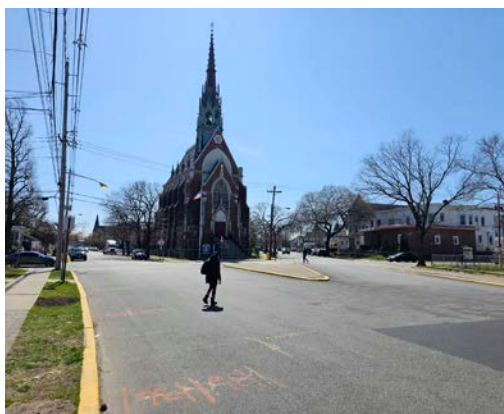


# State Street & Hamilton Avenue Complete Streets Conceptualization

City of Passaic, Passaic County, NJ

2023



## About the Report

This report has been prepared as part of the North Jersey Transportation Planning Authority (NJTPA) Complete Streets Technical Assistance program with financing by the Federal Transit Administration and the Federal Highway Administration of the U.S. Department of Transportation. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The NJTPA is solely responsible for its contents.

The report was authored by staff at the Alan M. Voorhees Transportation Center (VTC) at Rutgers, The State University of New Jersey, and reviewed by Sustainable Jersey and the NJTPA.

## The Alan M. Voorhees Transportation Center

The Alan M. Voorhees Transportation Center (VTC) is a national leader in the research and development of innovative transportation policy. Located within the Edward J. Bloustein School of Planning and Public Policy at Rutgers University, VTC has the full array of resources from a major research university on transportation issues of regional and national significance.

### Alan M. Voorhees Transportation Center

Edward J. Bloustein School of Planning and Public Policy  
Rutgers, The State University of New Jersey  
33 Livingston Avenue, Fourth Floor  
New Brunswick, New Jersey 08901

## Sustainable Jersey

Sustainable Jersey (SJ) is a nonprofit organization that provides tools, training and financial incentives to support communities as they pursue sustainability programs. By supporting community efforts to reduce waste, cut greenhouse gas emissions, and improve environmental equity, Sustainable Jersey is empowering communities to build a better world for future generations.

### Sustainable Jersey

Sustainability Institute at the College of New Jersey  
Forcina Hall, 3rd Floor  
2000 Pennington Rd.  
Ewing, NJ 08628

## North Jersey Transportation Planning Authority

The North Jersey Transportation Planning Authority (NJTPA) is the federally authorized Metropolitan Planning Organization for 7 million people in the 13-county northern New Jersey region. Each year, the NJTPA oversees more than \$2 billion in transportation improvement projects and provides a forum for interagency cooperation and public input. It also sponsors and conducts studies, assists county planning agencies, and monitors compliance with national air quality goals.

### North Jersey Transportation Planning Authority

One Newark Center, 17th Floor  
Newark, NJ 07102

## Acknowledgment

The authors of this report would like to extend special thanks to the following Passaic officials and other key stakeholders that made this project possible:

- Hector Lora, Mayor
- Kathy Martin, Mayor's Office
- Rick Fernandez, Business Administrator
- Sonal Patel, Assistant to the Business Administrator
- Joseph Golden, Engineer
- Yasseen Saad, City Engineer
- Vivian Vergel, Engineering Division
- Joe Buga, Project Manager, Passaic Enterprise Zone
- Maria F. Rivero, Engineering Aide
- Lieutenant Patrick Burnett, Police
- Julio Sanata, Zoning Officer
- EZ Ride, TMA

The team would also like to thank all those who participated in the public meeting and were able to provide their valuable insights into the study area. Rutgers graduate student Martin Balcazar provided support in the preparation of the graphics in the report.

# Table of Contents

<b>Executive Summary</b> .....	<b>1</b>
<b>Background</b> .....	<b>2</b>
What is a Complete & Green Street? .....	3
Benefits of Complete Streets .....	4
Complete Streets in New Jersey and Passaic .....	5
<b>Study Area</b> .....	<b>5</b>
<b>Existing Conditions</b> .....	<b>7</b>
State Street.....	7
Hamilton Avenue .....	8
Lexington Avenue .....	9
<b>Concepts and Recommendations</b> .....	<b>10</b>
<b>Additional Recommendations</b> .....	<b>14</b>
1. Adopt a Complete Streets Ordinance.....	14
2. Install a Demonstration Project.....	14
<b>Conclusion</b> .....	<b>15</b>
<b>Appendix</b> .....	<b>17</b>
A. Workshop Flyers .....	18
B. Potential Funding Resources .....	20
C. Guidance Documents.....	23

# Executive Summary

*Complete Streets are streets designed for all users, all modes of transportation, and all ability levels. They balance the needs of drivers, pedestrians, bicyclists, transit riders, emergency responders, and goods movement based on local context.*

**-State of New Jersey Complete Streets Design Guide**

In 2022, the City of Passaic sought the expertise of the North Jersey Transportation Planning Authority (NJTPA)'s Complete Streets Technical Assistance (CSTA) Program to help reimagine and redesign a roadway into a bicycle and pedestrian-friendly corridor. This report envisions how to reallocate the current right-of-way along Hamilton Avenue and State Street (Figure 1) to accommodate a two-way protected bicycle path. Feedback from municipal stakeholders informed development of three conceptualizations for State Street, supporting plans for Hamilton Avenue, and selection of a preferred concept. This report shows how State Street can be completely redesigned with wider sidewalks, angled parking, and a bicycle path to provide safe roadway facilities for all users. In addition, the supporting plans show how the bicycle path can continue up Hamilton Avenue to provide a continuous protected bicycle facility along the entire corridor.

During this project, the City used preliminary study recommendations to apply for a Transportation Alternatives Set-Aside grant. The conceptualizations included in this report will help to educate residents on what a redesign can look like and help to build support for a Complete Street. Additionally, this report describes how Passaic can test the redesign by conducting a demonstration project to gather additional feedback. The concepts and reference images provide context to how a temporary project could take shape. While this project focuses on a single corridor, the idea of protected bicycle paths and expanded public space is applicable to other municipal-owned roads. A list of potential funding resources and recommended design guides can be found in the appendices.



Figure 1. Looking south on Hamilton Avenue.

# Background

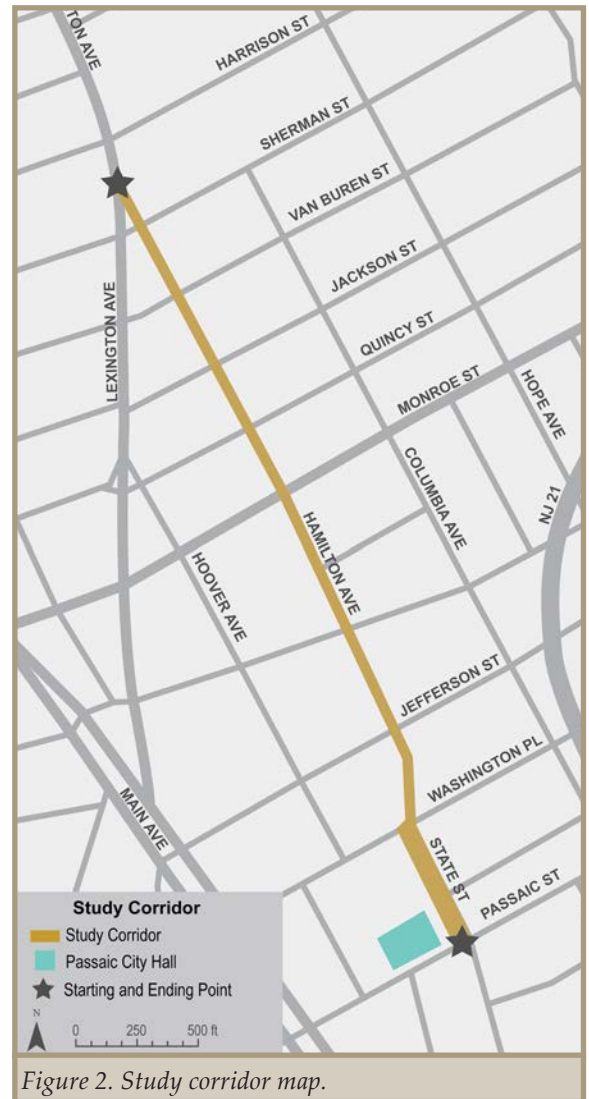
The North Jersey Transportation Planning Authority created the CSTA Program in 2018 to assist municipalities in advancing or implementing Complete Streets, a need identified by the Together North Jersey consortium. This report is part of the third round of the CSTA Program, in which seven municipalities were selected to receive technical assistance. Municipalities were chosen for the program through a competitive application process based on the following criteria: the need for technical assistance, commitment to project implementation, opportunity for public engagement, and the strength of their respective municipal teams. In addition, projects at locations with high crash rates and projects with the potential to involve and benefit traditionally underserved populations were given additional consideration.

The City of Passaic requested a Complete Streets Conceptualization project as part of an effort to improve mobility in the downtown area. In its application, the City identified the Hamilton Avenue and State Street corridor between Passaic Street and Lexington Avenue as key roadways to start establishing a safe bicycle network in the City to help increase connectivity between this neighborhood and the greater region (Figure 2). The application stated that this project will help to strengthen municipal efforts to connect residents to local, county, and regional destinations.

The corridor is characterized by smaller-scale, street-oriented mixed-used buildings and important destinations such as City Hall, the Passaic Police Department, Passaic County Community College, and a school. As such, the City is especially interested in adding infrastructure that will accommodate users of all ages and abilities. Passaic expects numerous development projects to bring new residents and jobs to the neighborhood. In its application, the City stated that these developments may result in 28,000 new daily trips. Therefore, the City wants to improve bicycle and pedestrian options in advance of these projects to encourage increases in non-motorized trips.

