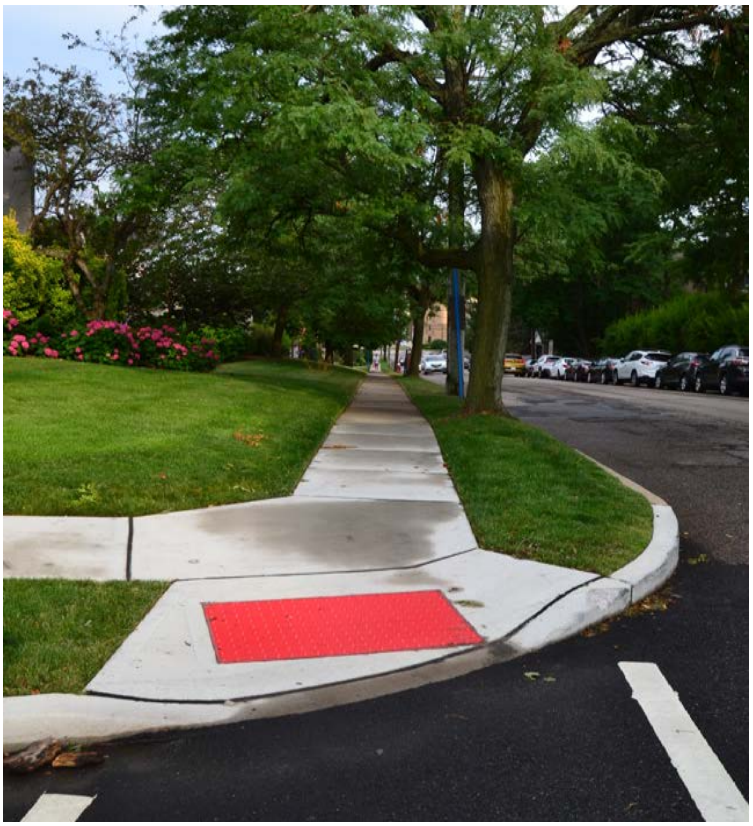
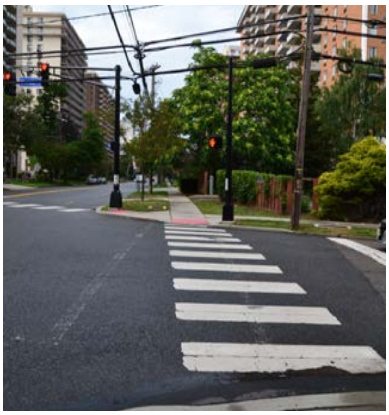
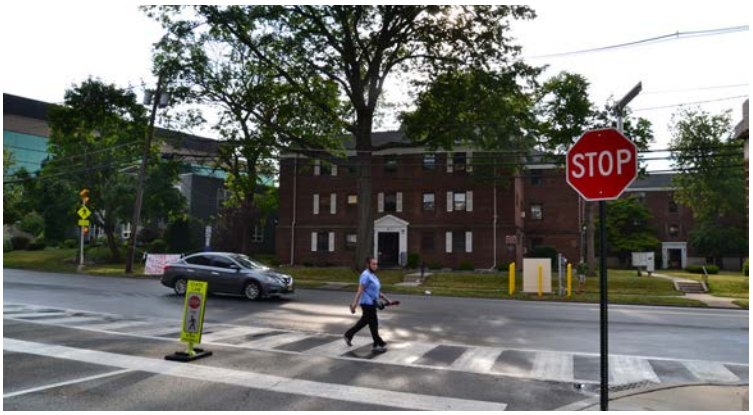


Prospect Avenue and Beech Street Walkable Community Workshop

City of Hackensack, Bergen County, NJ

2020





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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 report is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or its use thereof.

The report was authored by Lisa Cintron, James Sinclair, and Charles T. Brown of the Alan M. Voorhees Transportation Center (VTC) at Rutgers, The State University of New Jersey, and reviewed by Sustainable Jersey and the NJTPA.

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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.

