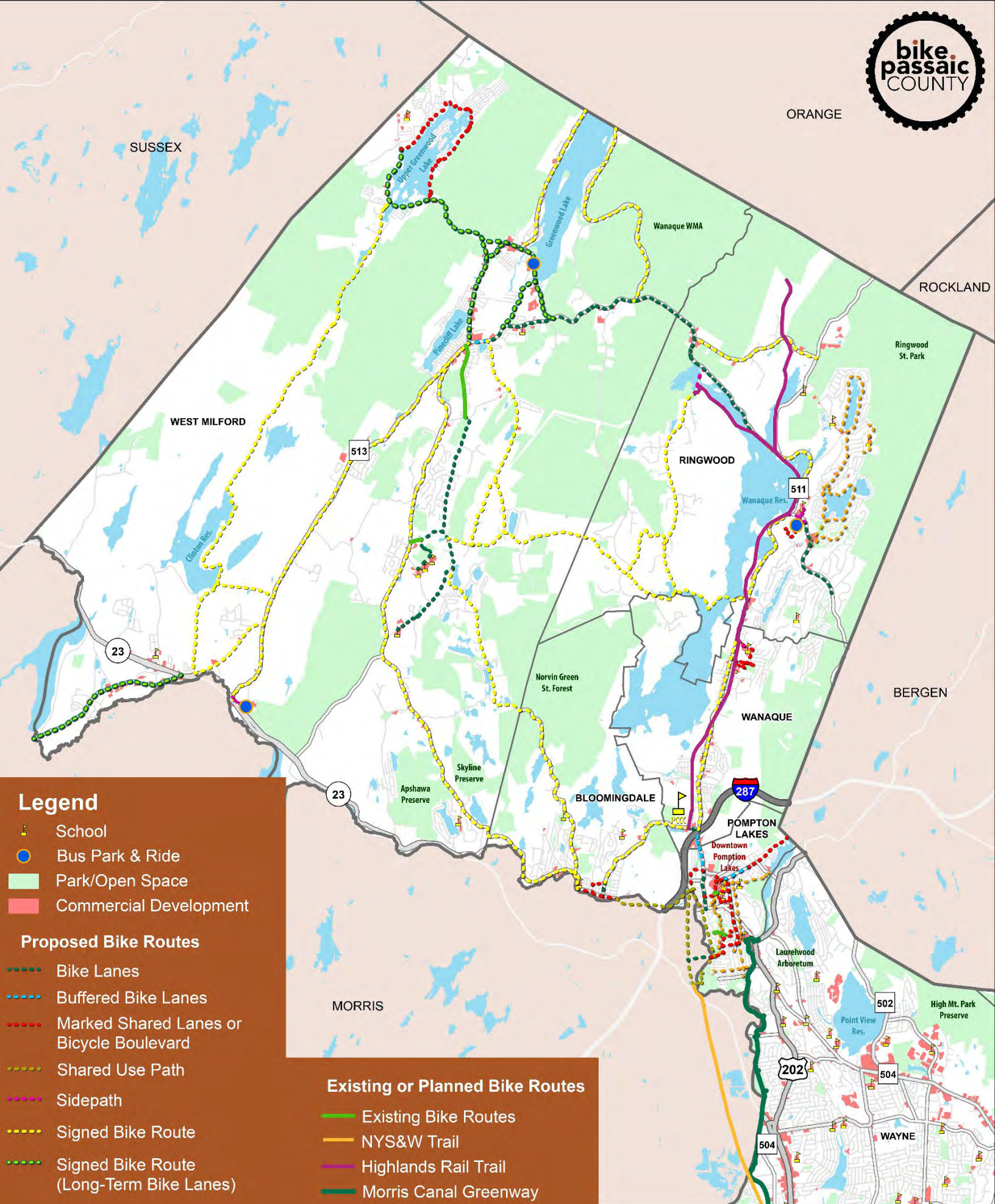
- Likewise, Greenwood Lake Turnpike (CR-511) is an east-west county roadway that has the potential to connect the commercial and residential centers of West Milford with those of Ringwood and with the Highlands Rail Trail. Standard bicycle lanes are recommended for Greenwood Lake Turnpike, which would require certain portions of the shoulder areas to be widened.

