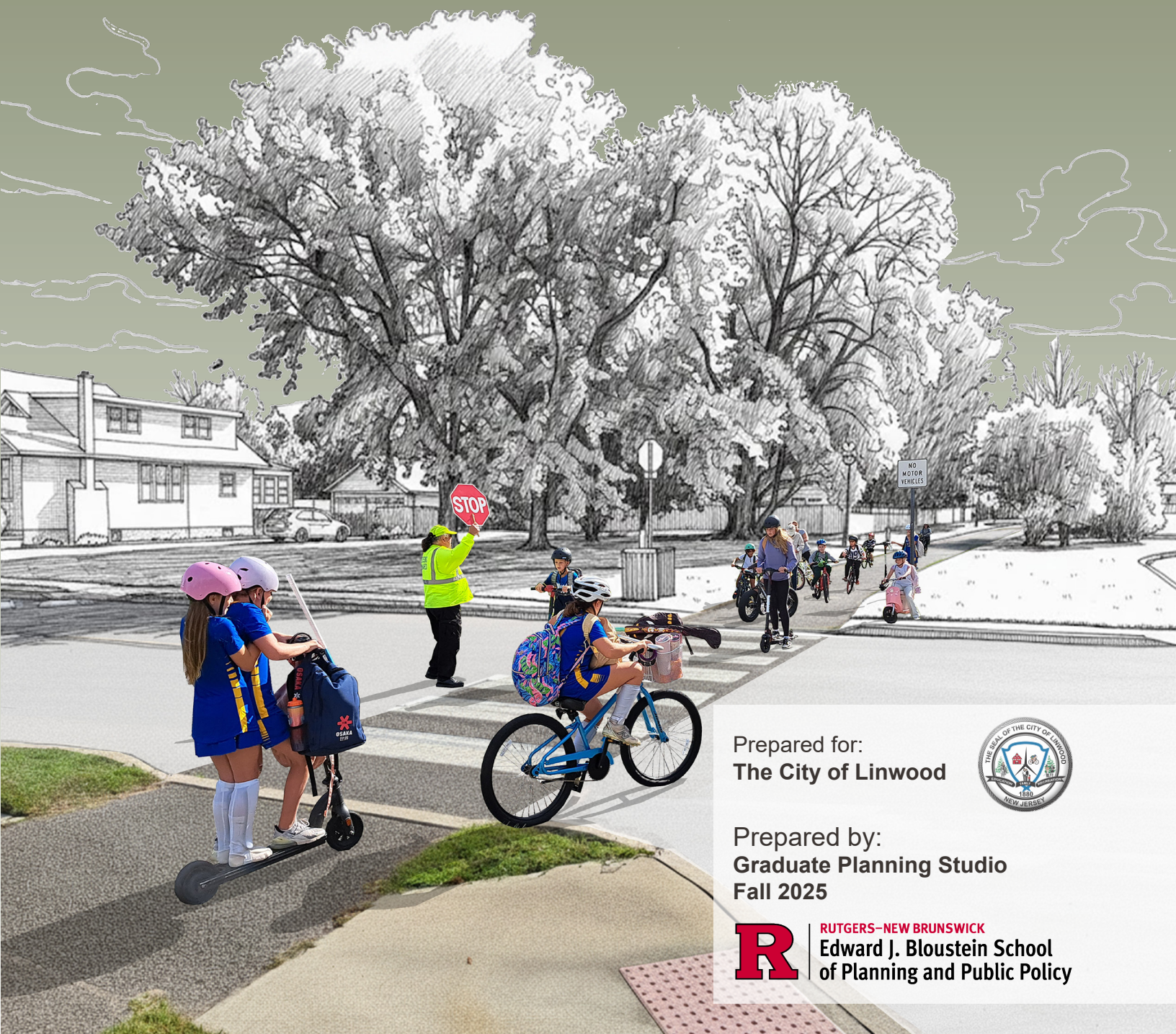


The City of Linwood Bike Path Improvement Plan

*Final Report
December 2025*



Prepared for:
The City of Linwood



Prepared by:
Graduate Planning Studio
Fall 2025



RUTGERS-NEW BRUNSWICK
Edward J. Bloustein School
of Planning and Public Policy



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Edward J. Bloustein School
of Planning and Public Policy

December 19, 2025

Mayor Darren Matik
Leigh Ann Napoli, RMC, CMR, MPA, QPA
Linwood City Council

400 W Poplar Ave
Linwood, NJ 08221

Dear leaders within the Linwood community:

Through Graduate Planning Studio classes, students at the Edward J. Bloustein School of Planning and Public Policy work with real clients to develop practical solutions under the direction of faculty members and research staff affiliated with the school. With these projects, City and Regional Planning students apply best practices and gain hands-on experience using innovative design and research methods.

During the Fall 2025 semester, a Graduate Planning Studio class composed of second-year Master of City and Regional Planning students partnered with the City of Linwood, New Jersey to develop an active transportation enhancement concept plan for the Linwood Bike Path, also known as the George K. Francis Bikeway. The bike path is a well-used shared-use path that is recognized as a community asset and serves as a key active mobility corridor in Linwood for commuting and recreation, connecting three schools, three parks, and three neighboring municipalities. The large and diverse range of people the path attracts is its greatest strength. The primary focus of the recommendations in this report is accommodating all users in a safe and comfortable way as ridership on the path grows.

This report, serving as the final product of the Graduate Planning Studio class, aims to support the City of Linwood's goal of creating a safer, more connected, and more accessible active transportation network. Informed by field observation, data analysis, and feedback from community stakeholders, the Studio developed recommendations to explore opportunities for path expansion, improvements to intersections, and placemaking enhancements.

We would like to thank you for your participation and support through this process. We hope this report's vision will support Linwood as it looks toward implementation.

Sincerely,
The Fall 2025 Bloustein Planning Studio Team

The City of Linwood: Bike Path Improvement Plan

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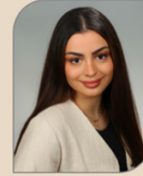
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EXECUTIVE SUMMARY

The Linwood Bike Path is a thriving shared-use path with strong amenities, beautiful scenery, and separation from vehicle traffic. Connecting parks, schools, and adjacent municipalities, the path is a popular recreational and active mobility corridor for students, families, and visitors of all ages. Yet at peak times, heavy bidirectional use by pedestrians, bicyclists, and scooter users results in congestion and discomfort between users passing each other.

The Bloustein School Studio's Linwood Bike Path Improvement Plan, created in partnership with the City of Linwood, New Jersey, aims to accommodate present and future path users with a safe and comfortable user experience along the Linwood Bike Path, also known as the George K. Francis Bikeway. The Plan recommends widening the existing path from approximately 8.5 feet to a consistent 15 feet and creating three dedicated lanes to separate pedestrians from bicyclists and scooter users traveling in each direction, relying on design cues to moderate speeds.

A variety of intersection improvements, including curb extensions, new crosswalks, and diverters, increase the likelihood that drivers will slow down and yield to path users. Lane divisions, pavement markings, and use of strategic curves near intersections increase path users' awareness in turn, enabling the removal of stop signs for path users except at key high-traffic intersections. Further recommendations include placemaking and sustainable landscaping to enhance aesthetics and support long-term resiliency, building on Linwood's existing amenities.

With the goals of enhancing active mobility and minimizing conflict, this proposal seeks to improve on the Linwood Bike Path's present success and accommodate future generations of path users. The plan aims to enable predictable movements along and across the path, enrich user experience through placemaking, and incorporate green infrastructure for long-term resilience.

BACKGROUND

The City of Linwood is a city of approximately 7,000 residents in Atlantic County, New Jersey. It is primarily a residential suburb of Atlantic City, and it is neighbored to the north by Northfield and to the south by Somers Point. The City of Linwood has a long history of planning for and implementing pedestrian and bicycle mobility, including the development of its Bicycle and Pedestrian Plan in 2012. The plan was prepared in partnership with the New Jersey Department of Transportation's Office of Bicycle and Pedestrian Programs through the Local Technical Assistance Program to evaluate existing conditions and identify improvements that would enhance safety, access, and connectivity for walking and cycling within the city. The planning process involved data collection, crash analysis, sidewalk and roadway assessments, and an active public engagement effort that included a Steering Committee, public events, and an online survey. The resulting recommendations emphasized strengthening the city's primary bicycle corridor, improving east–west neighborhood connections, expanding bicycle parking, and implementing a consistent sidewalk network. A central component of the 2012 plan was the call to extend and upgrade the Linwood Bike Path, improve intersections, and modernize signage and facilities to support daily users and improve access for schools.

The George K. Francis Bikeway, known locally as the Linwood Bike Path, has continued to serve as one of Linwood's most significant public amenities and community assets. The shared-use path forms a 2.48-mile segment of the larger Pleasantville–Somers Point Bike Path, a regional active transportation corridor linking Pleasantville, Northfield, Linwood, and Somers Point. Originally converted from a former railroad line, the path varies in width but generally remains narrower in Linwood than in neighboring communities, where portions have been widened to accommodate increased use. In recent years, the number and diversity of users along the path have grown substantially, including pedestrians, joggers, bicyclists, dog walkers, scooter riders, and—more recently—electric bicycle users. The city has noted an increase in congestion and speed differentials along the path, resulting in safety concerns.