Prior to creating the conceptualizations, the CSTA project team met with City officials to discuss the study area and gain a better understanding of the corridor and the need for bicycle and pedestrian accommodations. A member of the project team then conducted a site visit and walked the length of the study corridor, making note of existing conditions, observing driver and pedestrian behavior, and identifying opportunities and barriers. The project team then created preliminary design concepts, which they presented to municipal officials on October 13, 2022. Passaic officials selected a preferred alternative, which the team developed into full conceptualizations. Those draft images were presented to the City and members of the public during a virtual meeting held on February 28, 2023. During that meeting, the CSTA team gathered additional feedback and provided answers to questions from the public. The final concept images found in this report reflect the public and stakeholder feedback

The City also took advantage of the early draft concepts to apply for a Transportation Alternatives Set-Aside grant to construct the bikeway project. This grant program, administered by the New Jersey Department of Transportation (NJDOT) in partnership with the NJTPA, provides federal funds for community based “non-traditional” surface transportation related projects designed to strengthen the cultural, aesthetic, and environmental aspects of the nation’s surface transportation intermodal system. On May 19, 2023 the NJDOT announced that Passaic would receive a \$454,000 grant.



## What is a Complete & Green Street?

Complete & Green Streets are part of a movement where municipalities, counties, and states adopt policies that require road engineering and design projects to consider the mobility needs of everyone (Figure 3). Everyone includes all roadway users and all travel modes—pedestrians, cyclists, transit users, freight, and travelers of all ages and abilities.

Section 11206 of the new Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment and Jobs Act (IIJA) of 2021, defines Complete Streets standards or policies as those which “ensure the safe and adequate accommodation of all users of the transportation system, including pedestrians, bicyclists, public transportation users, children, older individuals, individuals with disabilities, motorists, and freight vehicles.” This section of the BIL requires that States and MPOs use 2.5 percent of their planning and research funds for Complete Streets activities that will increase safe and accessible transportation options.

Complete Streets should tailor the road to the specific needs of the surrounding environment. A school zone, for instance, may require reduced speed limits, narrower travel lanes, and wider sidewalks to achieve a safer setting for students. Meanwhile, streets along transit routes should incorporate the needs of bus and rail commuters by installing benches, shelters, lighting, and signs.

Regardless of the context, Complete & Green Streets designs should improve safety for pedestrians and bicyclists who are the most vulnerable road users. Reduced speed limits, raised medians, and other design elements can help create a safer environment for seniors, children, and people with disabilities. To put the impacts of traffic speeds into perspective, a 10-mph reduction in vehicle speed dramatically decreases the chance of pedestrian fatalities in a collision. The U.S. Department of Transportation (USDOT) cites collisions in which pedestrians are struck by a vehicle traveling 40 mph as being fatal 85 percent of the time. Comparatively, at 30 mph, pedestrian fatality rates drop to 45 percent, and at 20 mph they drop down to five percent (Figure 4 and Figure 5). Complete & Green Streets recognize that all users of the transportation network, whether traveling by car, bus, train, or taxi, become pedestrians at some point during their journey.

Complete Streets is also an implementation strategy of the Safe System Approach, adopted as the guiding principle behind the USDOT National Roadway Safety Strategy, which emphasizes that deaths and serious injuries due to roadway crashes are unacceptable. Safe System Approach refocuses transportation system design and operation on anticipating human errors and reducing impact forces to minimize crash severity and save lives. Under this approach, the transportation agencies implement proactive, redundant systems of safety to prevent crash fatalities and serious injuries. Complete Streets addresses two of the five elements of a Safe System- Safe Roads and Safe Speeds- and advances the proactive implementation of safety infrastructure.

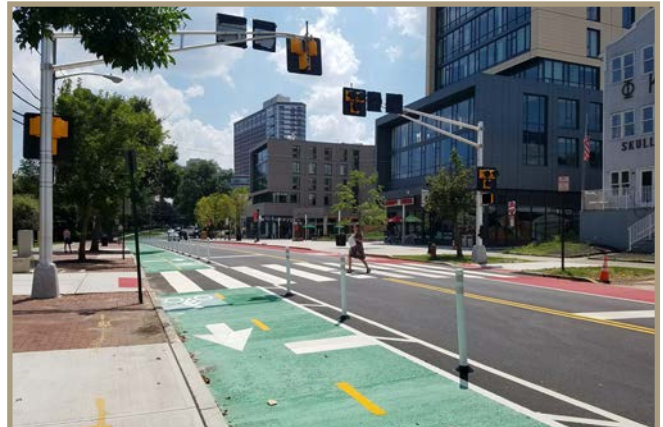


Figure 3. This Complete Street in New Brunswick, NJ, features a bicycle path, bus lane, and enhanced pedestrian crossing.

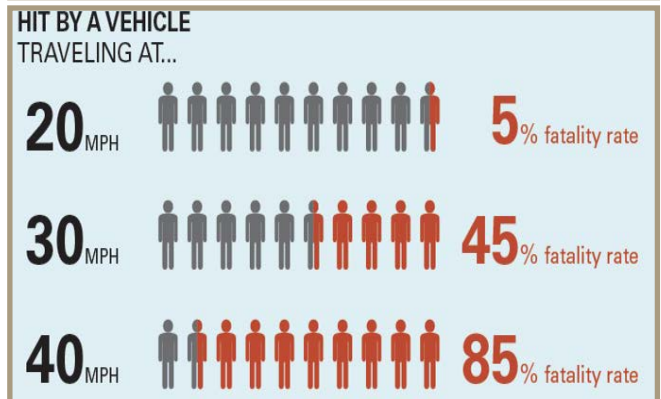


Figure 4. Graphic showing increased fatality rate as vehicle speeds increase. (USDOT)

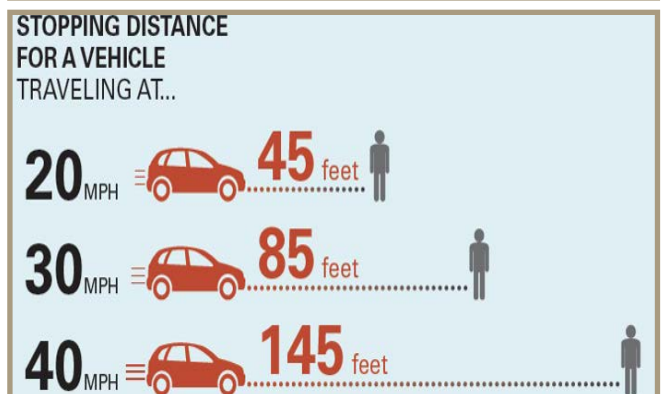


Figure 5. Graphic showing increased stopping distance as vehicle speeds increase. (USDOT)

## Benefits of Complete Streets

While the primary benefit of Complete & Green Streets is improved safety for all roadway users, there are other positive outcomes. Complete streets create better places to live, work, and do business.

### Public Health

Complete Streets make it possible for people to routinely choose walking, bicycling, and transit to access community destinations such as supermarkets, medical services, and entertainment destinations, leading to greater physical activity and social connectivity. Improving walkability, bikeability, and transit access helps solve urgent public health problems by improving safety and sociability and by reducing air pollution.

### Green Streets

Green Streets use green infrastructure practices installed within the public right-of-way to manage stormwater while preserving the primary function of a street as a conduit for vehicles, pedestrians, bicyclists, and transit riders (Figure 6). Green Streets and Complete Streets can complement each other by creating an inviting and comfortable walking and bicycling environment by incorporating green infrastructure elements, such as street trees and rain gardens that provide shade and remove pollutants from the air, while minimizing flooding along streets and sidewalks that interferes with and discourages walking and bicycling.



Figure 6. Green infrastructure used to narrow the roadway and provide a shorter crossing distance for pedestrians.

### Economic Vitality

Improving streetscapes can help to strengthen or revitalize business districts. Complete Streets generate more foot traffic when they create great places where people want to be, which can encourage both residents and visitors to spend more money at local shops and restaurants. For example, pedestrianizing Division Street in Somerville, New Jersey attracted new businesses and helped to revitalize a struggling business corridor (Figure 7). The economic benefits also extend to individuals by lowering costs related to car ownership. By walking, biking, and taking transit for more trips, households save money on driving expenses like gasoline, parking, and maintenance, and can choose to own fewer vehicles – or no vehicles at all.



Figure 7. Division Street in Somerville was converted into a popular pedestrian plaza.

### Transportation Equity

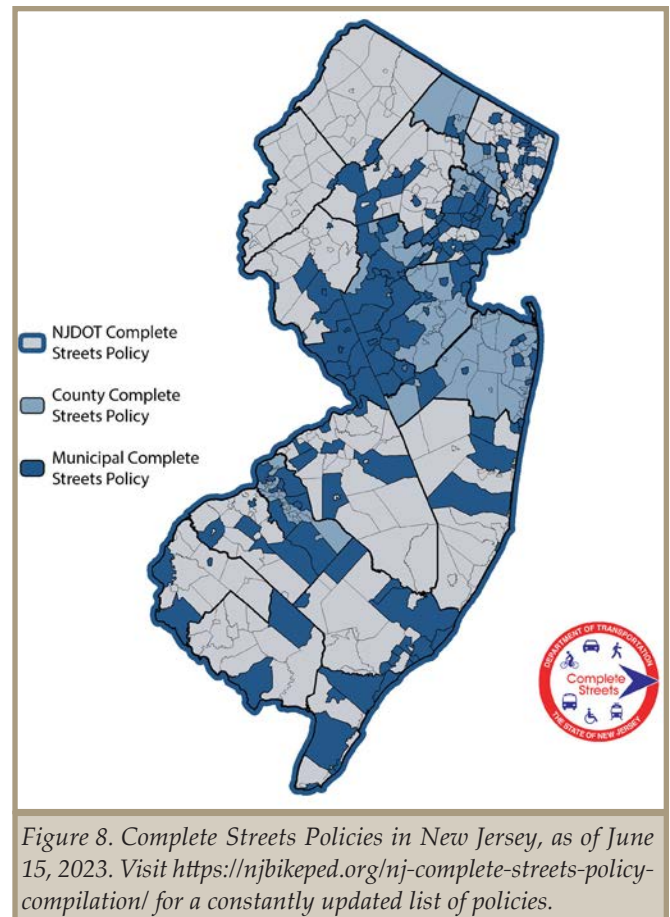
Fair and equitable distribution of transportation investments is a fundamental principle of Complete Streets. All users of the transportation system should benefit from our shared streets regardless of income, ethnicity, ability, or other differences. For those whose transportation choices are limited by circumstance or location, pedestrian, bicycle, and transit access to essential services and community destinations such as hospitals, medical offices, senior centers, schools, employment centers, bus routes, and transit stops can be life-changing.