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Acknowledgments

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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

The City of Hackensack, New Jersey, participated in the North Jersey Transportation Planning Authority (NJTPA) Complete Streets Technical Assistance (CSTA) Program in 2020. The CSTA Program selected eight municipalities to receive up to $10,000 in technical assistance to advance complete streets projects. This report identifies several recommendations to promote walking as a means of travel and to improve walkability along Prospect Avenue and Beech Street within Hackensack. This report calls for developing a complete streets implementation plan, installing pedestrian amenities and a road diet on Prospect Avenue and Beech Street, and upgrading traffic signals. Long-term recommendations include conducting a traffic study at the Hackensack Meridian Health-Hackensack University Medical Center (HUMC) entrance, installing bicycle lanes that connect to a broader network, and installing permanent curb extensions.

The recommendations in this report were developed using a collaborative process with municipal employees and stakeholders. This included a virtual Walkable Community Workshop (WCW) that was held on July 7, 2020 and a follow-up virtual public meeting on August 18, 2020. These meetings were held virtually due to COVID-19. The corridor under consideration, along Prospect Avenue and Beech Street, connects the surrounding residential communities with a variety of medical services, office buildings, and the Hackensack High School. Crashes along the corridor are common and many involve high school-aged pedestrians and bicyclists.

The lessons learned by all participants during the half-day workshop are applicable to other municipal-owned roadways in Hackensack. The field audit form, information about the NJTPA's pedestrian safety education program, Street Smart NJ, and a list of potential funding resources can be found in this report's appendices. These resources can be used to conduct other walk audits and projects within the town. In addition to the project team, this report has been reviewed by officials from the City of Hackensack and Bergen County.

Figure 1. Prospect Avenue, in Hackensack.

Background

The North Jersey Transportation Planning Authority (NJTPA) created the Complete Streets Technical Assistance (CSTA) Program in 2018 to assist municipalities in advancing or implementing complete streets, a need identified by the Together North Jersey (TNJ) consortium. TNJ was created in 2011 to develop the first comprehensive plan for sustainable development for North Jersey. Sustainable Jersey (SJ) and the Alan M. Voorhees Transportation Center (VTC) at Rutgers University were retained to provide technical assistance for this program. In its first year, the program successfully supported nine municipal governments seeking to implement complete streets in their communities. This report is part of the second year of the CSTA Program, in which eight additional municipalities were selected to receive technical assistance. Municipalities were chosen for the program based on the following criteria: the need for technical assistance; commitment to project implementation; opportunity for public engagement; the strength of their respective municipal teams; and the project's potential effects on Environmental Justice (EJ) populations.

Through the CSTA Program, municipal employees and stakeholders participated in a virtual Walkable Community Workshop (WCW) on July 7, 2020 to learn the benefits of complete streets and proven strategies for making streets safer for the most vulnerable users—pedestrians and bicyclists. The workshop included an hour-long classroom-style training. The project team then guided participants through a virtual walking audit along Prospect Avenue, between Essex Street (Bergen County Route 12) and Beech Street, and along Beech Street between Prospect Avenue and First Street (Bergen County Route 55). The virtual walking audit, led by staff from VTC with support from Sustainable Jersey and the NJTPA, enabled participants to collectively identify problems and potential improvements to the study corridor.

The selected corridor provides pedestrians with an important connection to schools, healthcare, transportation, and shopping. A number of institutions that attract many daily visitors are located along or near the corridor. The residential areas surrounding the community are densely populated and there is a relatively high poverty rate in the neighborhood just south of Essex Street (19 percent). Beech Street is a 15-minute walk from Hackensack's downtown commercial district and is an important corridor connecting residential areas with the downtown amenities.

Direct observations by the research team, feedback from local officials and residents, and NJDOT crash data suggests that walking and bicycling on Prospect Avenue and Beech Street is challenging due to an overall lack of pedestrian and bicycle infrastructure. In their application to the CSTA Program, Hackensack officials expressed interest in improving walkability and bikeability along the Prospect Avenue and Beech Street corridor to provide better connections to key destinations along and around the study corridor. Hackensack officials also expressed interest in providing special consideration for residents, Hackensack Meridian Health – Hackensack University Medical Center (HUMC) employees, and Hackensack High School students who walk along Prospect Avenue and Beech Street daily.