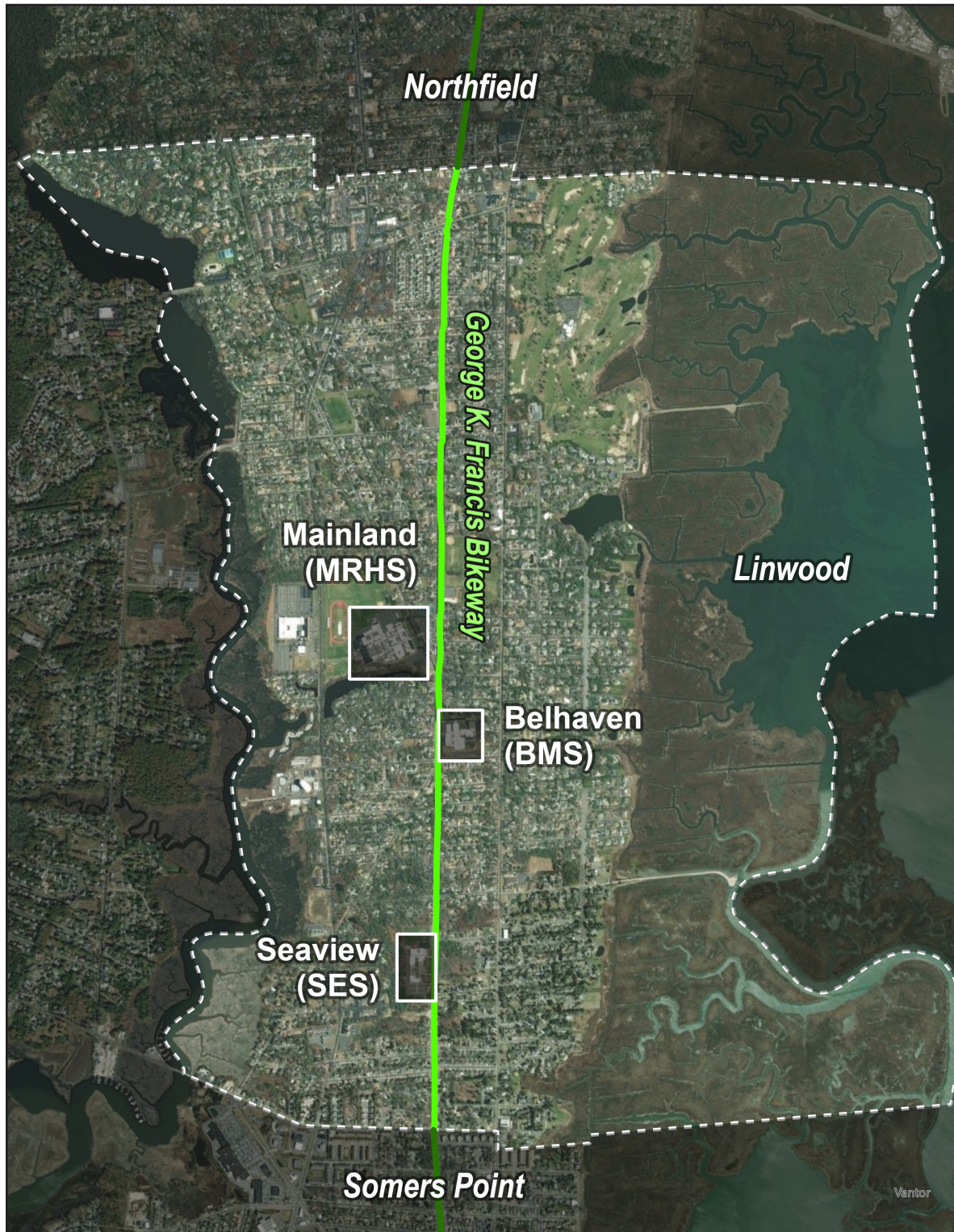


Figure 1. Map of Linwood Bike Path Alignment

In response, Linwood seeks to upgrade and expand its segment of the bike path to improve user safety and comfort, and ensure accessibility. This report builds upon the City's past and current efforts, including both the 2012 Bicycle and Pedestrian Plan and the FY 2026 Municipal Aid Application, which was partly awarded by the New Jersey Department of Transportation to widen, resurface, and upgrade the Linwood Bike Path. While the awarded funding will not cover the full cost of implementing all measures recommended in this plan, Linwood can ensure the funds are used to advance projects that align with this plan's broader vision of a safer, wider, more comfortable bike path.

The proposed improvements include widening the path to 15 feet, resurfacing, updating striping and signage, and introducing new safety treatments at key roadway crossings, most notably the installation of rectangular rapid flashing beacons (RRFBs) at Central Avenue, a major crossing point with no stop control. These upgrades are designed to better accommodate the current and anticipated levels of daily use, up to 3,000 users, depending on the season, and to provide a more reliable, comfortable, and navigable facility for residents, students, and regional visitors.

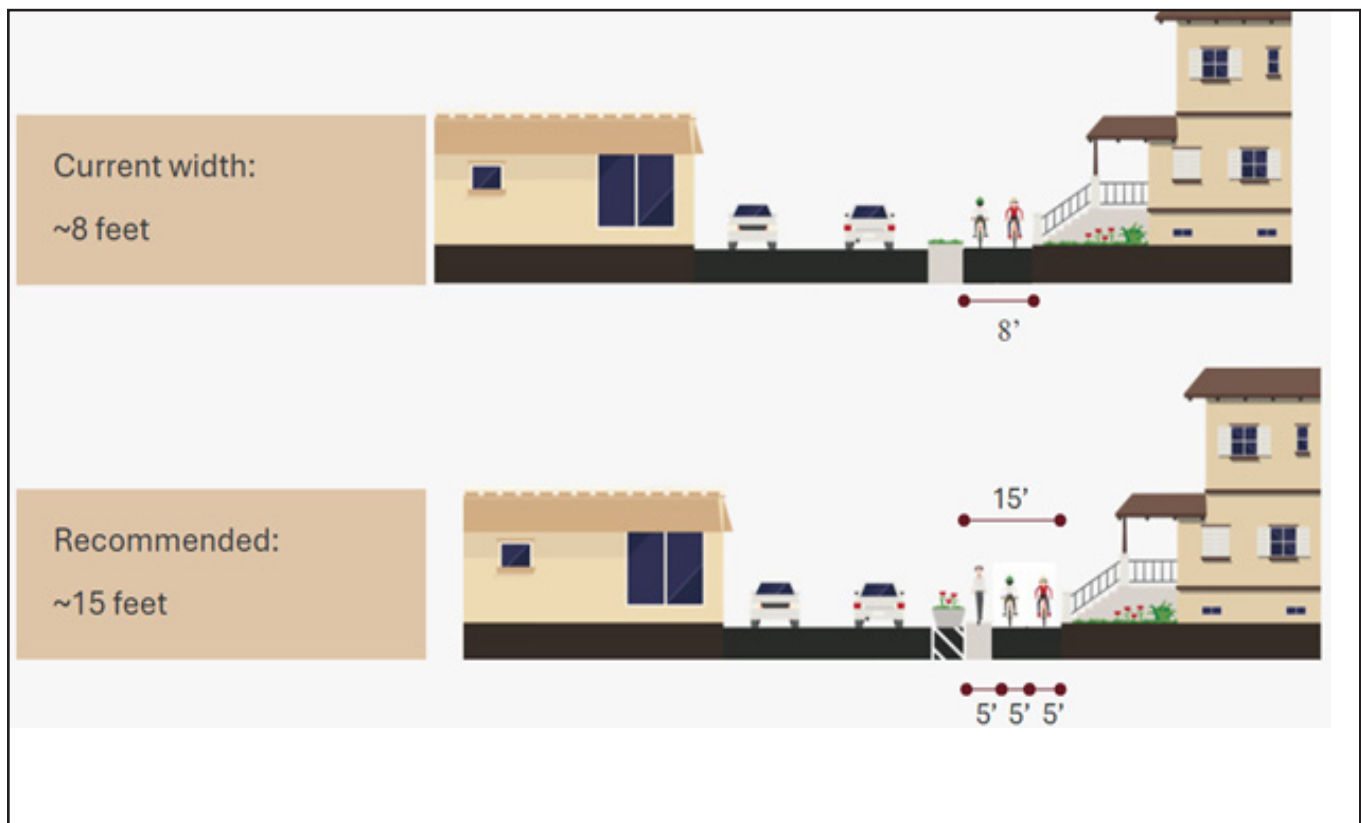


Figure 2. Section View of Proposed Widening (generated via StreetMix)

FRAMEWORK

The framework to guide the assessment of the bike path is grounded in four core planning components: capacity, safe systems, placemaking, and green streets. Together, these components shape the evaluation of existing conditions and inform the final design recommendations for a state-of-the-art active transportation corridor suited for safe transportation and recreation for Linwood residents of all ages and abilities. This framework guides the identification of opportunities for improvement, ensuring that design solutions enhance user experience, promote environmental resilience, and support expanding daily path use.

Capacity

The American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, 5th Ed. (2024) and the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide, 3rd Ed. (2025) include specific guidance on shared use paths which informed our framework for addressing the Linwood Bike Path's capacity concerns. The AASHTO guide specifically includes a Level of Service (LOS) calculation based on width, peak volume, and cyclist-pedestrian modal split, which estimates the level of comfort experienced by path users.

With too much congestion, conflicts between pedestrians and bicyclists may cause discomfort and safety concerns for some users, leading them to avoid using the path. Congestion can be avoided by widening the path, and separating uses, where possible, can reduce the frequency of conflicts between people walking and faster bicycle and e-bike traffic. Addressing congestion thus improves comfort for pedestrians, who can worry less about fast-moving bicyclists passing close-by, and improves safety for bicyclists, who can enjoy the path as a separated right-of-way away from motor vehicles on adjacent streets.

Safe System Approach

Our framework and recommendations are strongly guided by the Safe System Approach, which is endorsed by the Federal Highway Administration (What Is a Safe System Approach?, 2025) and the New Jersey Department of Transportation's 2025 New Jersey Strategic Highway Safety Plan (NJDOT, 2025, p.1). The Safe System Approach focuses on mitigating and preventing the risks within modern transportation systems. Importantly, a safe system approach recognizes that humans make mistakes and seeks to create a framework that protects them (What Is a Safe System Approach?, 2025). Traditional approaches to roadway safety react to crash data to identify key locations for safety improvements; however, reactive approaches are limited in their ability to respond to endemic behavioral issues, including but not limited to speeding and careless driving, which impact all roads. The Safe System Approach focuses on proactive systemic and systematic design tactics aimed at improving driver attention and visibility, reducing conflicts, and managing speed. A proactive design approach prevents safety issues and dangerous crashes before they happen (What Is a Safe System Approach?, 2025). By keeping this proactive approach in mind throughout the path enhancement project and others, Linwood can ensure a safer system for all road users when implementing new designs.

Placemaking

The Linwood Bike Path would benefit from additional placemaking strategies to enhance user experience. Placemaking is a community-based practice of fostering connection with the built and physical environment through activation of public space. Oftentimes, this is curated through artistic endeavors and providing high-quality third spaces. A “third space” refers to a place outside of home and work where people can go, often for leisure or to foster a sense of community or belonging, such as parks. A well-curated selection of amenities aids in drawing a diverse crowd. This can include the addition of public art, wayfinding signage, mile markers, and the provision of pedestrian-scale lighting. Amenities along the shared-use path enhance social connectivity, ultimately contributing community-building as residents and visitors use them. By investing in placemaking strategies and amenities, the City of Linwood can enhance its shared-use path into not only a community asset, but a regional amenity that promotes connectivity and brings people to Linwood.

Green Streets

Green Streets are designed to integrate climate resiliency solutions, safety, and multimodal accessibility in accordance with state and local policy. In many New Jersey communities such as Linwood, Green Streets can help mitigate flooding from stormwater runoff, reduce urban heat island impacts, support pollinator populations, promote bicycle and pedestrian access, and create sustainable, resilient streetscapes for long-term community value. Nature-based solutions such as bioretention and biofiltration cells may help address the NJDEP Stormwater Regulations by catching the first 1.25 inches of precipitation during heavy rainfall, promoting infiltration, and filtering out pollutants before water reaches the storm sewer system.

Green Street design focuses on functional, ecological, and aesthetic benefits. Bioswales and rain gardens filter pollutants and manage stormwater runoff, while tree trenches and planter strips provide cooling and shade to increase the comfort of comfortable for all bike path users. Permeable pavements reduce runoff and ponding, particularly in low-traffic areas, and vegetated curb bump-outs enhance pedestrian safety, harvest runoff, support local biodiversity, and reduce motor vehicle turning speeds. These practices not only address flooding and environmental concerns, but also support safer, more pedestrian-friendly, and more beautiful streets and spaces, consistent with Linwood’s overarching goals of resiliency and sustainability.