## Complete Streets in New Jersey and Passaic

New Jersey is a leader in the Complete Streets movement. In 2009, NJDOT was among the first state DOTs in the nation to adopt an internal complete streets policy. Since 2009, NJDOT has funded six Complete Streets Summits and over a dozen local, regional, and statewide in-person and online educational workshops intended to disseminate the latest information about complete streets to planners, engineers, elected officials, and advocates. In 2017, NJDOT released the New Jersey Complete Streets Design Guide to inform New Jersey communities on how to implement Complete Streets projects. In 2019 (with updates in 2020), NJDOT released the *Complete & Green Streets for All: Model Complete Streets Policy and Guide* to serve as a new resource for local best practices in policy language. One of the positive outcomes of these efforts is that communities of all sizes throughout the state have joined NJDOT in adopting complete streets policies. Of New Jersey's 21 counties, eight have adopted Complete Streets policies. Additionally, 174 municipalities have implemented policies (Figure 8).

Passaic County adopted a Complete Streets policy in 2014. The City of Passaic has not yet passed its own policy or ordinance.



## Study Area

According to the 2020 US Census, The City of Passaic is home to approximately 70,537 residents within an area of 3.24 square miles. The median age is 30.8, and the estimated median household income is \$49,436. Passaic is home to a high population of Hispanic residents, 73.4 percent compared to 20 percent statewide. Passaic is a city of immigrants, as 40.7 percent of residents were born outside the United States. Clifton borders the city to the north, south, and west. The Passaic River borders the east side of Passaic City. Across the river are the Bergen County municipalities of East Rutherford, Garfield, Rutherford, and Wallington.

The study corridor is .6 miles long and runs from the intersection of Passaic Street and State Street to the intersection of Hamilton Avenue and Lexington Avenue. Detailed conditions for the corridor can be found in the next section.

### Traffic Volumes and Speed

NJDOT recorded traffic counts on Hamilton Avenue between Jefferson Street and Madison Street in 2019. That observation found an annual average daily traffic (AADT) volume of 5,297. As a comparison, Route 21 had a recorded volume of 79,693 vehicles the following year. A peak traffic volume of 472 vehicles was counted between 4 pm and 5 pm. The speed limit is 25 mph throughout the study corridor, but recent data on recorded traffic speed is not available.

### Crash History

According to NJDOT crash data, over the five years from 2017-2021, there were 388 crashes along the study corridor. Of those, the most common crash type involved a parked vehicle, followed by sideswipes and right-angle crashes. Eleven crashes involved a pedestrian, of which six occurred on the State Street section. There were four crashes with a bicyclist, two of them occurring at the intersection of State Street and Passaic Street (Table 1).

Table 1. Pedestrian and bicycle crashes in study area, 2017-2021.

Location	Date	Crash Type	Ped./ Cyclist Age	At Intersection	Lighting Condition
State & Passaic	December 2018	Pedestrian	Unknown	Yes	Dark (street lights on)
State & Passaic	July 2019	Bicyclist	Adult	Yes	Daylight
State & Passaic	July 2020	Bicyclist	Adult	No	Daylight
State & Passaic	October 2021	Pedestrian	Adult	Yes	Daylight
State & Washington	March 2017	Pedestrian	Adult	Yes	Dawn
State & Washington	May 2018	Pedestrian	Adult	Yes	Dawn
State & Washington	August 2018	Pedestrian	Child	Yes	Daylight
State & Washington	May 2019	Pedestrian	Adult	Yes	Daylight
Hamilton & Madison	September 2019	Pedestrian	Adult	Yes	Dark (street lights on)
Hamilton & Madison	August 2021	Bicyclist	Adult	Yes	Daylight
Hamilton & Monroe	May 2019	Pedestrian	Adult	Yes	Unknown
Hamilton & Quincy	April 2021	Pedestrian	Adult	Yes	Daylight
Hamilton & Quincy	April 2021	Pedestrian	Adult	Yes	Daylight
Hamilton & Jackson	January 2020	Pedestrian	Adult	Yes	Dark (street lights on)
Hamilton & Jackson	June 2020	Bicyclist	Senior	Yes	Daylight

## Bicycling Conditions

There were no bicycle facilities in the study corridor. There is a short three-block-long bicycle lane on Lexington Avenue parallel to the study corridor. In 2022, the NJTPA funded *Bike Passaic County*, a county-wide bicycle master plan that provides a framework to improve and encourage bicycling throughout the County. This plan identified the study corridor as a suitable location for bicycle facilities.

The NJTPA prepared a map showing City of Passaic roads classified by their Level of Bicycle Compatibility (LBC) (Figure 9). This system analyzes roadway design, speed limits, number of lanes, and truck volumes to categorize all roads and trails into one of five groups. Most roadways in Passaic are LBC 2 or 3. Adding infrastructure can change the comfort level. The categories are:

- LBC 1: Little to no stress. Suitable for all cyclists, including children.
- LBC 2: Little traffic stress. Suitable for most adult cyclists, but more challenging for children.
- LBC 3: Moderate traffic stress. Comfortable for those who already ride bicycles.
- LBC 4: High traffic stress. Only for very experienced bicyclists.
- LBC 5: Unable to classify or unsuitable for bicycling.

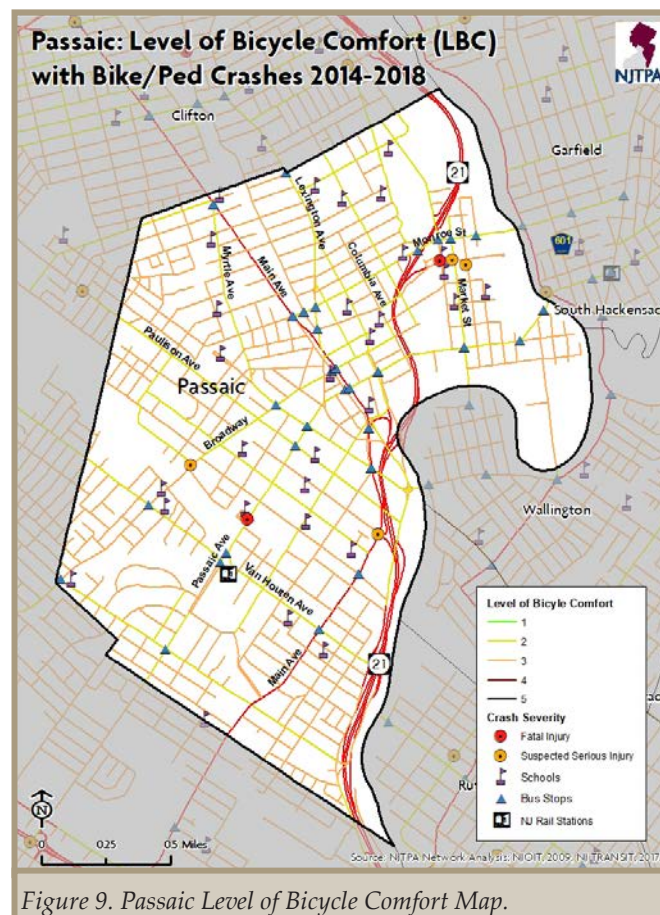


Figure 9. Passaic Level of Bicycle Comfort Map.

# Existing Conditions

## State Street

The State Street section of the project is located between Passaic Street and Washington Place. City Hall occupies the entire western side of this block, including a surface parking lot on the northern end (Figure 10). The eastern side of the block has a bakery with surface parking and a church. These properties are divided by a minor roadway, Ann Street, which terminates at State Street (Figure 11). There are no crosswalks across State Street at this intersection, although the project team observed multiple pedestrians crossing at that location.

The roadway is 80 feet wide and has two travel lanes in each direction, parallel parking, a southbound left-turn lane, and a small concrete median (Figure 12). The roadway continues south of the study area with the same cross-section, and feeds into State Route 21. There are no bicycle facilities, and the sidewalks seem narrow for a prominent corridor next to the civic center, as they are not wide enough for people to walk side-by-side.



Figure 12. Looking north on State Street from the center median.

At the intersection with Passaic Street, the traffic signal appears to be a few decades old but has been retrofitted with modern pedestrian signals. All four corners have curb ramps, but only one appears to meet current Americans with Disabilities Act (ADA) standards. The traffic signal narrows the sidewalk (Figure 13).

Narrow sidewalk conditions are exacerbated by the poor condition of the concrete, which creates a barrier to mobility. Additionally, there are multiple driveways into the City Hall complex, and the transition between the sidewalks and the driveways is rough (Figure 14).



Figure 10. City Hall, as seen from the southeast corner of Passaic Street and State Street.

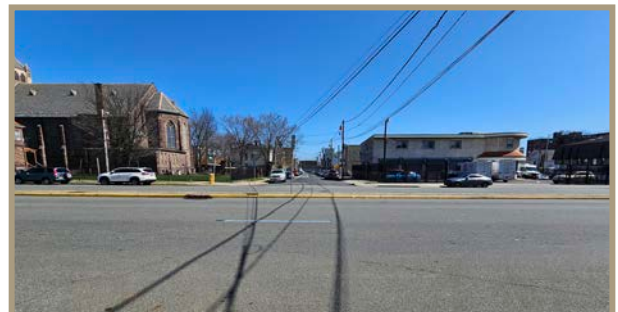


Figure 11. Looking east to Ann Street, the bakery is on the right and the church is on the left.



Figure 13. Old traffic signal, non ADA-compliant ramp, and narrow sidewalk outside City Hall.



Figure 14. Narrow sidewalk with degraded concrete at City Hall driveway.

Washington Place is a one-way roadway, with traffic flowing in the eastbound direction. There is a continuous right-turn lane for traffic into State Street. The crosswalk at this location is 45 feet long (Figure 16). A concrete island divides this turn lane from the rest of the intersection, which is signalized (Figure 17). This signal also appears to be several decades old, and six of the eight pedestrian signal heads are of an older design. All the corners have curb ramps, but none appear to be ADA-compliant (Figure 18).