West of the Wanaque Reservoir, the county landscape is dominated by the Highlands topography, and the existing street network is considered to be moderate to high stress for bicycling (LTS 3).

- Despite the high level of stress, these streets are scenic and attractive to enthused and confident recreational road bicyclists, as indicated both by STRAVA data and anecdotal observations.
- Significant investment to widen shoulders for dedicated bike lanes is typically not a high-priority recommendation for rural roads, due to significant cost and potential right-of-way and environmental impacts, and because inexperienced and concerned bicyclists are not likely to ride on these roads due to grade changes and exposure to high traffic volumes and speeds.

Therefore, for these streets, a more subtle enhancement is recommended, such as designation as signed bicycle routes. As described in the Pattern Book, this would include the installation of regulatory and wayfinding signage to enhance bicycle activity, along with general maintenance practices that support favorable bicycling conditions. However, further discussion with cyclists who regularly use these roads is needed because improving bicycling safety on hilly, winding rural roads is highly location specific.

Large format bicycle network mapping with enhanced detail and labels is provided in the Appendix and as a standalone map.



**Legend**

- School
- Bus Park & Ride
- Park/Open Space
- Commercial Development

**Proposed Bike Routes**

- Bike Lanes
- Buffered Bike Lanes
- Marked Shared Lanes or Bicycle Boulevard
- Shared Use Path
- Sidewalk
- Signed Bike Route
- Signed Bike Route (Long-Term Bike Lanes)

**Existing or Planned Bike Routes**

- Existing Bike Routes
- NYS&W Trail
- Highlands Rail Trail
- Morris Canal Greenway

Figure 6: Proposed County Bicycle Network, Northwest



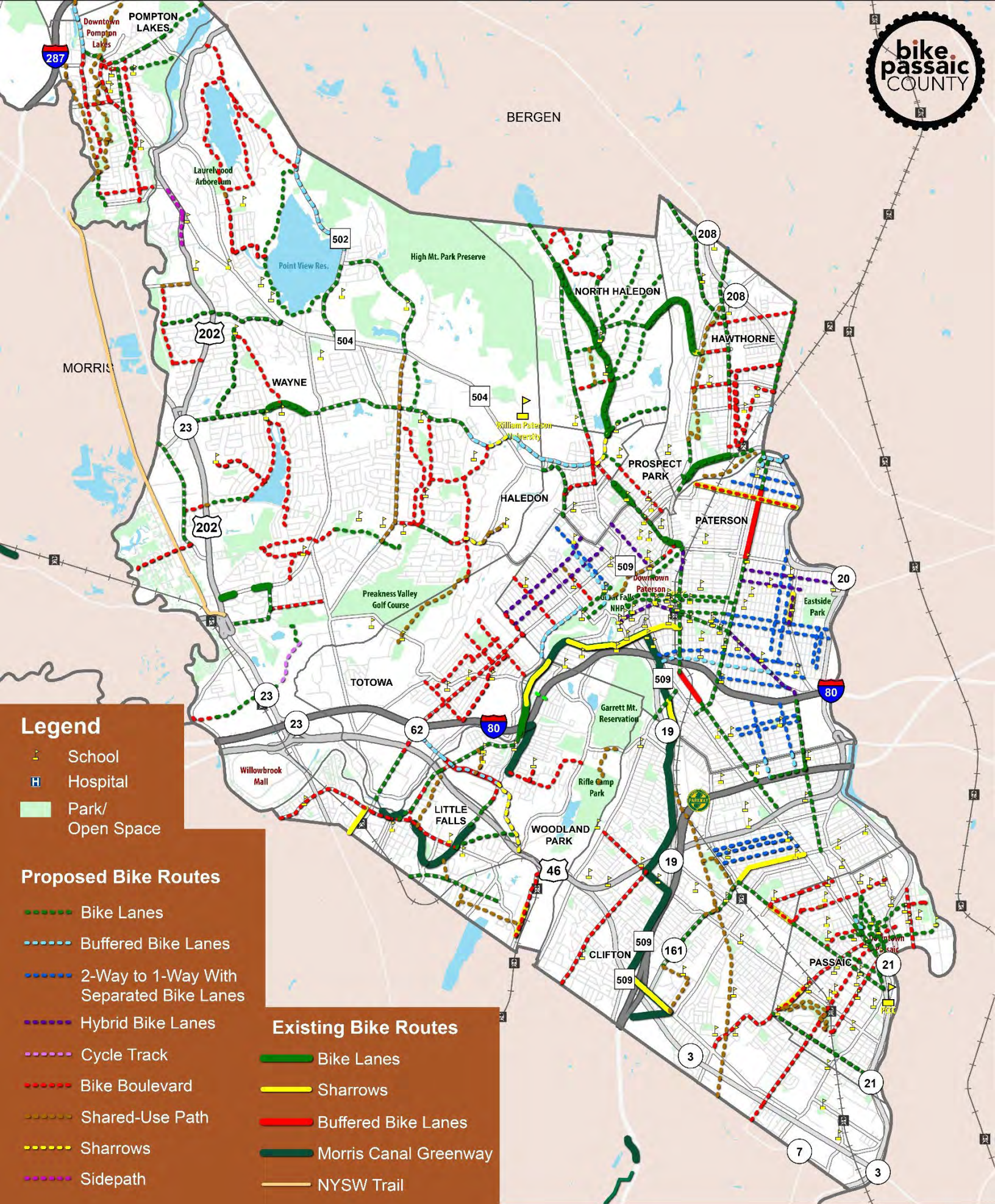
## Proposed County Bicycle Network, Southeast