CASE STUDIES

South Jersey is home to numerous shared-use paths that serve as vibrant active mobility corridors, many of which were formerly railroad lines. The Linwood Bike Path faces common challenges, notably on-path congestion at peak periods and relatively frequent intersections with vehicular traffic. To learn about the best practice for innovative solutions to these issues, this plan reviews three shared-use paths similar to Linwood's in the Mid-Atlantic region for inspiration for improvements that could also benefit the Linwood Bike Path.

Widening with Bicycle-Pedestrian Separation in Washington & Old Dominion Railroad Regional Park (Falls Church, VA)

Communities throughout the Washington & Old Dominion Railroad Regional Park saw increasing conflicts between pedestrians and bicyclists on the existing shared-use path with 9 feet of width. In 2021, the City of Falls Church (Fields, 2021) widened to 21 feet, with 5.5 feet for each bicycle direction, 8 feet for pedestrians, and 2 feet of separation between the two. Paul Gilbert, executive director of Northern Virginia Regional Park Authority (NOVA Parks), described this approach as “the cutting edge of trail design” and predicted that the increased comfort would promote more pedestrian use of the path (Matteson, 2024).



Figure 3. "Wheels and Heels" Roadway Design (Matteson, 2024)

Curb Extensions near Woodbine Railroad Trail (Woodbine, NJ)

In Cape May County, Woodbine, NJ is home to a rail-trail running through the center of town with frequent intersections with the local street network. In recent years, they completed a resurfacing of a county route which runs adjacent to the shared-use path on both sides, similar to Wabash Ave, implementing concrete curb extensions (Schwartz, p. 12, 2022). Curb extensions shorten the crossing distance for pedestrians at crosswalks while briefly narrowing the travel lane for drivers. This design concept enforces safe speeds and reduces crash injury risk. Below is a temporary painted curb extension at Adams Ave, which crosses the path; this extension could potentially be upgraded to concrete later, but for now it offers some of the same immediate safety benefits at a fraction of the cost.

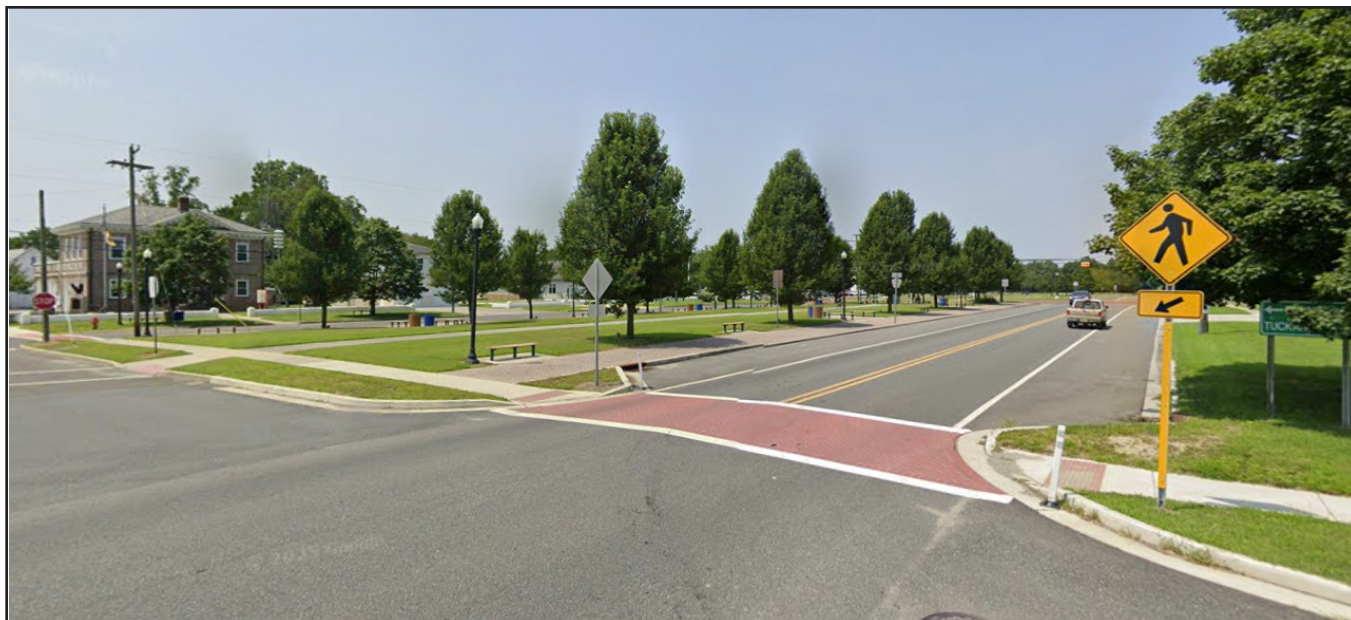


Figure 4. Woodbine Railroad Trail (Google StreetView)



Figure 5. Woodbine Railroad Trail (Google StreetView)

Perpendicular Crossings for Chester Valley Trail (Exton, PA)

In the town of Exton, PA, the Chester Valley Trail intersects with a major state route. In order to avoid poor visibility at the crossing, the shared-use diverts from the original railroad right-of-way to form two perpendicular crossings (Lander, 2022, p. 113). This mirrors current best practices and reflects the Linwood Bike Path Improvement Plan's recommendation for the intersection of Maple Ave at Wabash Ave (see page 32).



Figure 6. Aerial view of Chester Valley Trail Crossings (Google Maps)

SITE VISIT DATA COLLECTION

In order to observe conditions and quantify activity on the Linwood Bike Path, field-based data collection was undertaken. The site visit was essential to assess path conditions and provide context that supplements the information gathered from maps, secondary data, and remote analysis methods.

Quantitative Site Observation

On Friday, October 3, 2025, a site visit was conducted to observe and collect data on existing conditions and pedestrian and bicyclist traffic patterns along the entire corridor. The study area was divided into three segments that were approximately equal in length. Teams then walked the length of their respective segments—accompanied by municipal council, law enforcement, and administrators—to provide a clearer understanding of how conditions vary throughout the path and where specific issues may be more pronounced.

After completing the walkthrough, team members proceeded to their pre-determined locations along the bike path, where they recorded trail traffic counts by user type for a 45-minute period during school dismissal. The Segment A team focused on intersections around Mainland Regional High School, Segment B around Belhaven Middle School, and Segment C around Seaview Elementary School.

Data collection occurred at two different intersections along the path per school, documenting overall traffic at Devonshire Avenue and both north and southbound traffic at Oak Avenue near Mainland Regional High School (MRHS). At Segment B, data was collected at the path intersection points with Belhaven Avenue and West Patcong Avenue. Within Segment C, traffic observations were made at the Seaview Avenue and Garfield Avenue intersections.

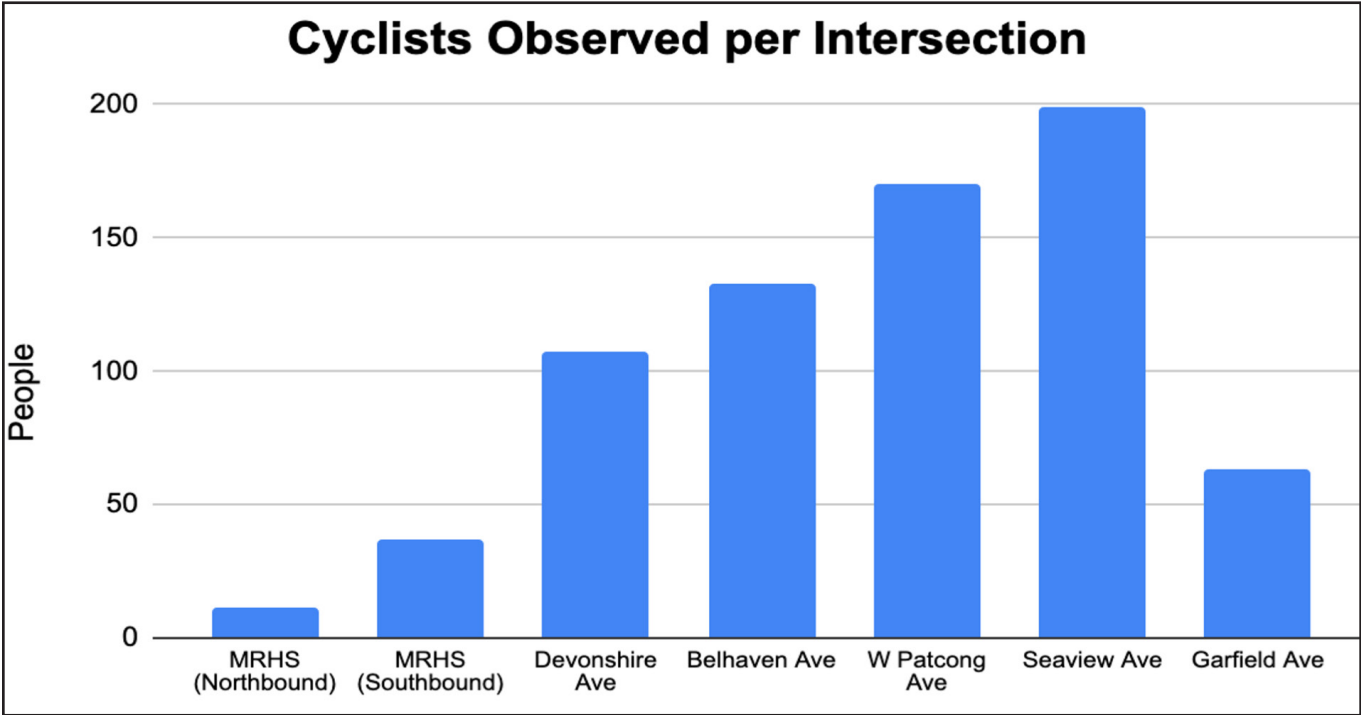


Figure 7. Bicycle Traffic Counts by Intersection during Afternoon School Dismissal