Various policy, planning, and programmatic efforts aim to improve pedestrian safety and mobility throughout Hackensack. These efforts include the adoption of a municipal complete streets policy in 2012 and implementation of NJTPA's Street Smart NJ pedestrian safety campaign in 2017. The Hackensack Police Department also continues to promote pedestrian safety through education and enforcement. Hackensack was designated a Transit Village in 2016. A number of pedestrian improvements in the area surrounding the Hackensack Bus Terminal include curb extensions and pedestrian signal improvements at nearby intersections. Atlantic Street is an important connection between the study corridor and this pedestrian-friendly downtown area.

What is a Complete Street?

Complete streets are roads designed for all users, all modes of transportation, and all ability levels (Figure 2). They balance the needs of drivers, pedestrians, bicyclists, transit riders, emergency responders, and goods movement based on the local context. Complete streets should tailor 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, and enhanced lighting and signs.

Regardless of the context, complete streets should be designed to 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 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 to 5 percent (Figure 4 and Figure 5). Complete streets recognize that all users of the transportation network, whether traveling by car, bus, train, or taxi, become a pedestrian at some point during their journey. Creating a safer environment benefits everyone.

Figure 2. A complete street, as seen in New Brunswick, New Jersey. No two complete streets are alike, as they should always reflect the context of the street and the character of the community.

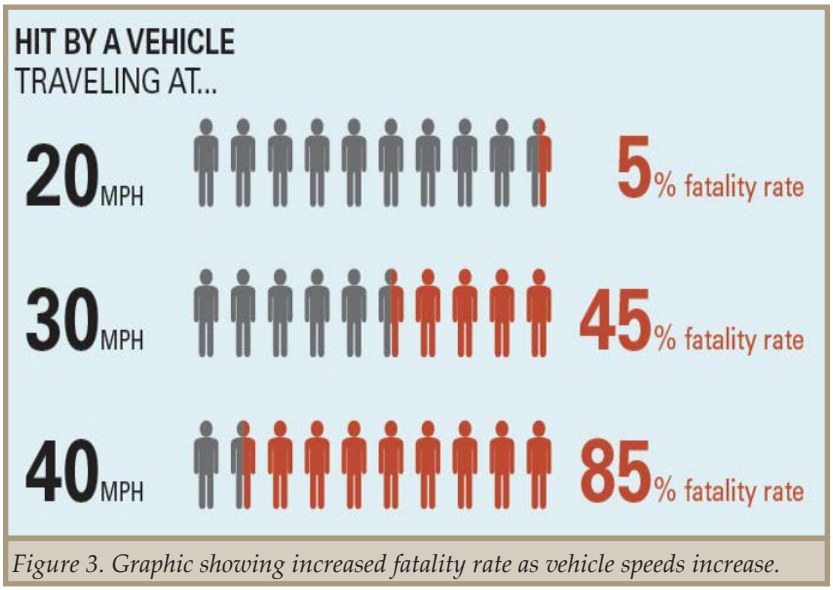


Figure 3. Graphic showing increased fatality rate as vehicle speeds increase.

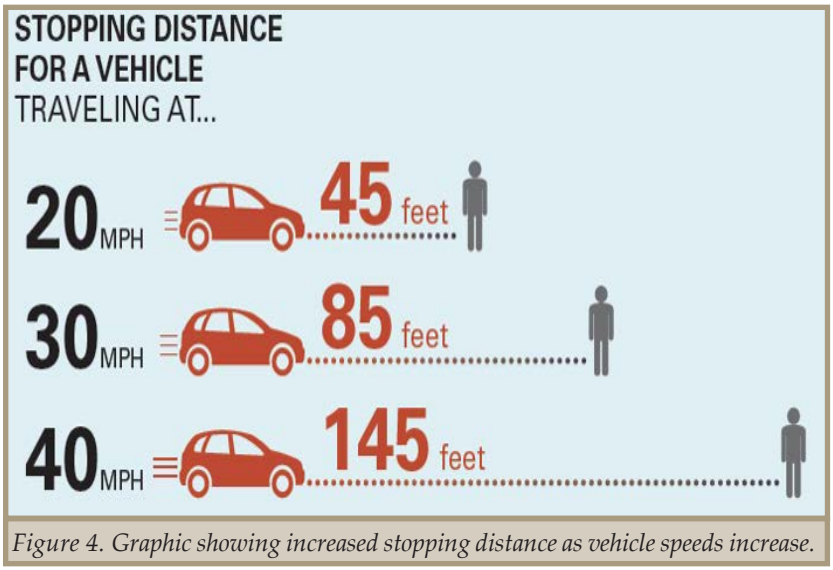


Figure 4. Graphic showing increased stopping distance as vehicle speeds increase.