Figure 16. Looking south at the very wide right turn lane onto State Street.



Figure 17. Looking north from the center island.



Figure 18. Looking southeast, the curb ramps are not ADA-compliant.

## Hamilton Avenue

North of Washington Place, State Street becomes Hamilton Avenue, a 40-foot-wide road that is one-way northbound. There are no lane markings, so it is unclear if one or two lanes of traffic are allowed (Figure 15). This lack of delineation may result in higher speeds, dangerous passing, sideswipes, and other unintended behavior, as observed in the crash history. Parking is generally allowed on both sides of the street.

The study corridor continues north through eight intersections until it reaches Lexington Avenue. The roadway cross-section remains constant, although the intersection treatments vary. Land use also varies from residential to mixed commercial, to civic with School No. 6. The sidewalk conditions vary block-by-block, from as little as four feet in some sections, to over ten feet in other sections (Figure 19, 20).

The intersections with Jefferson Street, Madison Street, and Monroe Street are signalized (Figure 21). The intersection with Jackson Street is an all-way stop. At the other intersections, Hamilton Avenue has the right of way (Figure 22). There are twelve minor driveways on both sides of the street. In addition, the east side has two larger driveways for commercial properties.



Figure 15. Looking north from Washington Place.

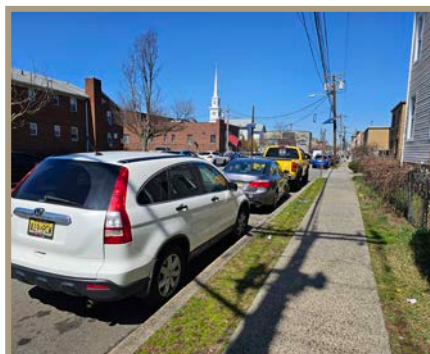


Figure 19. Section with narrow sidewalk.

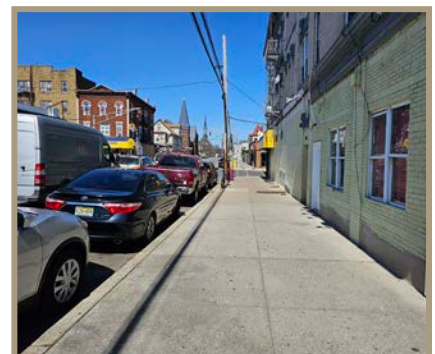


Figure 20. Section with wider sidewalk.



Figure 21. Hamilton and Madison.



Figure 22. Hamilton and Quincy.

## Lexington Avenue

At the northern end of the corridor, Hamilton Avenue merges with Lexington Avenue (CR 625) shortly after the intersection with Sherman Street. Lexington Avenue has one lane in each direction, with on-street parking. Even though Lexington Avenue is the major roadway and has the right of way, Hamilton Avenue is wider. Combined with the acute angle at which the roadways meet, the project team observed confusion about vehicles on Hamilton Avenue needing to stop (Figure 23).

The proximity of Sherman Street to Lexington Avenue creates a small triangular concrete island (Figure 24). This island is not large enough for vehicles to stop without blocking the crosswalk (Figure 25). The church also limits visibility, forcing drivers to enter the crosswalk to see if the roadway is clear (Figure 26).



Figure 23. Looking north on Hamilton Avenue, with the Sherman Street intersection in the foreground. A yield sign is visible where the roadway merges with Lexington Avenue.



Figure 24. Looking east from Lexington Avenue and Sherman Street.



Figure 25. Looking west on Sherman Street, a vehicle at the stop sign blocks the crosswalk.



Figure 26. Looking south on Hamilton, a vehicle blocks the crosswalk to see traffic.

The project team observed moderate pedestrian traffic at this intersection. Many pedestrians chose to follow the shortest path to cross the roadway, which is outside of the marked crosswalks (Figure 27).

Parking is not allowed adjacent to the concrete island or on the east side of Lexington Avenue approaching the intersection with Harrison Street. This results in an undefined 30-foot-wide space for vehicles (Figure 28). Google Street View shows that Lexington Avenue had shared-lane markings (sharrows) and defined parking areas between 2017 and 2019. However, at some point, these faded or were removed and not replaced.

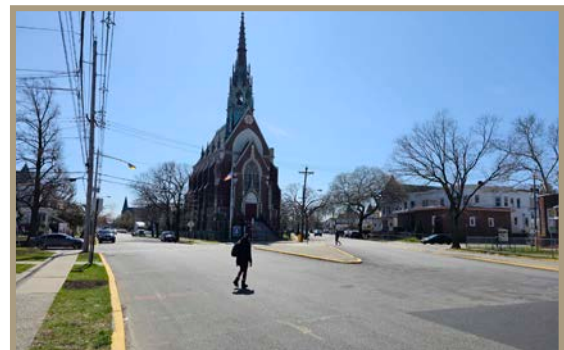


Figure 27. Pedestrians following the shortest path.

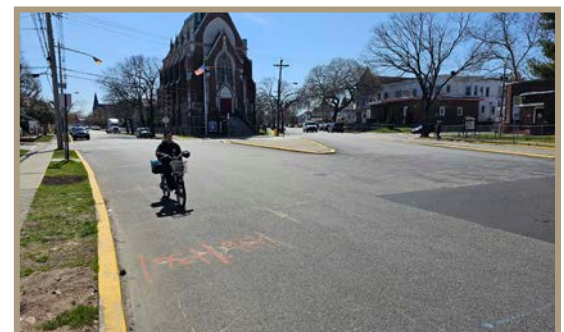


Figure 28. A bicyclist in the very wide travel lane.

# Concepts and Recommendations

The CSTA team developed three initial designs for the Hamilton Avenue section. The rationale for this approach is that Hamilton Avenue has a more significant space constraint than State Street, and the chosen preferred alternative would determine what treatment would work best for the entire study area. The three alternatives were: a one-way buffered bicycle lane, a one-way parking-protected bicycle lane, and a two-way cycle track (Figure 29, 30, 31). The pros and cons of each design were discussed with City officials during a meeting on October 13, 2022. Passaic selected Alternative 3 in that meeting as it would provide the most comfort and safety for users of all ages and abilities. The City requested moving the cycle-track to the east side of the roadway and designing the State Street concept with angled parking in mind, if possible.

The project team then re-envisioned the State Street corridor by reallocating the 73 feet of roadway space into infrastructure that can better serve pedestrians and bicyclists while still allowing full vehicular access to City Hall. The proposed design creates new public open space, new space for art, and visually enhances the civic center.

Figure 32 shows the proposed design for State Street, looking north. Starting from the left side of the image, where City Hall is, the sidewalk has been significantly expanded from six feet to twelve feet. This change will allow pedestrians to walk side-by-side while supporting new amenities such as benches, trash cans, pedestrian-scale lighting, and additional trees.

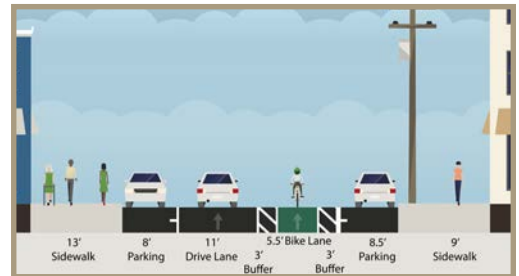


Figure 29. Alternative 1, buffered bicycle lane.

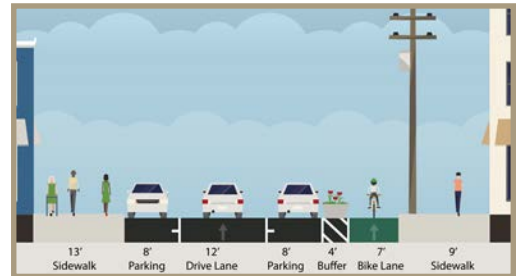


Figure 30. Alt. 2, parking-protected bicycle lane.

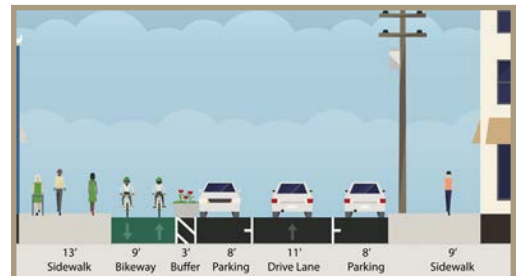


Figure 31. Alternative 3, cycle track.



Figure 32. Final concept design, looking north from the intersection of State Street and Passaic Street.

Parallel parking is replaced with reverse-angled parking, maintaining the same number of spaces. Reverse-angled parking is safer for all roadway users and this new configuration allows for a vastly expanded sidewalk extension near the intersection, which decreases the length of the crosswalk and creates space for green infrastructure. The roadway is reduced to two vehicle travel lanes and the concrete median is removed. A southbound left-turn lane is not shown in the concept but could be accommodated if a traffic study shows that it is needed.



Figure 33. Example of a parking-protected cycle track.

A ten-foot-wide two-way protected cycle track is shown on the eastern side of the roadway. Near the intersection, it is separated from the roadway with a concrete median while still allowing full driveway access to the bakery. Further north, parallel parking is maintained adjacent to the cycle track. Figure 33 shows what a completed cycle-track can look like. The eastern sidewalk can be widened slightly to eleven feet.

Figure 34 shows State Street at the intersection with Ann Street. The new roadway cross-section continues, and a crosswalk is shown added across State Street at this intersection. During the field visit, the project team noticed multiple pedestrians crossing here. Enhanced pedestrian signage, such as a Rectangular Rapid-Flashing Beacon (RRFB) may be warranted here.

A raised crosswalk is shown across Ann Street. Raised crosswalks provide a level path for pedestrians, which is especially important for people using wheelchairs. In addition, the raised crosswalk acts as a speed deterrent for drivers, further improving safety.

Sidewalk extensions at the corners prevent illegal parking, which is important for visibility. These extensions also provide an opportunity to add green infrastructure.