Bicycle facility type recommendations for the southeast were evaluated and selected based on context, existing conditions, and collaborative efforts, to develop a comprehensive, interconnected, and fully integrated bicycle network. Numerous recommendations from previous studies and plans were considered, including many from the *Moving Passaic County*, *Great Falls Circulation Study*, and the various Morris Canal Greenway studies. Examples include the Taft Avenue bridge over I-80 in Woodland Park; recommendations from municipal coordination efforts including facilities on Haledon Avenue between Paterson, Prospect Park, and Haledon; potential rail with trail facility adjacent to the conceptual Newark-Paterson Transit BRT concept in Clifton and Paterson; and numerous recommendations from BIKEPaterson, including Madison and Getty Avenues bike lanes.

Additional comments from surveys, e-mail, and written sources, WikiMap entries, and municipal recommendations were also evaluated and incorporated in the same manner.

Figure 7 depicts the proposed county bicycle network for southeast Passaic County. The legend indicates each facility type with a unique color scheme for each type with existing facilities displayed with solid lines and potential new facilities with dashed lines.

Large format bicycle network mapping with enhanced detail and labels is provided in the Appendix and as a standalone map.



**Legend**

- School
- Hospital
- Park/  
Open Space

**Proposed Bike Routes**

- Bike Lanes
- Buffered Bike Lanes
- 2-Way to 1-Way With Separated Bike Lanes
- Hybrid Bike Lanes
- Cycle Track
- Bike Boulevard
- Shared-Use Path
- Sharrows
- Sidepath

**Existing Bike Routes**

- Bike Lanes
- Sharrows
- Buffered Bike Lanes
- Morris Canal Greenway
- NYSW Trail

Figure 7: Proposed County Bicycle Network, Southeast



## End Notes

---

<sup>i</sup> Passaic County. (N.d.). Highlands Regional Trail. Retrieved: <https://www.passaiccountynj.org/departments/planning-economic-development/plans-and-technical-studies/highlands-rail-trail>. Accessed April 24, 2022.