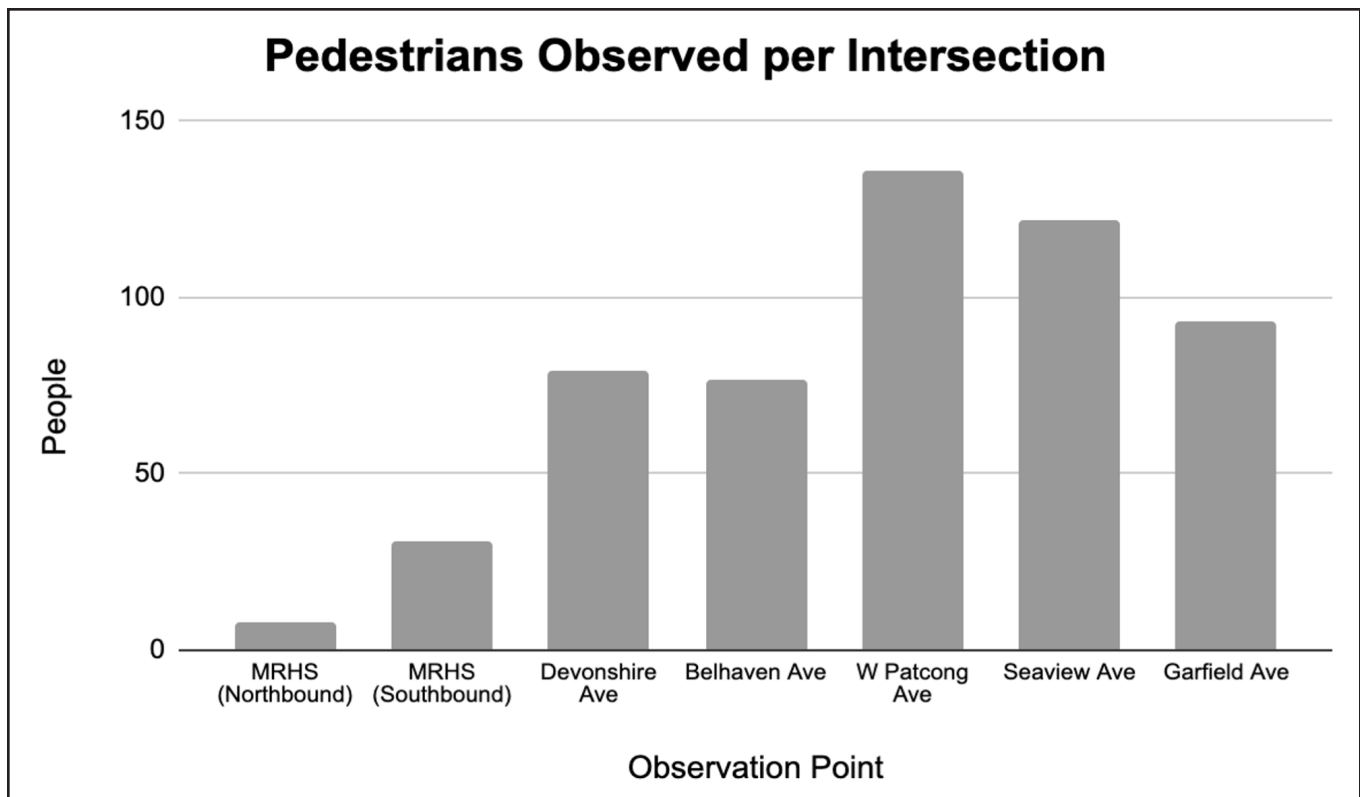


Figure 8. Pedestrian Traffic Counts by Intersection during Afternoon School Dismissal

School	Cyclists	Pedestrians
MRHS	51.7	39.3
BMS	151.5	106.5
SES	131	107.5
Overall Average	111.4	84.4

Figure 9. Average Cyclist and Pedestrian Counts by School Segment

Figure 7 shows the total number of bicyclists recorded at each intersection during the 45-minute study period. On the day of the site visit, Seaview Avenue had the highest number of bicyclists, with 199, while the MRHS Northbound direction had the fewest at 11. Figure 8 displays the total number of pedestrians observed at each intersection. West Patcong Avenue recorded the most pedestrians, with 136, while the MRHS Northbound direction again had the fewest, at 8.

Figure 9 breaks down the overall average number of bicyclists and pedestrians observed at each segment's intersections. Segment 2 (Belhaven Middle School) had the highest cyclist volume, while Segment 3 (Seaview Elementary School) had the highest pedestrian volume, though both segments had relatively similar traffic levels. Traffic of both bicyclists and pedestrians in Segment 1 (MRHS) was noticeably lower than the overall average of the study area.

With high traffic to and from Belhaven Middle School and Seaview Elementary School, peak congestion on the Linwood Bike Path was observed between Patcong Ave and Seaview Ave, with roughly 300 total path users during the 45-minute observation window. Normalized to a per-hour rate, this represents a

peak of 400 users per hour. According to methodology from the AASHTO Guide for the Development of Bicycle Facilities, this implies a Level of Service of F (Sawyer & Ta, 2025, p. 44). At this Level of Service, the path is considered “beyond functional capacity” during peak periods, with “significant conflicts.” This description is corroborated by qualitative site observations in the most congested areas.

Qualitative Site Observation

The overall experience of the path is shaped by site observations focusing on capacity, safety, placemaking, and green streets concepts. These observations influence how welcoming, intuitive, and enjoyable the path feels for users throughout the day. During the site visit, the following observations were collected to better understand existing conditions and improvement opportunities.

Capacity Observations

Calls for widening to address capacity concerns are indicative of the shared-use path’s success in providing community members with an effective travel corridor and pleasant recreational outlet. Much of the peak traffic volume occurs between the major intersections near the three schools. At these peak hours, some bicyclists were observed moving off the path onto adjacent Wabash Avenue in order pass pedestrians or slower-moving bicyclists. Users generally sorted themselves by direction, keeping to the right, for example, but the high volume resulted in bicyclists and scooter users frequently passing very close to pedestrians.

Safety Observations

The section summarizes the safety observations made along the path. The path has a clear separation from motor vehicle travel lanes on Wabash Avenue and high visibility down the shared-use path and at crosswalks. Likewise, the use of crossing guards along the shared-use path and the closure of intersections during dismissal adds to a proactive approach to safety. Signs placed along the path, such as “Use Helmet,” promote safe riding practices. However, some stop signs, are placed in ways that may confuse both drivers and path users. White “Walk Bikes Across Intersection” signs are common at road crossings, and bicycle stop signs are present in some locations as well. Additionally, motor vehicle traffic control at intersections with Wabash Avenue can be confusing to drivers.

Along Central Avenue (a county road), for example, stop signs control traffic on both East and West Wabash Avenue and on the bike path while traffic at Central Avenue has no stop control. However, because state law provides the right-of-way to pedestrians in the crosswalk, the existing signage may confuse users as to who has right-of-way, especially in the cases of bicyclists who dismount and cross as pedestrians. Furthermore, there is no signage on Central Avenue alerting motorists to the trail crossing.

There are multiple intersections of Wabash Avenue where both East and West Wabash Avenue are stop controlled as separate intersections, such that drivers crossing Wabash Avenue must stop twice—including once in the median, blocking the bike path—while stop control for bicyclists is inconsistent or unclear. For example, Greenwich Avenue is an all-way stop-controlled intersection; however, there are additional stop signs in the median of Wabash Avenue, and there is only a bike-stop sign going northbound on the bike path.

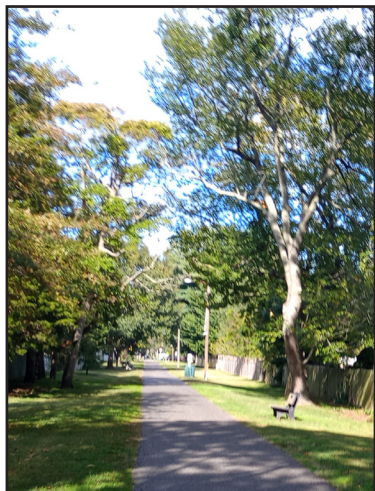
Placemaking Observations

The Studio's walk-through revealed several notable existing features that contribute to its sense of place and enhance the overall user experience. Much of the path is lined with mature trees and memorial benches, offering shaded areas for its users to rest. Portions of the corridor, particularly near intersections and parking lots, are already well-lit, improving visibility and enhancing safety for users; however, observations were made during daylight and did not confirm lighting conditions at night. Opportunities may remain for enhanced pedestrian-scale lighting in the area to further improve comfort, wayfinding, visibility, and perceived safety.

The need for additional trash bins highlighted in the 2012 Linwood Bicycle and Pedestrian Plan appears to have been met, with numerous bins noted at several points throughout the path, encouraging proper waste disposal and minimizing litter. Adequate bike racks were also observed at all three schools, ensuring secure bike storage for students. Although not directly part of the path, the nearby Linwood Arboretum guided many of this plan's placemaking recommendations. Design elements such as its diverse native vegetation, shaded seating alcoves, and a public drinking fountain reflect recommended enhancements proposed later in the plan. Overall, the path itself is well-maintained, and the pavement has minimal cracking or potholes, but opportunities remain to further activate the trail for residents and visitors alike.

Green Streets Observations

Much of the path already has several critical green streets features, including mature trees to provide shade as well as adjacent pervious surface and drainage swales to mitigate flooding. Presently, the shallow drainage ditches along the path address runoff during rain events; however, they are mostly manicured grass and lack biodiversity or engineered capacity to retain and infiltrate stormwater. The same goes for much of the rest of the path, which, other than grass and trees, lacks diverse vegetation. The ecological quality of grassy areas surrounding much of the path could be improved by increasing the use of native plants, increasing the depth and width of existing drainage facilities, and offsetting the use of impervious surfaces due to path widening with reductions in impervious surfaces when reclaiming street space at intersections. Including native vegetation would not only create a greater sense of place by drawing inspiration from the arboretum's landscaping, but also support stormwater retention, reduce erosion, and enhance local biodiversity.



Figures 10 & 11. Already Present: Mature Trees and Drainage Infrastructure.

GENERAL RECOMMENDATIONS: TRAILWIDE ENHANCEMENTS

The recommendations detailed below begin with general enhancements to the path's overall function and character. Non-site-specific recommendations focus on capacity, safety, green infrastructure, and placemaking. These general recommendations provide a background to elevate the user experience throughout the path through cohesive design features and strengthen connectivity.

Capacity and User Comfort

To increase the capacity of the path and to accommodate more users simultaneously, widening the path is recommended. At most sections, the path is currently paved with an average width of 8.5 feet. The overall widening recommendation is increasing the width of the path to 15 feet throughout to ensure ample space for pedestrians, bicyclists, and other path users to share the space effectively. Widening to 15 feet allows for the trail to be divided into three lanes through striping, each 5 feet wide: one for northbound bicyclists, one for southbound bicyclists, and one for pedestrians traveling in either direction. Use of paint to delineate dedicated space allows for clarity of where people walking and rolling should ride. During peak times, this design treatment should reduce conflicts and keep all trail users alert for other users.