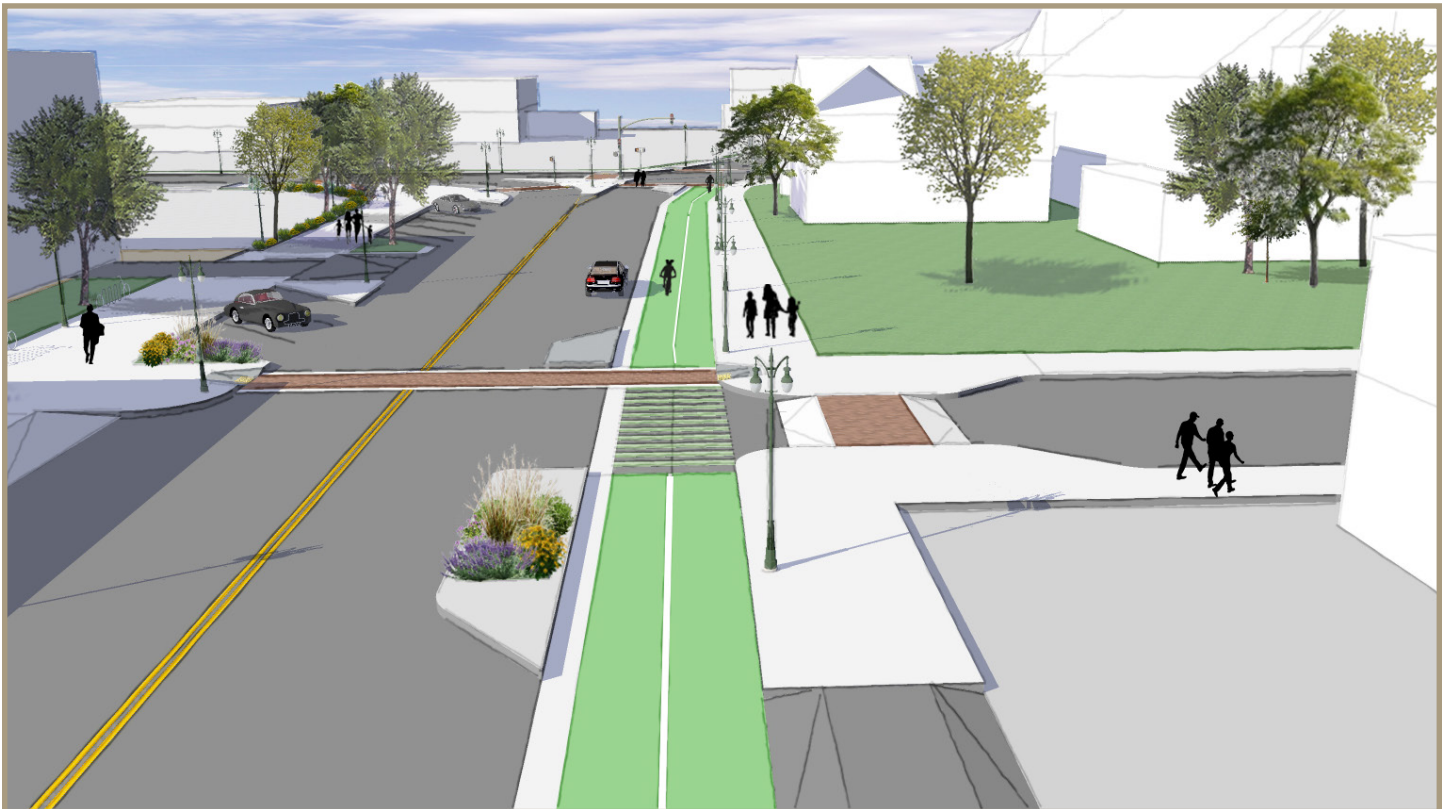


Figure 34. Concept design, looking north to the intersection with Ann Street.

The final concept rendering for State Street, Figure 35, gives a new perspective looking south. The existing median island is expanded, narrowing but maintaining the channelized right turn lane while still accommodating larger vehicles. A single northbound traffic lane means the crosswalk across State Street is significantly shorter than its existing length.

Reconstruction of the corridor will also provide an opportunity to replace and upgrade the existing traffic signals and ensure that all curb ramps are ADA-compliant. New streetlights should be added, increasing the illumination of the roadway and sidewalks. Added lighting can provide a safety benefit both in terms of traffic collisions and personal safety.



Figure 35. Concept design, looking south from Washington Place.

The two-way cycle track continues north along Hamilton Avenue. In the short term, the cycle track can be created by re-striping the roadway and using temporary materials such as flexible plastic posts or jersey barriers. In the long term, the roadway can be rebuilt with the cycle track raised to the same level as the sidewalk. Figure 36 shows the existing conditions, while Figure 37 shows how the cycle track can fit into the reconfigured roadway. Reducing the travel lane from 23 feet to a standard 11 feet should help reduce speeding and crashes along the corridor. Loading zones should be considered adjacent to businesses or intersections.

The bicycle infrastructure will help pedestrians by decreasing crosswalk widths at intersections. Some parking spaces will need to be removed to ensure clear lines of sight between all roadway users at corners.

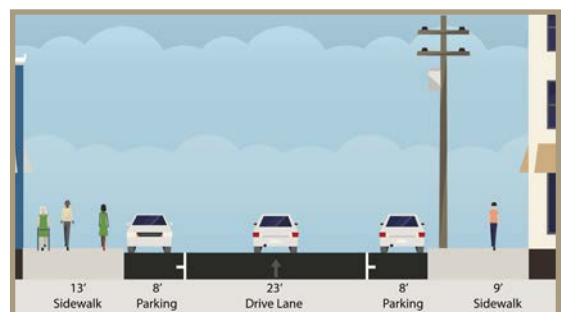


Figure 36. Hamilton Avenue, existing.

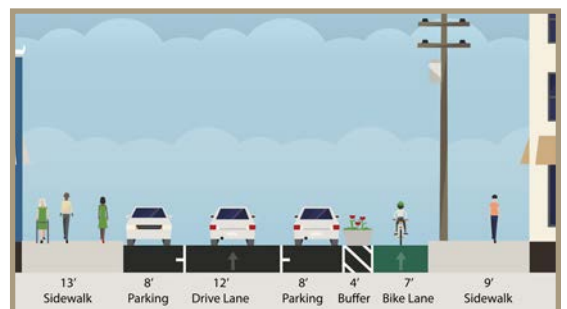


Figure 37. Hamilton Avenue, proposed.



Figure 38 shows the proposed treatment for the corridor as Hamilton Avenue joins Lexington Avenue. The cycle track continues on the east side of the roadway until the intersection with Harrison Avenue. This short segment will require coordination with the county. Parking is currently prohibited in this section. Care must be taken to transition bicyclists onto the connecting roadways, and the plan shows small curbs to create a protected transition. Sidewalk extensions can improve pedestrian safety at the intersection.

A new sidewalk extension, crosswalk, and stop sign are shown where Hamilton Avenue merges with Lexington Avenue. A crosswalk is added where pedestrians were observed crossing. The sidewalk extensions narrow the roadway and reinforce the need to fully stop before entering Lexington Avenue. In addition, sidewalk extensions next to Sherman Street prevent vehicles from illegally parking too close to the corner.

The existing center island is shown expanded on all sides. Parking can be added on the section that fronts Hamilton. The expanded island will provide more space for vehicles on Sherman Street to queue and increase visibility. All crosswalks are shown upgraded to high-visibility designs. Although not drawn on the plan, an RRFB should be considered for the crosswalks at Lexington Avenue and Sherman Street.

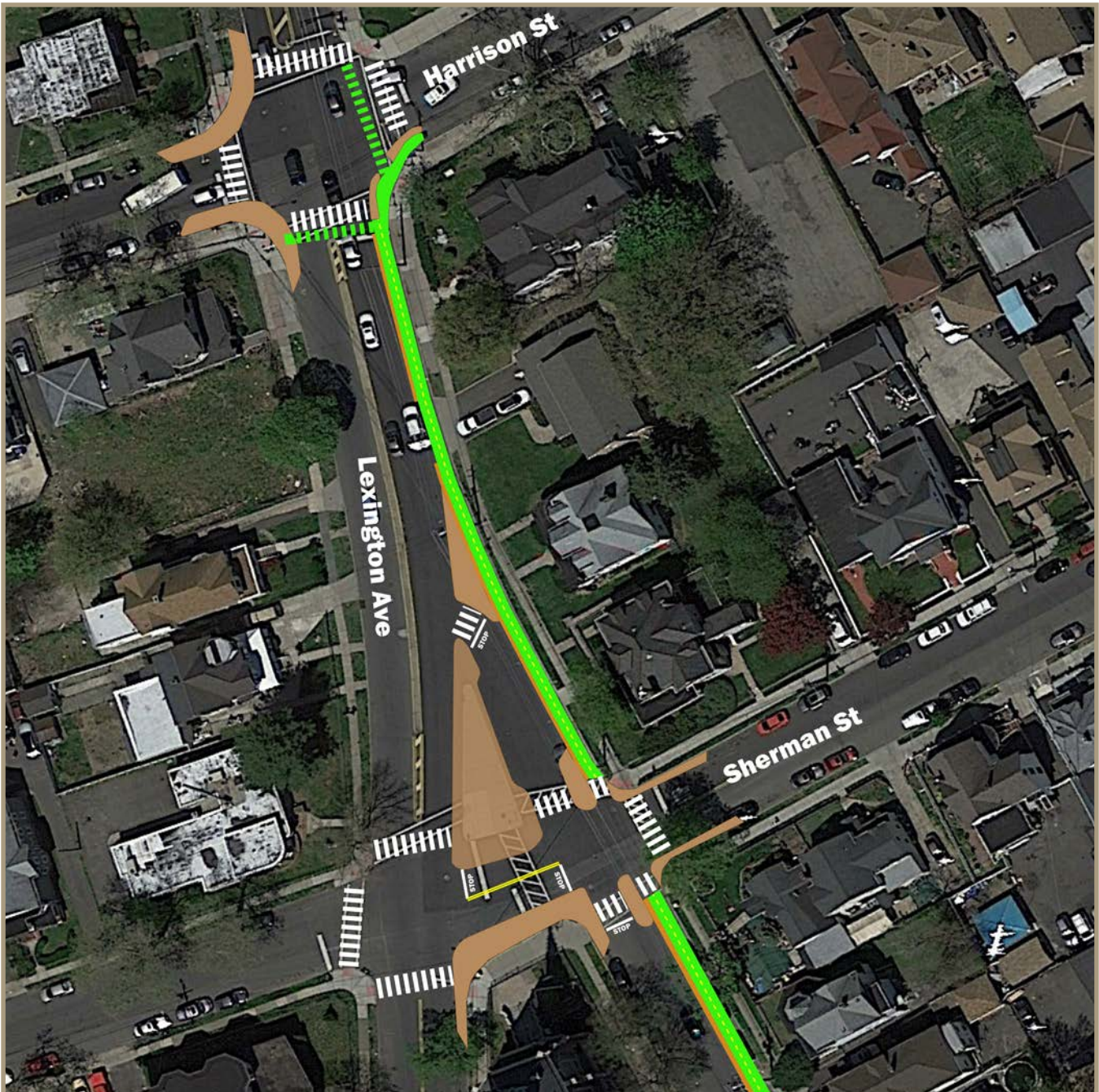


Figure 38. Plan view of improvements at northern end of study corridor.