The recommendation to adopt a three-lane design, instead of a centerline dividing all users by travel direction, is informed by best practices from AASHTO, NACTO, and Manual on Uniform Traffic Control Devices (MUTCD) guides. Both the AASHTO Guide for the Development of Bicycle Facilities and the NACTO Urban Bikeway Design Guide recommend separating uses on shared use paths like Linwood

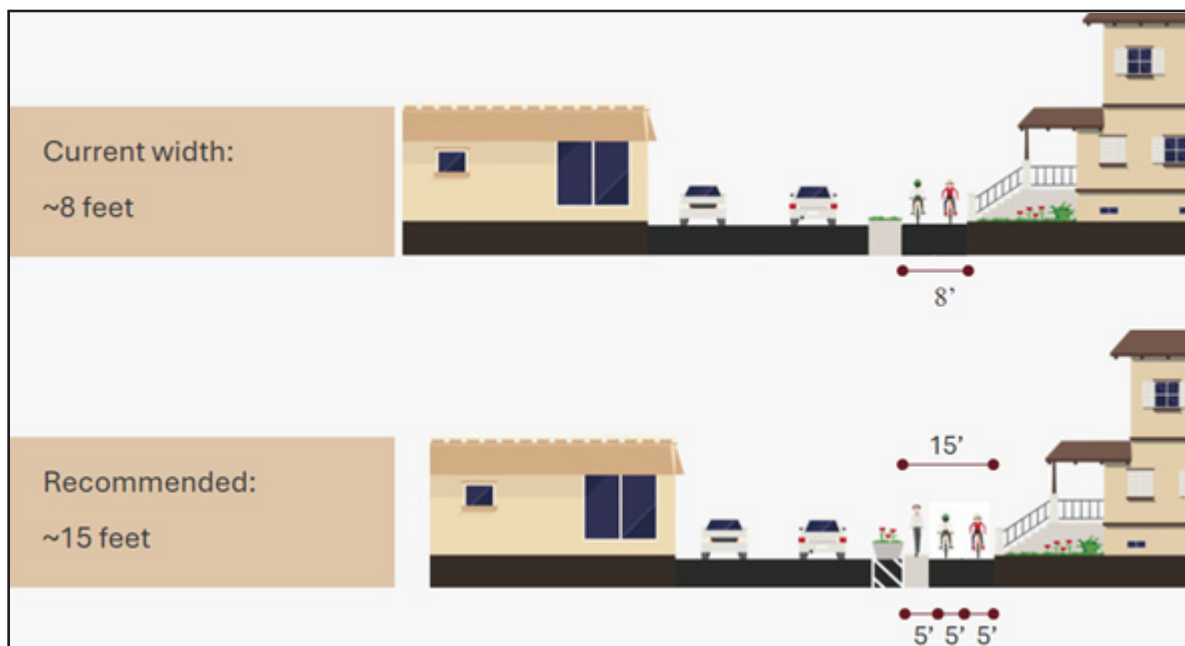


Figure 12. Section View of Proposed Widening

Bike Path with high-volume pedestrian and cyclist use, and the MUTCD provides signage for this purpose (NACTO; Sawyer & Ta, 2025, p. 45; FHWA, 2023, p. 1058).

The three-lane design keeps pedestrians on one side of the path, separate from higher-speed bicyclists. Guaranteeing 5 feet of space allows family groups, friends, and dogwalkers a greater degree of comfort, even during periods of heavy use. The alternative centerline design, seen below in Marin County, CA's Mill Valley-Sausalito Bike Path, forces pedestrian groups into a bind: either take up an entire lane, and experience close passes from bicyclists (see below left); or walk single-file on the shoulder (see below right), a position less amenable to socialization and recreation. Giving pedestrians a dedicated lane, as in the three-lane proposal, reaffirms their right to use the path and have adequate space for socialization.

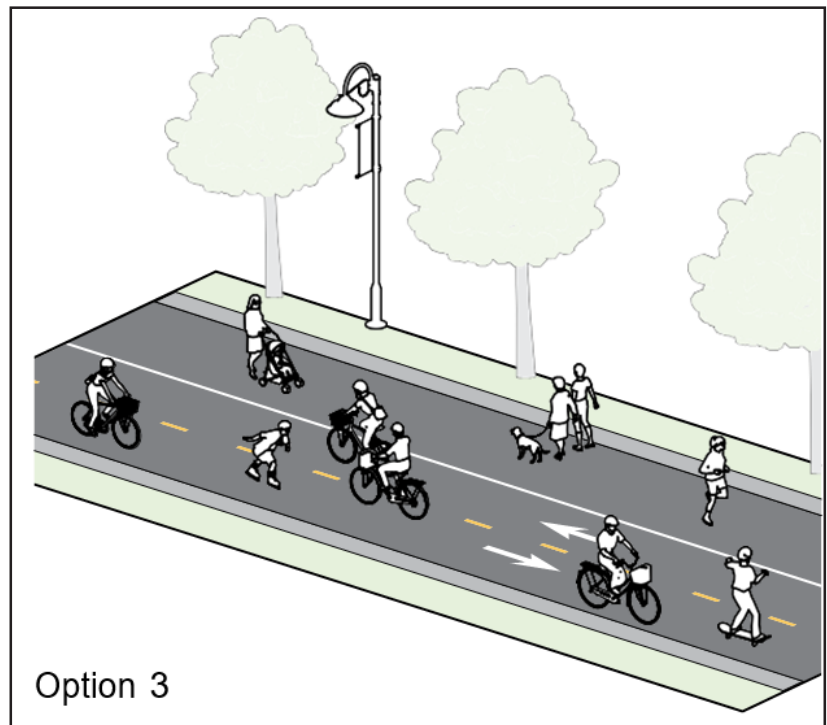


Figure 13. AASHTO Shared-Use Path Option 3 (AASHTO)

While 12 feet is the “practical minimum” for a three-lane design according to AASHTO, widening to 15 feet would guarantee a greater degree of comfort, even if path demand sees future increases (Sawyer & Ta, 2025, p. 43). The estimated peak traffic volumes (see Quantitative Site Observations page 12) of 400 users per hour between Patcong Ave and Seaview Ave implies a Level of Service of F at the current width. This grade would improve to a D with a 12-foot width and a C with a 15-foot width, retaining the ability to accommodate more users (Sawyer & Ta, 2025, p. 44). Given that 15 feet of width can be accommodated throughout Linwood, expanding to this width provides a comfortable, high-capacity path for generations of future users while balancing competing considerations, such as cost, additional impervious surface, and trail width in constrained areas.



Figures 14 & 15. Mill Valley – Sausalito Bike Path in Marin County, CA. (Masui, 2024)



Figure 16. MUTCD R9-7 Sign (Federal Highway Administration, 2023)

To enforce lane separation, it is recommended to use on-pavement markings to denote the walking and bicycle lanes with symbols, text, and arrows, where applicable to denote direction of travel.

Typically, NACTO recommends use of the MUTCD R9-7 sign shown in Figure 16, recommended by the MUTCD for use on shared use paths with bicyclists separated from pedestrians (NACTO; FHWA, 2023, p. 1058); however, this sign typically applies to bidirectional shared-use configurations where bicyclists must overtake pedestrians on their left, toward the path's centerline. To reflect the recommended three-lane configuration where bicycle traffic and walking traffic is fully separated, signage should be modified as appropriate to ensure it clearly reflects the configuration of the bike path. Additionally, the use of bicycle and pedestrian directional decals on the pavement may more effectively communicate where riders and walkers should situate themselves.

Systemic Trail Safety

Counteracting Potential Motor Vehicle Incursions

Widening the bike path may pose a need to discourage vehicles from turning onto the pathway, as a 15-foot path would become wide enough to comfortably accommodate them. Therefore, it is necessary to incorporate countermeasures into the design of the trail at intersections to make it clear that the bike path is a car-free space. Various treatments are available which may both provide safety benefits and add to the aesthetic value or charm of the bike path.

To discourage vehicles from entering, bollards, signage, and other blockers or markers could be used, serving a double purpose as lane enforcement and modal filtering for permitted path users. Adding bollards or other vertical deflection near intersections, as shown in Figure 17, not only prevents motor vehicles from accidentally entering the bike path, but also compels riders to cross the intersection safely and refrain from unsafe passing at these potential conflict points.

Additionally, aesthetic features such as wooden gateways, shown in Figure 18, could be installed at the path's entrances at intersections, adding aesthetic value and signaling that the path is a dedicated space for pedestrians and bicyclists only.



Figure 17. Bollards and MUTCD R5-3 “No Motor Vehicles” Sign in Atlantic County Bikeway - Egg Harbor Township, NJ (Google StreetView)



Figure 18. Wooden Gateway at Entrance to Middlesex Greenway – Metuchen, NJ (Pacer)

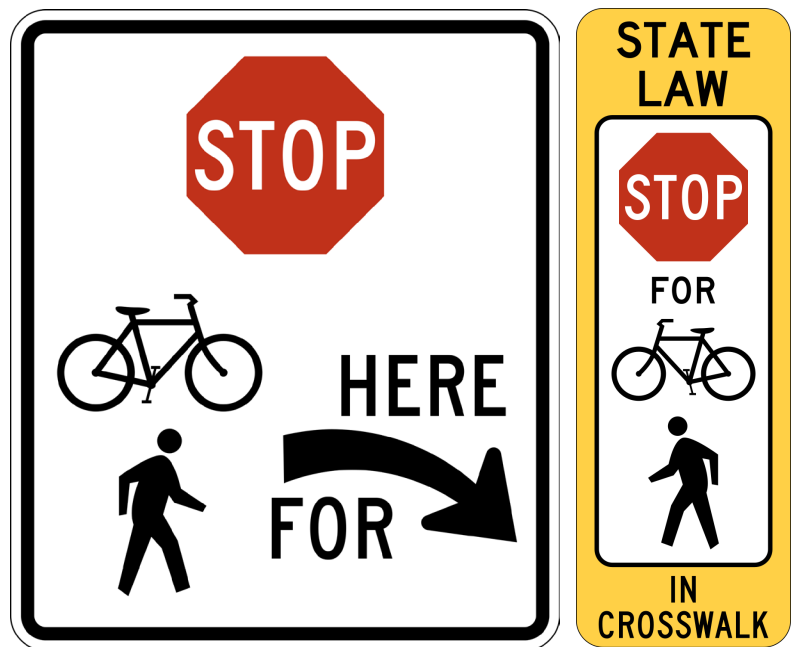
Revising Stop Control at Bike Path Crossings

On a corridor with no traffic signals, stop signs and painted stop bars are a useful tool to mitigate potential crashes between drivers and path users at intersections. Yet site visit observations revealed that bicyclists and scooter users frequently disregard stop control, instead preferring to checking for cross-traffic while in motion. Based on three likely reasons for this behavior, this plan recommends an alternate vision of stop control, informed by the Safe System approach, that may enhance its effectiveness by using it only when necessary.

The first potential reason for low compliance with stop control is time and effort burden: between Wilson and Haines avenues, for example, path users encounter stop signs every 250 feet, requiring frequent braking and acceleration with little time spent at cruising speed. Additionally, coming to complete stops is energy-consuming; Wilson & Papadopoulos (2004) estimate the typical cyclist requires 6 calories of energy to bring themselves back up to cruising speed from a full stop. Finally, bicyclists and scooter users may further perceive stopping as unnecessary at high-visibility intersections, since drivers are generally obligated to stop for path users at intersections, especially when the intersection is an all-way stop (N.J. Rev. Stat. § 39:4-144, 2024).