# Additional Recommendations

The concepts presented here aim to help Passaic visualize the potential benefits that a complete redesign of State Street and Hamilton Avenue can bring to safety and mobility. The following steps should help to continue building momentum for the transformation.

## 1. Adopt a Complete Streets Ordinance

Adopting a Complete Streets policy or ordinance is an important first step toward implementing Complete Streets, as it defines the meaning of Complete Streets, establishes goals, and lays out the ways in which the municipality will accomplish the goals. Adopting a Complete Streets policy represents a commitment by a municipality to apply Complete Streets principles and goals to all transportation decisions.

Having a Complete Streets policy earns a municipality extra consideration on certain state grant applications. Additionally, municipalities that are seeking Sustainable Jersey certification earn points for adopting and instituting a policy. NJDOT offers a guide to policy development and a separate guide on how to create an implementation plan. These resources are among those available at <http://njbikeped.org/complete-streetsresources/>. NJDOT also offers a model policy guide, which should be used as a template for a new municipal policy ([https://www.state.nj.us/transportation/eng/completestreets/pdf/CS\\_Model\\_Policy\\_2019.pdf](https://www.state.nj.us/transportation/eng/completestreets/pdf/CS_Model_Policy_2019.pdf)). A policy can be strengthened by enacting it as a municipal ordinance. The guide also provides example text for doing so.

## 2. Install a Demonstration Project

Demonstration projects are an approach to neighborhood building that uses short-term, low-cost, scalable interventions to affect long-term change related to street safety and public space. This approach can draw attention to perceived shortcomings, widen public engagement, test interventions, and inspire action. Passaic could use a demonstration project to test out the proposed concepts before committing to a full rebuild (Figure 39 and 40).

Demonstration projects allow a municipality to quickly make necessary safety and livability improvements while the permanent improvements move through the various project design and funding steps. Demonstration projects provide flexibility in that improvements can be temporary. Rather than debating the costs and benefits of a sidewalk extension, a municipality can paint one and observe the new dynamic between pedestrians and drivers without committing to a permanent change. This allows residents and policymakers to witness the improvement and determine its effects. It also allows for data to be collected and the final permanent design to be modified based on what was learned during the temporary installation.



Figure 39. A temporary sidewalk extension in Belleville, NJ.



Figure 40. In 2015, Jersey City created a new pedestrian plaza on Newark Avenue using planters, paint, tables, and chairs. In 2021, the City inaugurated a permanent plaza with stone pavers, larger planters, enhanced lighting, benches, pedestrian safety bollards, and other public space features.

# Conclusion

The City of Passaic is growing with redevelopment projects bringing new residents and employees to what is already a bustling downtown center. Even though walking and bicycling are popular ways to get around, the transportation network is primarily auto-oriented. Redesigning State Street and Hamilton Avenue to put pedestrians and bicyclists first will enhance mobility and safety for residents and visitors. Redesigning the corridor also provides an excellent opportunity to address safety issues and improve accessibility. This report provides concept images for improvements that can be made in the short and long terms. Temporary demonstration projects can be used to make the changes quickly with low-cost materials while the City applies for the larger grants needed for the large transformation proposed in this report.



Figure 41. Hamilton Avenue.



# Appendix

**A. Public Meeting Flyers**

**B. Potential Funding Resources**

**C. Design Resources**

## A. Workshop Flyers

# VIRTUAL PUBLIC MEETING

Tuesday, February 28, 2023  
1:00 pm



## Learn about a vision for a bicycle-friendly Hamilton Avenue and State Street!

To register for this meeting, visit:  
<https://go.rutgers.edu/Passaic>

### The City of Passaic wants to make Hamilton Avenue and State Street safer!

Join us on Tuesday, February 28, to learn about a preliminary design for bicycle and driver safety improvements to Hamilton Avenue and State Street. We want your input!

This effort is part of the Complete Streets Technical Assistance Program, a collaboration between Sustainable Jersey, the Voorhees Transportation Center at Rutgers University, and the North Jersey Transportation Planning Authority (NJTPA). Funded by the NJTPA, the program helps towns and cities imagine a safer, more functional, and more welcoming environment for everyone who uses the street.



# REUNIÓN PÚBLICA VIRTUAL

Martes, febrero 28, 2023  
1:00 pm

## ¡Conozca una visión para hacer que Hamilton Avenue y State Street sean más seguras para los ciclistas!

Para registrarse en esta reunión, visite:  
<https://go.rutgers.edu/Passaic>

### ¡La Ciudad de Passaic quiere que Hamilton Avenue y State Street sean más seguras!

Únase a nosotros el martes 28 de febrero para aprender sobre un diseño preliminar para las mejoras de seguridad para ciclistas y conductores en Hamilton Avenue y State Street. ¡Queremos tu opinión!

Este esfuerzo es parte del Programa de Asistencia Técnica de Calles Completas, una colaboración entre Sustainable Jersey, el Centro de Transporte Voorhees en la Universidad de Rutgers y la Autoridad de Planificación del Transporte del Norte de Jersey (NJTPA). Financiado por la NJTPA, el programa ayuda a los pueblos y ciudades a imaginar calles más seguras y hospitalario para todos.



## B. Potential Funding Resources

This appendix provides a list of grant programs available to New Jersey communities for the advancement of Complete Streets initiatives, including both infrastructure and non-infrastructure projects, and programs to increase walking and bicycling. A table has been included that lists the most common grant sources for Complete Street related projects. This appendix also includes links to two online databases with additional funding sources. The grants listed are highly competitive so grant application requirements should be carefully reviewed before making the decision to apply. Incomplete grant applications may be automatically rejected. The most successful applications tell the story of the populations most in need of the proposed improvements, especially traditionally underserved or vulnerable populations. Applications should use compelling pictures, data, and other documentation, and indicate how and why the project was selected.

### New Jersey Department of Transportation

The Division of Local Aid and Economic Development at the New Jersey Department of Transportation (NJDOT) administers funds to local public agencies such as county and municipal governments for construction projects to improve the state's transportation system. Grant support and technical assistance is provided through the Local Aid Resource Center's Help Desk (<https://njdotlocalaidrc.com/>). The New Jersey Transportation Trust Fund and the 2021 Bipartisan Infrastructure Law provide the opportunity for funding assistance to local governments for road, bridge, and other transportation projects. While NJDOT and the three metropolitan planning organizations that cover the state administer many federal aid programs, including Transportation Alternatives and Safe Routes to School, the USDOT administers some grant programs directly. NJDOT administers state aid programs. Below are some options for funding infrastructure projects through NJDOT.

#### State Aid Infrastructure Grant Programs

**Municipal Aid:** This program assists municipalities in funding local transportation projects, and all New Jersey municipalities are eligible to apply. NJDOT encourages applications for pedestrian safety improvements, bikeways, and streetscapes. Additionally, a common strategy to implement on-street bike lanes is to include bike lane striping within repaving projects that are funded through this program. Learn more here: <https://njdotlocalaidrc.com/state-funded-programs/municipal-aid>

**County Aid:** County Aid funds are available for the improvement of public roads and bridges under county jurisdiction. Public transportation and other transportation projects are also included. Learn more here: <https://njdotlocalaidrc.com/state-funded-programs/county-aid>

**Bikeways:** This program provides funds to counties and municipalities to promote bicycling as an alternate mode of transportation in New Jersey. A primary objective of the Bikeway Grant Program is to support the State's goal of constructing 1,000 new miles of dedicated bike paths that are physically separated from vehicle traffic. Learn more here: <https://njdotlocalaidrc.com/state-funded-programs/bikeways>

**Safe Streets to Transit:** This program encourages counties and municipalities to construct safe and accessible pedestrian linkages to all types of transit facilities and stations, to promote increased usage of transit by all segments of the population and decrease private vehicle use. Learn more here: <https://njdotlocalaidrc.com/state-funded-programs/safe-streets-to-transit>

**Transit Village:** This program awards grants for transportation projects that enhance walking, biking, and/or transit ridership within a ½ mile of the transit facility. Municipalities must already be designated as a Transit Village by the NJDOT Commissioner and the inter-agency Transit Village Task Force to be eligible to apply. Learn more here: <https://njdotlocalaidrc.com/state-funded-programs/transit-village>



## Other NJDOT Assistance

**Bicycle and Pedestrian Planning Assistance (BPPA):** NJDOT offers local planning assistance through the Bureau of Safety, Bicycle, and Pedestrian Programs. Under the BPPA program, on-call consultants are paired with communities to complete a variety of projects, including bicycle and pedestrian plans, safety assessments, trail feasibility studies, and improvement plans for traffic calming projects. Priority is given to traditionally underserved communities and those with a documented safety concern. For more information, please contact the NJDOT Bicycle and Pedestrian Coordinator at [bikeped@dot.nj.gov](mailto:bikeped@dot.nj.gov).

## State-Administered Federal Aid Infrastructure Grant Programs

**Transportation Alternatives Program:** The Transportation Alternatives Program is a set-aside of the Surface Transportation Block Grant Program, and it is sometimes referred to as TA Set-Aside. It provides federal funds for community-based “non-traditional” transportation projects designed to strengthen the cultural, aesthetic, and environmental aspects of the nation’s intermodal system. Municipalities can receive bonus points on the grant if they have an adopted Complete Street Policy, are a Targeted Urban Municipality, or are a designated Transit Village. Learn more here: <https://njdotlocalaidrc.com/federally-funded-programs/transportation-alternatives>

**Safe Routes to School:** The Safe Routes to School Program is funded through the Federal Highway Administration’s (FHWA) Federal Aid Program and is being administered by the NJDOT, in partnership with the North Jersey Transportation Planning Authority (NJTPA), the Delaware Valley Regional Planning Commission (DVRPC), and the South Jersey Transportation Planning Organization (SJTPO). The program provides federal funds for infrastructure projects that enable and encourage children in grades K-12, including those with disabilities, to safely walk and bicycle to school. Applicants can receive bonus points on the grant if they have School Travel Plans, a Complete Streets Policy, and Transit Village designation. Learn more here: <https://njdotlocalaidrc.com/federally-funded-programs/safe-routes-to-school>

**Recreational Trails Program:** The Recreational Trails Grant Program administered by the NJDEP Green Acres Program provides federal funds for developing new trails and maintaining and restoring existing trails and trail facilities including trails for non-motorized, multi-use (including land and water) and motorized purposes. The program is currently on hold as it undergoes revisions. Learn more and get notified of future grant opportunities here: <https://dep.nj.gov/greenacres/trails-program-home/>

## Federal Highway Administration-Administered Federal Aid Infrastructure Grant Programs

The Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment and Jobs Act of 2021 (IIJA), and the Inflation Reduction Act of 2022 (IRA) established new funding programs that can be helpful for county and municipal governments looking to fund Complete Streets and other safety and active transportation projects. The new funding generally requires a 20 percent local match on a cost-reimbursement basis. In other words, for every dollar spent within the grant’s budget, up to 80 cents will be eligible for reimbursement by the federal government. Eligible entities apply for grants directly to the United States Department of Transportation through the [grants.gov](https://www.grants.gov) online portal.

**Safe Streets and Roads for All Program (SS4A):** This program was established out of the Infrastructure Investment and Jobs Act of 2021 (IIJA). It funds planning and implementation of projects and strategies which share a goal of eliminating roadway deaths and serious injuries. Many Complete Streets-related measures are eligible. Funding can be used to produce a comprehensive safety action plan, undergo demonstration projects, and implement permanent measures. Congress has appropriated \$5 billion to the program through fiscal year 2026, and all grants require a 20 percent local match. The SS4A program supports the National Roadway Safety Strategy and the United States Department of Transportation’s goal of zero deaths and serious injuries on our nation’s roadways. Counties, municipalities, and other non-State government entities are eligible to apply. Applications for the 2023 fiscal year are due on July 10, 2023. More information is available here: <https://www.transportation.gov/grants/SS4A>

**Reconnecting Communities Pilot Program (RCP):** The Reconnecting Communities Pilot Program was established by the Infrastructure Investment and Jobs Act of 2021 (IIJA). The program aims to correct wrongs of past transportation projects that have isolated or otherwise cut off communities from jobs and other amenities. Ideal projects improve access in one or more ways, increasing opportunities for residents of impacted communities. Congress has appropriated \$1 billion for this program through fiscal year 2026. States, counties, and local units of government are eligible to apply for funding to plan and implement projects on facilities of which the applicant is the owner. Non-owners may apply for planning grants, as well as capital construction grants, provided that the facility owner has appropriately endorsed the application. All grants require a 20 percent local match. More information is available here: <https://www.transportation.gov/grants/reconnecting-communities>

**Thriving Communities Program (TCP):** The Thriving Communities Program provides technical assistance to governments and transit agencies. The program focuses on communities that have suffered historic disinvestment and lack the resources and capacity to successfully engage, develop, design, and deliver infrastructure projects. The program provides planning, technical assistance, and capacity building to better navigate federal requirements, identify financing and funding opportunities, and grow long-term capacity to leverage transportation investments to achieve broader economic and community development goals. More information is available here: <https://www.transportation.gov/grants/thriving-communities>

**Neighborhood Access and Equity Grant Program:** This program was created by the Inflation Reduction Act of 2022 (IRA). Much of the eligibility and criteria are similar to the Reconnecting Communities Pilot (RCP, see above). It appropriates an additional \$1.8 billion to reconnecting communities.

## Health and Environment Funding

**Sustainable Jersey:** The Sustainable Jersey Small Grants program provides capacity building awards to municipalities to support local green teams and their programs and is not project specific. Learn more about grant opportunities here: <https://www.sustainablejersey.com/grants/>

**Sustainable Jersey for Schools:** Sustainable Jersey for Schools grants are intended to help districts and schools make progress toward Sustainable Jersey for Schools certification. Learn more here: <http://www.sustainablejerschools.com/>

## Funding from Other Sources

Various other funding sources exist that may help municipalities further complete streets projects. Both Sustainable Jersey and Together North Jersey have developed comprehensive online databases that catalog the many funding sources available. They can be found at the following locations:

**Together North Jersey Funding and Resources Database:** <https://togethernorthjersey.com/funding-tools-database/>

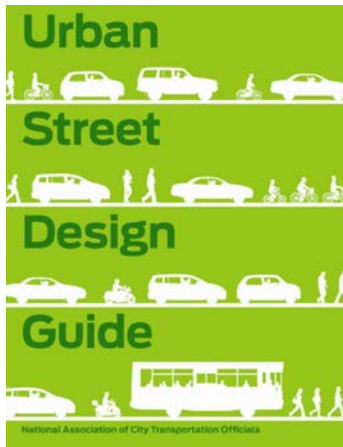
**New Jersey Transportation Infrastructure Bank (NJTIB):** The NJTIB is an independent State Financing Authority responsible for providing and administering low interest rate loans to qualified municipalities, counties, and regional authorities in New Jersey. The unique partnership with NJDOT was established with the mission of reducing the cost of financing transportation projects in the state. Learn more here: <https://www.njib.gov/njtib>

**County and Municipal Capital Programs:** In the case where alternative funds are not available but there is community consensus and political will to move forward with a project, county and municipal capital programs should be considered. Local budgets may have the ability to support some projects, especially if other state and federal programs provide budget relief in other areas.

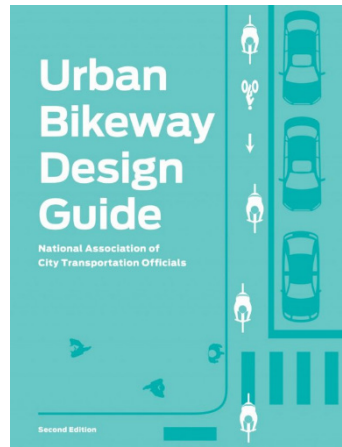
**County and Municipal Open Space Trust Funds:** All New Jersey counties and many New Jersey municipalities have an Open Space Trust Fund, which is a dedicated program supporting open space land acquisition. The trust funds are established by ballot measure. Depending on the fund parameters, other development projects can be eligible including trails, historical preservation, and farmland protection. For a database of ballot measures descriptions with amount of Open Space Trust Funds, visit the Trust for Public Lands LandVote Database. <https://tpl.quickbase.com/db/bbqna2qct?a=dbpage&pageID=8>

# C. Guidance Documents

## NACTO Guides



[Urban Street Design Guide](#)



[Urban Bikeway Design Guide](#)



[Transit Street Design Guide](#)



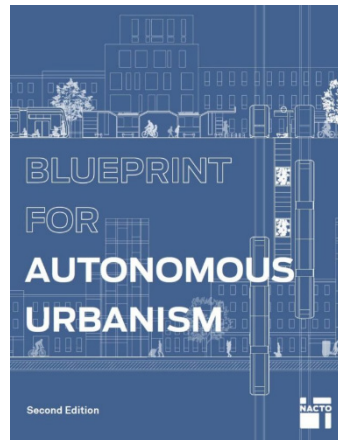
[Urban Street Stormwater Guide](#)



[Global Street Design Guide](#)



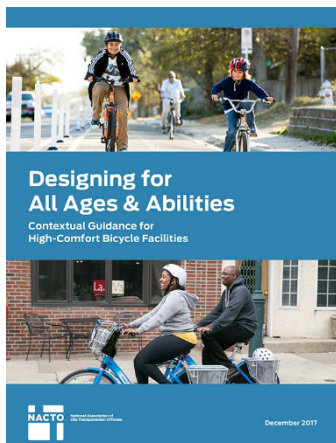
[Designing Streets for Kids](#)



[Blueprint for Autonomous Urbanism](#)



[Bike Share Station Siting Guide](#)



[Designing for All Ages & Abilities](#)



[Don't Give Up at the Intersection](#)

# NJDOT Guides



[Complete & Green Streets for All: Model Policy & Guide](#)



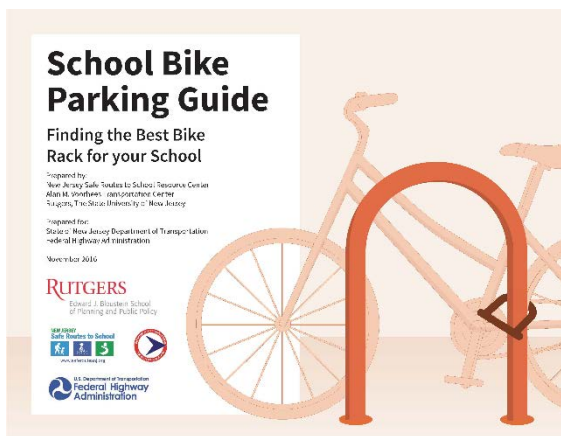
[2017 State of New Jersey Complete Streets Design Guide](#)