The Safe System approach requires framing transportation safety issues, in part, around the human nature aspects of road user behavior and aligning design treatments to these behaviors to ensure safety. Both drivers and bicyclists can be prepared to watch for each other at intersections without always coming to a complete stop, as long as speeds are in check, right-of-way is clear, and visibility is unobstructed. For drivers, intersection treatments including curb extensions and raised crosswalks (see Location-Specific Recommendations, page 38) slow motor vehicle speeds and improve pedestrian and cyclist visibility. Furthermore, pedestrian and cyclist right-of-way at these intersections can be emphasized with the R1-5e and R1-6e MUTCD signs shown below. R1-6e signs may be placed between motor vehicle lanes for maximum visibility. These signs should be prioritized at intersections where cross traffic to the bike path is not stop-controlled.

For bicyclists and scooter users, demarcating lanes provides a encourages safer speeds and careful riding. The use of bollards at intersections enhances this effect, requiring bicyclists to slow down in order to navigate between them. Intersection redesign proposals (see Maple Ave and Wabash Ave, page 32) also use tight path turns in order to slow speeds and increase alertness near crossings.



Figures 19 & 20. MUTCD-Compliant R1-5e (left) and R1-6e (right) signs (Federal Highway Administration, 2023)

While a stop-free approach is effective for most Linwood intersections, Ocean Heights Ave and Central Ave are higher-traffic intersections where bicyclists should be advised to come to a complete stop. Ocean Heights and Central Avenues connect to Atlantic County Route 651 and busy commercial areas on New Road. By reducing the number of stop signs for Linwood Bike Path users from 19 to as low as two, Linwood may present a more direct message about where stopping is necessary and improve compliance for stop signs at these key intersections.

Curb Extensions

Curb extensions remove excess road space at intersections to create a smaller turning radius so that drivers slow down, pedestrians are more visible, and crossing distances are minimized. Before committing to a concrete curb extension, quick-build curb extensions can use cones, flexible delineators, modular rubber curbs, or removable paint. These installations can test how well narrowing corners reduces turning speeds, improves driver yielding, enhances pedestrian visibility, and encourages students to cross in safer, more predictable locations.



Figure 21. Concrete Curb Extension Near Intersection in Woodbine, NJ (Google StreetView)

Crosswalk Markings

Additional high-visibility crosswalks are proposed to call attention to areas with frequent path entries and exits, and to direct path users to the safest routes of entry and exit. They are especially useful for filling missing links in the pedestrian network, such as the gap between a school exit and a bike path. Crosswalks can improve driver yielding behavior, organize student movement along safe corridors, and reduce diagonal crossings. Linwood may also consider the use of street murals at high-volume crossings near schools to increase driver alertness and a sense of cohesion between the school and the nearby neighborhood.

School Slow Zone Color Treatments

Bright colorized pavement creates a visual cue that alerts drivers they are entering a school zone. These treatments reinforce speed reduction and help highlight pedestrian zones. Temporary slow-zone demonstrations can test whether bright pavement encourages drivers to naturally reduce speed, whether students gravitate toward the highlighted safe area, and whether the stronger visibility improves overall safety perception. Common materials used are removable color coatings, anti-slip paint, chalk paint, reflective accents, and large-area stencils.



Figure 22. Example of a Temporary School Zone Crosswalk, Street Mural, and Curb Extension (National Complete Streets Coalition)

Strengthened Green Infrastructure

Planter Beds and Shrubbery

Adding planter beds and shrubbery along the path's green space can help improve the aesthetic landscape of the path while also creating a more absorbent environment to prevent flooding, reduce erosion, and collect rainwater. Using local vegetation also provides pollinators with the habitats and nutrients they need to thrive and reproduce, leading to healthy pollinator populations.



*Figures 23 & 24. Planter Examples
(Public Outdoor Creations; Mannheim Big Planter)*

Bioswales

As previously mentioned in our observations of the current physical environment of the path, there are two large drainage swales that are currently filled with grass. These two swales, located between State Street & Haines Avenue and beside the Linwood Arboretum, respectively, provide great opportunities for bioswales. Bioswales—drainage ditches with engineered soils and native plant species—manage stormwater more effectively than simple grass drainage ditches. On top of better stormwater management, they increase biodiversity, reduce the urban heat island effect, and improve the aesthetic quality of the landscape. Below are pictures illustrating examples of good bioswales.



*Figures 25 & 26. Bioswale Examples
(Volkening, 2010; Effective Stormwater Management: Installing Bioswales, 2022)*

Enhanced Amenities for a Sense of Place

Benches

Benches are a key aspect of placemaking and provide a space for socialization, relaxation, and a break during exercise and recreation. Benches are seen throughout the path; however, many lack either shade or lighting. It is recommended that trees or shading canopies be installed near all benches that are not currently accompanied by the infrastructure, and pedestrian-scale lighting fixtures be installed near those that are unlit. The City of Linwood may evaluate where on the bike path there are the longest segments without adequate shading to prioritize locations for the earliest installation of these features.

Lighting

Adequate lighting is necessary to optimize safety, visibility, and wayfinding along the path at night. While the intersections along the path are illuminated well by streetlights, it is recommended to evaluate adding pedestrian-scale lighting along segments of the path that are not adequately served by existing fixtures. Evaluation and improvement of lighting conditions should be prioritized near Linwood's three schools and nearby intersections.

StoryWalk Boards

StoryWalk boards are boards set up along a path that each contain pieces of a story in order. These boards are typically placed low enough for children to read. The recommendation is implementing StoryWalk boards along the path, with the story beginning near Seaview Elementary School and heading north, so that young students may be encouraged to read and follow the story on the walk home after school with their families.



Figure 27. Benches in the Linwood Arboretum



Figure 28. Pedestrian-Scale Lighting

Empty boards can be purchased from the Pannier company website (www.panniergraphics.com), and templates or completed, printed stories to fit the boards can be purchased from the official StoryBookWalk website (www.storybookwalk.com). The city can customize their own laminated stories to fit in the frames or could host a contest or program to include community members, such as having children or teens help with illustrations. If the City chooses to purchase pre-designed story boards, they could opt to purchase multiple options to be switched out periodically to encourage continued engagement with students.



Figure 29. StoryWalk Board (StoryWalk Frames)

Little Free Library

Little Free Libraries are miniature house-like structures often made of wood that serve as book swap stations. When implementing a Little Free Library, a city or organization can begin by donating a few books to include in the system, and then residents can visit as they please and “swap” a book with their own or temporarily borrow an existing book in the library and return it later on. These programs provide a fun activity that could attract new visitors to the path, increase socialization and community participation at the site. Residents can visit the library and sit on a nearby bench during their walk to read and relax.

Little Free Library kits can be purchased through the official Little Free Library website and typically cost between \$200 and \$500 (Libraries). Instructions are also available on the site for those who may want to build their own. The city could also purchase an “unfinished” library, which would arrive with all parts needed, but would allow the City to personalize the library to best represent the community. Linwood could perhaps host a contest where local artists could submit design ideas or apply for hire to paint the structure.



Figure 30. Little Free Library Example (Google Street View)

Garbage Cans

Ample garbage and recycling bins were seen throughout the path. However, adding garbage cans or bins that include dog-bag dispensers could be a useful addition, as many dog owners and walkers frequent the path, as observed during the site visit. Best practice recommends placing garbage bins near benches, bike racks, and other high-use placemaking areas to support cleanliness and a sense of place.



Figure 31. Trash Bin with Waste Bags for Dogs

Mile Markers

Adding mile markers showing the distance from the beginning or end of the path, or to major locations, could promote physical activity and make the space feel more complete. These can be colorful or shaped as people running or walking for an added element of fun.



Figure 32. Mile Markers (NACTO)

Wayfinding Signage

Adding bicycle and pedestrian crossing signage at intersections can help enhance safety, clarity, and navigation. It is recommended that these signs use bright colors, such as bright green and white, to optimize visibility and to use universally known icons. Wayfinding elements can be both functional and creative, as needed along the path and at intersections. Wayfinding signage describing mileage to major destinations, such as the local schools, business districts, and the Pleasantville Bus Terminal, could also be installed. This element could encourage users to walk or bike to transit hubs, main streets, and schools, rather than driving.

Wayfinding signage can use painted arrows, footsteps, bicycle symbols, or portable signs to guide students to the path. Wayfinding pilots can test whether directional cues improve compliance with safer routes, reduce confusion at decision points, separate walking and biking flows, and decrease conflicts with vehicles.



Figure 33. Wayfinding signage (Rails to Trails)

Regional Collaborations

To maximize the impact of the path improvements proposed in this plan, it is recommended to establish and maintain a partnership with Cross County Connection Transportation Management Association (CCCTMA). Cross County Connection serves all of the South Jersey region, including Linwood. They can serve as an important partner in supporting the planning and implementation of demonstration projects and long-term active transportation improvements in Linwood. Cross County Connection has extensive experience delivering Safe Routes to School (SRTS) programs, including walk audits, school travel plans, pop-up safety activities, and education campaigns that promote safer walking and bicycling practices and skills through education for students. Their experience with temporary demonstration projects and school zone safety initiatives can help inform the City's decision making as it evaluates potential bicycle and pedestrian improvements moving forward.

In collaboration with the South Jersey Transportation Planning Organization (SJTPPO), Cross County Connection offers communities access to a demonstration materials lending library. The library can provide Linwood with low-cost temporary materials such as paint, cones, temporary signage, flexible delineators, and other resources used to install pop-up demonstrations. They can also participate in other educational community events, helping to engage families, raise awareness, and gather feedback.

LOCATION-SPECIFIC RECOMMENDATIONS

After reviewing the path, the next step was to evaluate and assess the key intersections with adjacent streets to identify modifications and infrastructure improvements. The improvements would enhance safety for all path users.

Given that the Linwood Bike Path's greatest asset is its separation from vehicles, intersections with significant cross-traffic deserve special attention. After reviewing the potential alignment of a widened Linwood Bike Path, the next step was to review these key intersections to assess the potential of modifications and infrastructure improvements to provide safety benefits to path users. Additionally, there are specific segments where the path's right-of-way is constrained, requiring creative solutions to maintain a 15-foot width. Our location-specific recommendations focus on Oak Avenue, Van Sant Avenue, the area near All Wars Memorial, W. Devonshire Avenue, Belhaven Middle School, and Patcong Avenue at Wabash Ave.

Oak and Wabash Avenue

The intersection of Oak Avenue and Wabash Avenue creates several conflict points for pedestrians, bicyclists, and drivers alike. Oak Avenue intersects Wabash Avenue diagonally, which creates awkward sightlines and long crossing distances for bicyclists and pedestrians at the intersection. This makes crossing Oak Avenue longer than necessary, increasing the risk of conflicts or crashes between motor vehicles and path users.