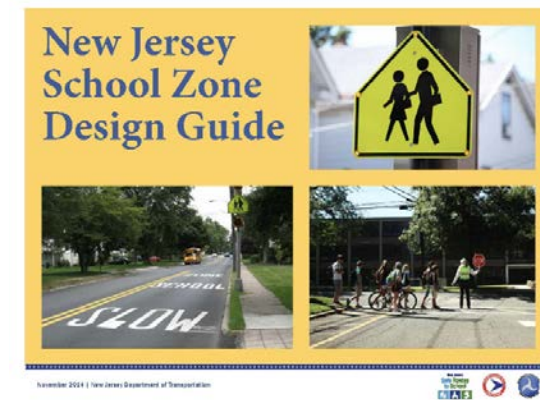
[A Guide to Creating a Complete Streets Implementation Plan](#)



[A Guide to Policy Development](#)

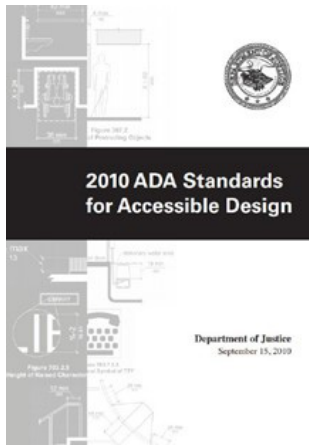


[School Bicycle Parking Guide](#)



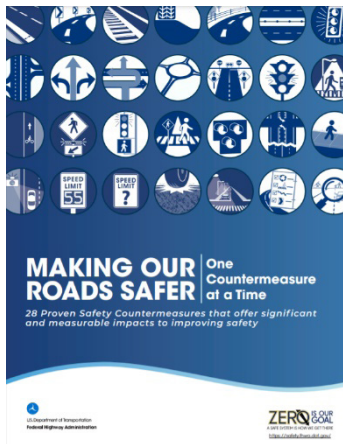
[New Jersey School Zone Design Guide](#)

## ADA Guidelines

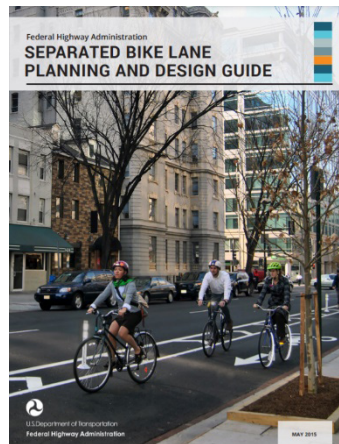


[ADA Standards for Accessible Design](#)

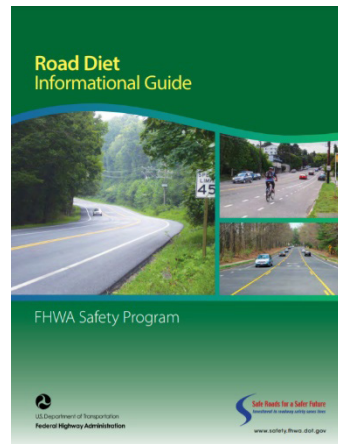
## FHWA Guides



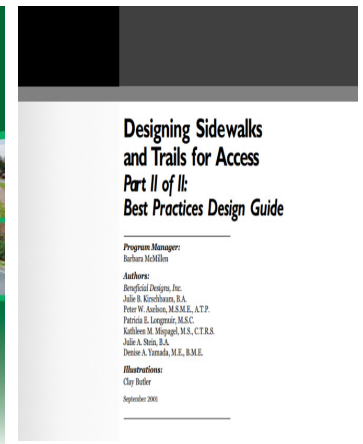
[Making Our Roads Safer: One Countermeasure at a Time](#)



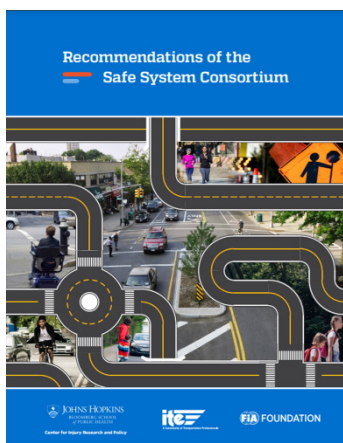
[Separated Bike Lane Planning and Design Guide](#)



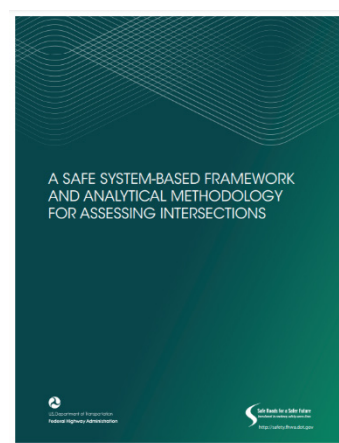
[Road Diet Informational Guide](#)



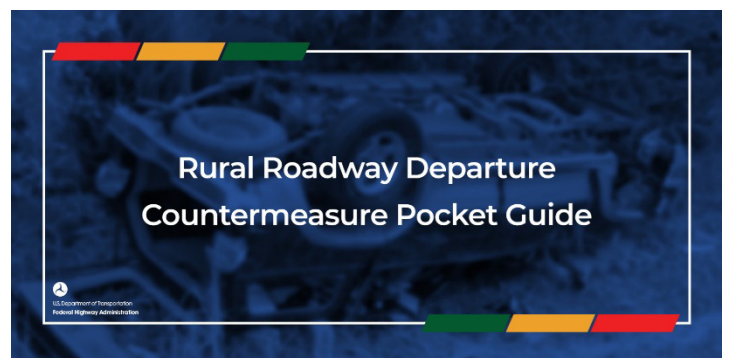
[Designing Sidewalks and Trails for Access Part II of II: Best Practices Design Guide](#)



[Recommendations of the Safe System Consortium](#)

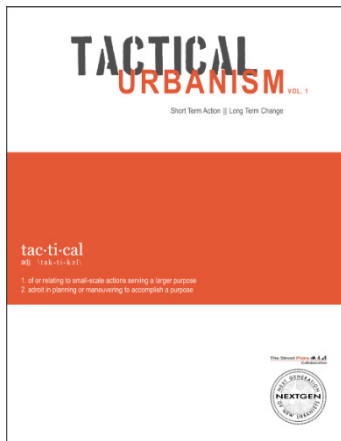


[A Safe System-Based Framework and Analytical Methodology for Assessing Intersections](#)

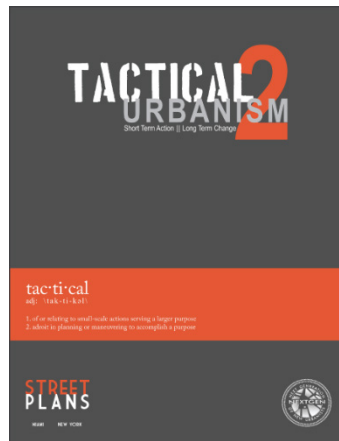


[Rural Roadway Departure Countermeasure Pocket Guide](#)

## Tactical Urbanism Guides



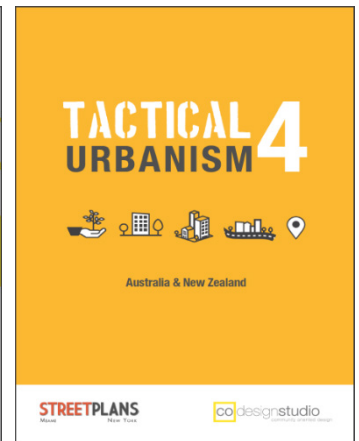
[Tactical Urbanism 1](#)



[Tactical Urbanism 2](#)



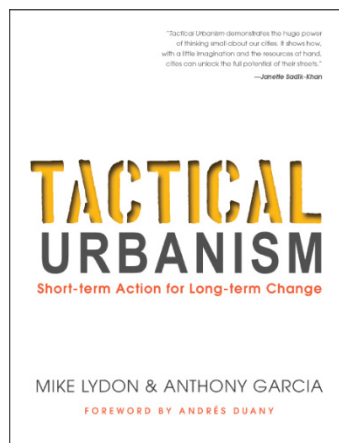
[Tactical Urbanism 3](#)



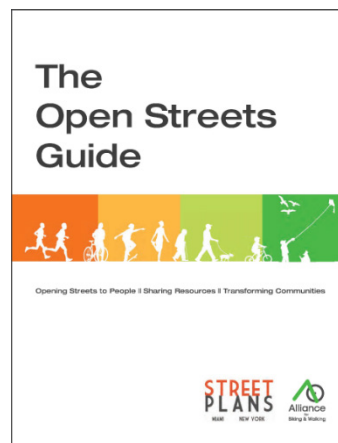
[Tactical Urbanism 4](#)



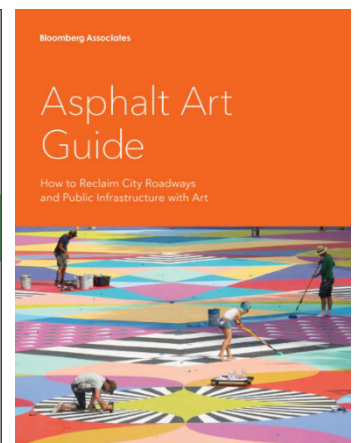
[Tactical Urbanism 5](#)



[Tactical Urbanism: The Book](#)



[The Open Streets Guide](#)



[Asphalt Art Guide](#)



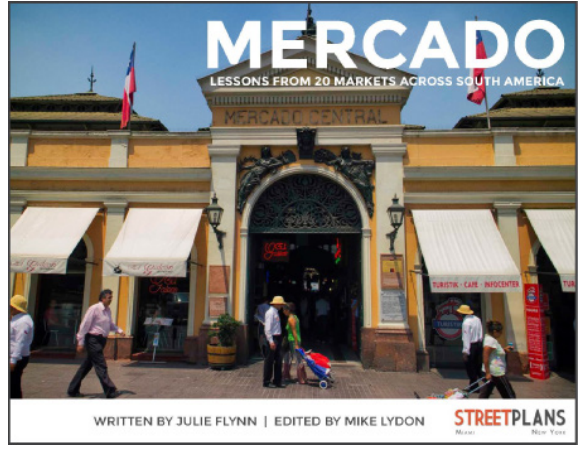
[Tactical Urbanist's Guide to Materials and Design](#)



[Fast-Track: A Tactical Transit Study](#)



[Public Space Stewardship Guide](#)



[Mercado: Lessons from 20 Markets Across South America](#)