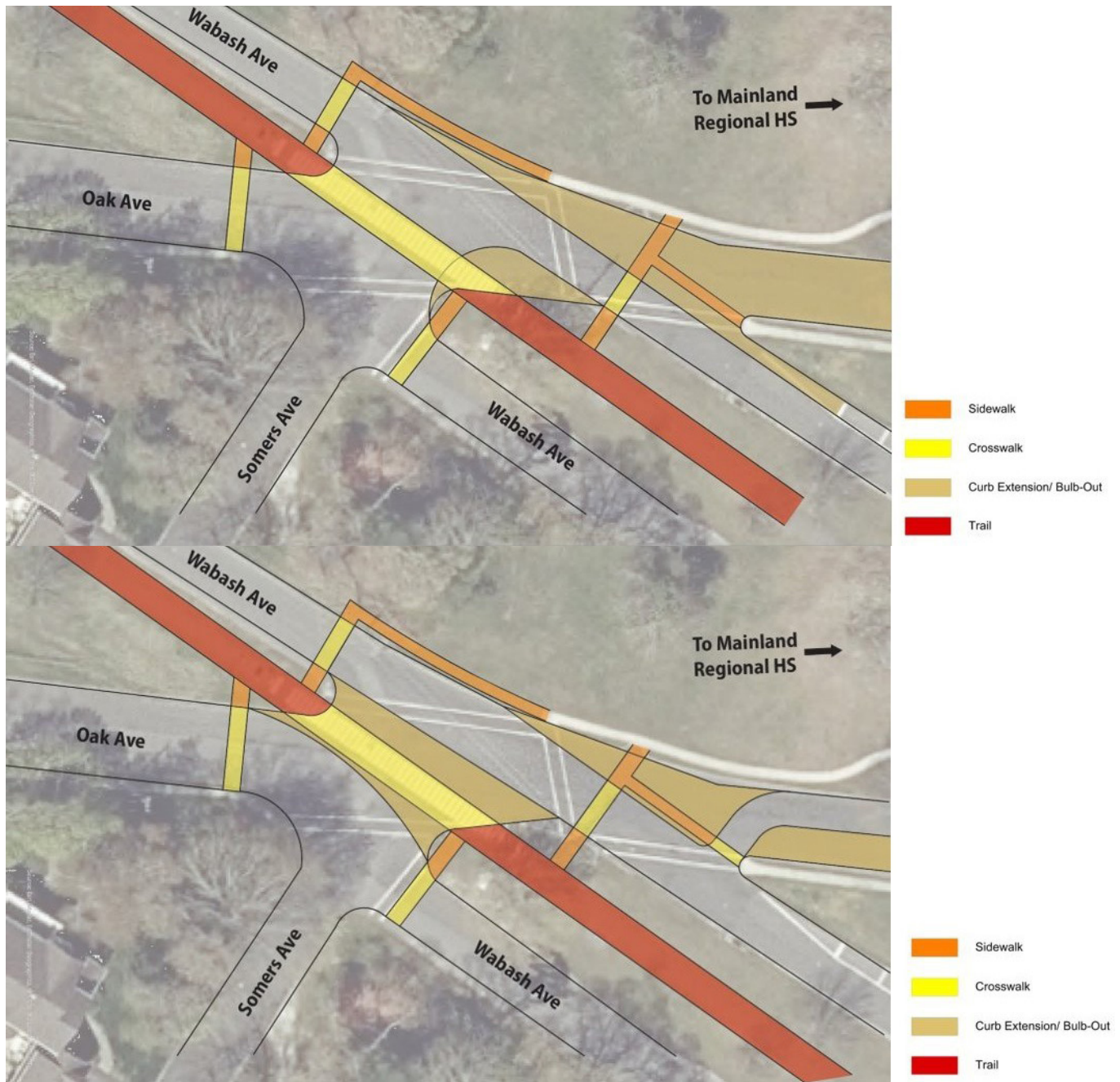
This plan provides two alternative configurations of the intersection of Oak Avenue and Wabash Avenue. The first proposed alternative is to close Oak Avenue from Wabash Avenue to the entrance to the Mainland Regional High School parking lot, in order to reduce the traffic conflicts that arise from poor visibility for drivers on Oak Avenue and to make it easier for high school students to cross Oak and Wabash. The reclaimed space of Oak Avenue could then be turned into a public plaza, public art installation, or be used for green infrastructure. Adding to the diverter, crosswalks were reconfigured so that pedestrian crossings are perpendicular to Wabash Avenue, reducing crossing distances to further improve safety.

The existing crosswalks would be replaced by the yellow shaded areas in the picture, shown below. Two curb extensions, shown by the tan shaded areas, would shorten the length of the crosswalks and make it safer for pedestrians to cross Wabash to and from the path. New sidewalk connections are shown in orange.

The other proposed alternative is a double diverter, making permanent the present closure of the intersection to through traffic during school pickup and drop-off times. This change would allow for pedestrians, bicyclists, and scooter users to cross Oak Avenue unimpeded. Vehicle traffic coming from Oak Avenue or Somers Avenue looking to cross Wabash Avenue would be rerouted north to Devonshire Avenue or south to West Patcong Avenue. The street closure could be achieved in the short-term with a piloted design using low-cost materials such as planters, cones, or paint; after evaluation of the impacts on road user safety and traffic patterns in the area, the pilot project could then be revised or made permanent. A permanent implementation should consider using more aesthetically pleasing materials and the reclamation of former road space for other purposes. The extra space not taken up by the widened

bike path could be turned into a public art installation, plaza, or be used for green infrastructure. Like the first option, the crosswalks would be redesigned to cross at 90-degree angles, and new sidewalks would connect the crosswalks to the path.

Secondly, the part of Oak Avenue west of Wabash Avenue would be narrowed through the use of curb extensions, in order for Oak Avenue to intersect Wabash Avenue at a right angle. This makes crossing distances shorter for pedestrians and bicyclists and also increases the visibility of the intersection as vehicles would be approaching the crosswalk head on. Lastly, this would require making Oak Avenue a one-way street towards Wabash Avenue to minimize the number of conflict points that arise from the intersection.



Figures 34 and 35. Oak and Wabash Recommendation Visualizations 1 & 2

Maple Avenue and Wabash Avenue

The intersection of Maple Avenue and Wabash Avenue presents a safety concern due to long crossing distances and exposure of path users to vehicle traffic with difficult sightlines. Safety can be improved by reorienting both legs of Maple Avenue to line up directly to create a four-way intersection. Additionally, curb extensions on both sides of Maple Avenue's northwest segment reduce pedestrian crossing distances and nudge drivers to proceed with caution through the intersection. These modifications would create a true four-way, 90-degree intersection, one of the safest possible orientations for an intersection to reduce driver confusion, improve visibility, improve traffic flow, and significantly shorten pedestrian crossings.

The vision for the bike path in the vicinity of Maple Avenue is to maintain a consistent width of 15 feet. Private property directly abuts the path along the southwest portion of Wabash Avenue, constraining any opportunities for rightward expansion. Instead, the 15-foot width can be achieved by slightly expanding the path into the roadway. Existing conditions allow for a 20-foot roadway with two 10-foot vehicle lanes as well as a 15-foot path with 2-foot buffers on each side. For the off-road portion of the trail passing the old train station, the recommendation is a similar 15-foot width, which can be achieved with relative ease due to the ample space available on both sides.

An important consideration for this design recommendation is the need to maintain vehicle access for the residence at 900 Maple Avenue. It should be noted that this reconfiguration does not require any property acquisition; however, Linwood should engage with the property owners to discuss potential options to redesign property access with a realignment of Maple Avenue.

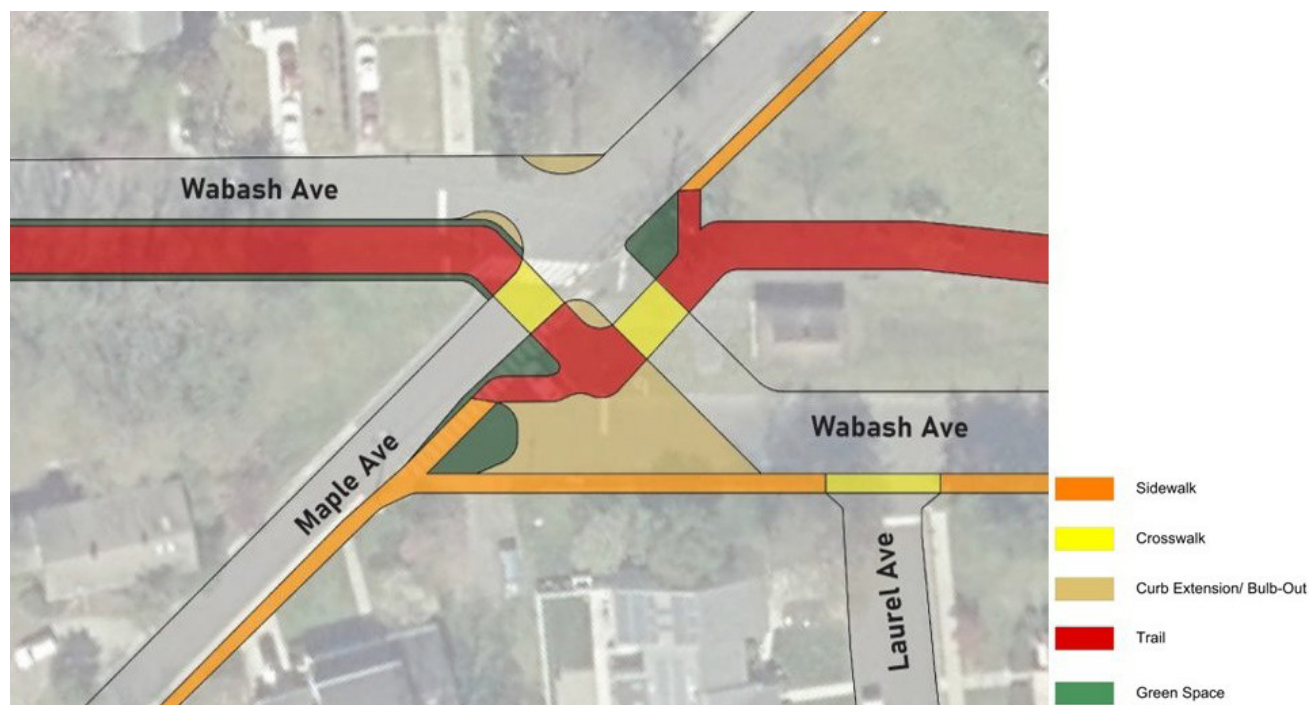


Figure 36. Maple and Wabash Recommendation Visualization

Van Sant Avenue

The right-of-way constraint at Maple and Wabash Avenues continues through the intersection of Maple and Van Sant Avenues, requiring widening the Linwood Bike Path into part of Wabash Avenue in order to maintain a consistent 15-foot width. Expanding into Wabash Avenue is necessary because the path directly abuts private property to its east in this section. Two-way travel is still feasible, as space remains for two 10-foot vehicle travel lanes. The narrower lanes may also reduce motor vehicle speeds along Wabash Avenue.



Figure 37. Van Sant Avenue Recommendation Visualization

All Wars Memorial Park

The current intersection sits at All Wars Memorial, a park that features amenities such as Linwood Street Hockey and a baseball field. The proposed design seeks to widen the existing path from 8.5 feet to 15 feet without reducing parking spaces along the adjacent street. The street will remain approximately 30 feet wide. To maintain the existing parking configuration, the plan expands the path into the park rather than toward the parking area. A 5-foot grass buffer will remain between the parking spaces and the path. The design extends the path 6.5 feet into the park to reach a total width of 15 feet, leaving a 1-foot grass buffer from the original edge to maintain separation. Similarly, the project adds three new entrances along the path to increase accessibility into the park. An important entrance is located near the Linwood Street Hockey arena, providing accessibility to path users. Existing memorial benches and utilities can be moved to allow for path widening. This approach enhances usability for pedestrians and bicyclists while respecting existing site constraints and community priorities.

The widening of the path near All Wars Memorial Park does not appear to require the relocation of any major utilities, as the expansion shifts to turf areas on the existing park. The expansion of the bike path in this segment may require moving small fixtures like benches, trees, and garbage bins, which can be easily shifted, relocated, or removed without a significant disturbance. The path segment near All Wars Memorial connects to the park, which is a popular local destination for recreational activity. Thus, safety measures and countermeasures through signage informing pedestrians and bicyclists of each other proves beneficial. The signage will promote speed checking and preparation to stop for pedestrians/bicyclists as needed. The path could benefit from pavement markings depicting “slow zones” or pavement calming features. Overall, the expansion of path near All Wars Memorial Park is beneficial for bicyclists and pedestrians alike, creating an active park and environment.



Figure 38. All Wars Memorial Park Recommendation Visualization

West Devonshire Avenue and Wabash Avenue

The intersection of West Devonshire Avenue and Wabash Avenue sits directly beside one of the parking lots of Mainland Regional High School and serves as a major walking and biking route for students during arrival and dismissal. At this location, many students cut across the parking lot, cross Wabash Avenue diagonally, or enter the bike path at unmarked and unpaved points. This adds an additional conflict location vehicles and buses on Wabash Avenue. To improve safety, comfort, and connectivity at this intersection, the concept plan introduces several coordinated upgrades that address observed student movement patterns and existing infrastructure gaps. Curb extensions at West Devonshire Avenue, Wabash Avenue, and the parking lot exit shorten crossing distances, slow turning vehicles, and improve visibility for students walking to and from Mainland Regional High School (MRHS).

A new crosswalk, aligned with the path students naturally take from the MRHS lot to the Linwood Bike Path, replaces informal diagonal crossings with a designated and protected route. An extended sidewalk along the west side of Wabash Avenue provides a continuous pedestrian connection from the parking lot exit to the intersection, removing areas where students previously walked on grass or in the roadway. A defined connection path further links the school exit to the curb extension and bike path, reducing unsafe shortcuts and clarifying access to the shared use path.

Together, these improvements create a safer, more intuitive circulation system that reduces conflict points and strengthens school and path connectivity.



Figure 39. West Devonshire and Wabash Recommendation Visualization

Belhaven and Wabash Avenue

At Belhaven Middle School, there is a large amount of both foot and bicycle traffic surrounding school arrival and dismissal. Students often cut directly through the parking lot to connect from the Linwood Bike Path to the school, presenting potential conflict during arrival and dismissal. To promote user safety and experience, recommendations include installing a curb extension in front of Belhaven School, two raised crosswalks at the existing crossings, and a new raised crosswalk that would lead pedestrians to the front entrance of the school.

Alternatively to multiple raised crosswalks at the intersection of Wabash Avenue and Belhaven Avenue, the City of Linwood could explore the installation of a raised intersection. A raised intersection is an alternative to multiple raised crosswalks in which the entire intersection is raised to create a traffic calming effect. This configuration improves visibility of pedestrians at the intersection and slows traffic but is also less disruptive to drivers than multiple consecutive raised crosswalks.



Figure 40. Belhaven and Wabash Recommendation Visualization

Patcong Avenue and Wabash Avenue

At Patcong Ave and Wabash Ave, installing a curb extension and three raised crosswalks would improve safety for path users at one of the Linwood Bike Path's busiest intersections. Two of the raised crosswalks would better support pedestrian traffic to and from the middle school and the third would be to improve the intersection over Patcong Ave. Moreover, the current diagonal crossing at the intersection would be redesigned to be a 90-degree crossing. This reconfiguration reduces the crossing distances for students accessing Belhaven Middle School.

Similarly to Belhaven Avenue, a raised intersection at Patcong Avenue may be an appropriate alternative to multiple raised crosswalks.



Figure 41. Patcong and Wabash Recommendation Visualization

Seaview Avenue and Wabash Avenue

The intersection of Seaview Ave and Wabash Ave is unique among the intersections along the Linwood Bike Path in that Wabash Avenue terminates on both sides of the intersection while the path continues through the intersection. Alongside the expansion of the path depicted below, curb extensions at all corners of the intersection would help shorten crossing distances and reduce turn radii to slow down vehicles making turns. This traffic calming is especially important due to proximity to Seaview Elementary School. Additionally, this location is a top priority for a bollard or other treatment to restrict accidental incursions by motor vehicles onto the widened bike path.



Figure 42. Seaview and Wabash Recommendation Visualization

CONCLUSION

The Linwood Bike Path's popularity among a broad range of users presents a valuable opportunity to enhance multimodal connectivity, promote active recreation, and improve accessibility to parks and schools. The Fall 2025 Graduate Planning Studio builds on the City of Linwood's Municipal Aid Application to widen the Linwood Bike Path to provide specific recommendations based on best practices for the shared-use bicycle and pedestrian path after conducting an in-person field observation. The plan aims to enhance safety and comfort by enabling predictable movements along and across the path, enrich user experience through placemaking, and incorporate green infrastructure for long-term resilience. Likewise, the recommendations outline by the studio focused on design improvements for specific intersections to improve pedestrian, bicyclist, and car-user safety.

The proposed 15-foot path widening enhances comfort for all users, applies a Safe System Approach to prioritize safety, integrates green streets principles through sustainable design, and allows for placemaking strategies to be further implemented by creating a more inviting, connected public space. The proposed separation between one bidirectional pedestrian lane and two lanes for bicyclists accommodates a wide range of users and speeds while maintaining existing parking configurations and promoting accessibility.

Moving forward, implementation will depend on securing funding, coordinating with regional partners such as Cross County Connection TMA, and addressing maintenance considerations for long-term sustainability. Collectively, these improvements will strengthen Linwood's active transportation network and reinforce the city's commitment to creating safer, greener, and vibrant public spaces. The plan builds on the existing path's strengths to create a more resilient, safe, and community-oriented active transportation network.

APPENDIX

Sources of Funding

There are numerous sources of funding available from state, federal, and non-profit programs for bicycle and pedestrian infrastructure. The various sources identified below can be used to provide funds for the Linwood Bicycle Path. However, many of these grant programs are competitive and/or require matching funds at the local level. Additionally, regional technical assistance is available for bicyclists and pedestrian projects from various regional agencies.

State Funding Sources

1. Bikeways Grant Program

- This grant program administered by the NJDOT is primarily designed to fund bicycle projects that create new shared-use paths. The selection criteria for this competitive grant program include factors such as the amount of new path miles added, improving bicycle connectivity, adoption of a complete streets' resolution, and utilization of FHWA proven safety countermeasures.
- <https://njdotlocalhub.com/local-aid-econ-dev/grant-programs/state-programs/bikeways/>

2. Municipal Aid

- This grant program is intended to fund projects that improve safety, biking, and walking. Bikeway and pedestrian safety projects are eligible for this program.
- <https://njdotlocalhub.com/local-aid-econ-dev/grant-programs/state-programs/municipal-aid/>

3. Local Aid Infrastructure Program

- This grant program administered by the NJDOT is intended to fund projects that appear due to unforeseen circumstances. It can be used to fund safety improvements at critical bicycle and pedestrian locations.
- <https://njdotlocalhub.com/local-aid-econ-dev/grant-programs/state-programs/local-aid-infrastructure/>

4. Safe Streets to Transit

- This grant program administered by the NJDOT is intended to fund projects that improve access to transit facilities. Pedestrian safety projects within 0.5 miles of a transit facility are eligible for consideration.
- <https://njdotlocalhub.com/local-aid-econ-dev/grant-programs/state-programs/safe-streets-to-transit/>

5. Recreational Trails Program

- This grant program administered by the NJDEP can be used to fund the development and maintenance of shared-use paths and their facilities. Funding consists of an 80% federal share and a 20% local match.
- <https://dep.nj.gov/greenacres/trails-program-home/nj-trails-program-grants/>

Federal Funding Sources

1. Safe Streets and Road for All

- This grant program funded by the Federal Highway Administration is designed to encourage bicycling and walking to school. The selection criteria for this competitive grant program includes improving safety, increasing biking and walking, adoption of supporting policies, and community support.
- <https://www.transportation.gov/grants/SS4A>

2. Transportation Alternatives Set-Aside Program

- This grant program is designed to encourage active transportation methods such as biking and walking. Projects regarding the design and construction of bicycle and pedestrian facilities are eligible for this program.
- <https://www.sjtpo.org/programs/ta/>

3. Congestion Mitigation and Air Quality Improvement Program

- This grant program is intended for projects that improve air quality and reduce congestion. Bicycle and pedestrian projects that reduce vehicle trips are eligible for this program.
- <https://www.sjtpo.org/programs/cmaq/><https://www.sjtpo.org/programs/cmaq/>

4. Safe Routes to School Program

- This grant program is intended for projects that encourage walking and biking to K-12 schools. Improving safety, increasing walking, and increasing biking are some of the selection criteria for this program.
- <https://www.sjtpo.org/safety/srts/>

5. Highway Safety Improvement Program

- This grant program is intended to reduce fatalities and serious injuries on roads. Projects that improve bicycle and pedestrian safety are eligible for this program.
- <https://www.sjtpo.org/safety/hsip/>

Non-Profit Funding Sources

1. Sustainable Jersey Grants Program

- This grant program offers small grants to municipalities. Projects related to bicycle and pedestrian safety are eligible for this program.
- <https://www.sustainablejersey.com/grants/sustainable-jersey-grants-program/>

Regional Technical Assistance

2. South Jersey Transportation Planning Organization

- The SJTPO can provide free demonstration materials, training, and technical assistance for bicycle and pedestrian projects.
- <https://www.sjtpo.org/programs/complete-streets-technical-assistance-program/>

3. Cross County Connection

- Cross County Connection can provide services such as conducting bicycle and pedestrian safety audits and providing assistance with grant applications.
- <https://www.driveless.com/local-government-programs-services/bicycle-pedestrian-planning-and-safety/>

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