Benefits of Complete Streets

While the primary benefit of complete streets is improved safety for all roadway users, there are other positive outcomes. Complete streets create better places to live, work, and do business. These benefits include mobility, equity, health, quality of life, economic vitality, and environmental health.

Mobility

Creating or enhancing multi-modal transportation options expands mobility opportunities for everyone, including nondrivers, youth, and senior citizens (Figure 5). In turn, increased mobility improves access to jobs and services, which is crucial for people who cannot afford or choose not to own a car, as well as those who are unable to drive due to a disability or their age.

Figure 5. When a street lacks accessible sidewalks and ramps, it is not complete.

Equity

Complete streets help decrease the necessity of the automobile for access to opportunity. Transportation costs comprise a significant portion of a household budget, approximately 20 percent in the United States. Much of this is due to the high cost of automobile ownership, including insurance, fuel, maintenance, registration fees, and financing. However, household transportation costs drop to just 9 percent in communities with improved street connectivity and accommodations for other modes.

Connected communities allow residents to use less energy and spend less money to get around, allowing for fewer car trips and the use of other less expensive modes of transportation like bicycling, walking, or public transit. Providing a variety of transportation choices across different price points allows families to free up more money for housing or other needs.

Figure 6. Trails, such as this one in Monroe, New Jersey, can encourage exercise and lead to improved health.

Health

Complete streets enhance opportunities for increased walking and bicycling which in turn leads to the numerous health benefits associated with increased physical activity. The Center for Disease Control (CDC) supports complete streets as a means to fight obesity (Figure 6).

Quality of Life

Livable, walkable communities diminish the need for automobiles. Walking or bicycling around town creates a sociable environment, fostering interactions between family, friends, or clients and increasing community involvement. These interactions, in turn, entice users to enjoy the surroundings they would otherwise ignore in a car. A reduction in vehicle use can also increase quality of life thanks to reductions in noise and stress associated with congestion and crashes (Figure 7).

Figure 7. Complete Streets in Asbury Park help foster a lively social environment.

Economic Vitality

Improving streetscapes revitalizes 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 that they may have driven past before. Such is the experience in Somerville, New Jersey, where one block of Division Street was converted to a pedestrian plaza. The area witnessed a sharp decline in vacant commercial properties; vacancy dropped from 50 percent to zero after the plaza was developed (Figure 8).[1]

Figure 8. Division Street in Somerville was converted into a pedestrian plaza that has become a popular gathering space.

Environmental Health

By reducing automobile use, complete streets can contribute to cleaner air. Additional sustainable design elements installed along complete streets can also bring other environmental benefits. For example, landscape improvements (green streets) can reduce impervious cover, reduce or filter stormwater runoff, and contribute to water quality improvement (Figure 9).

Figure 9. Green infrastructure used to narrow the roadway and provide a shorter crossing distance for pedestrians.

Complete Streets in New Jersey and Hackensack

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. In 2010, the National Complete Streets Coalition ranked NJDOT's complete streets policy first among 210 state, regional, county, and municipal policies nationwide. Since 2009, NJDOT has funded five "Complete Streets Summits," and over a dozen 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, 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. 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, 167 municipalities have implemented complete streets policies affecting 3.8 million (44 percent) of the state's residents (Figure 10).[2]

Hackensack adopted a complete streets policy in 2012, in which the City Council resolved that "all public streets projects, both new construction and reconstruction (excluding maintenance) undertaken by the City of Hackensack shall be designed and constructed as 'complete streets' whenever feasible... with special priority given to pedestrian safety." As of October 2020, Bergen County has not passed a complete streets policy.

1. "Complete Streets Case Study: Somerville, New Jersey," Alan M. Voorhees Transportation Center, 2016.
2. New Jersey Bicycle and Pedestrian Resource Center, "NJ Complete Streets Policy Atlas," 2018. http://njbikeped.org/ complete-streets-2/.

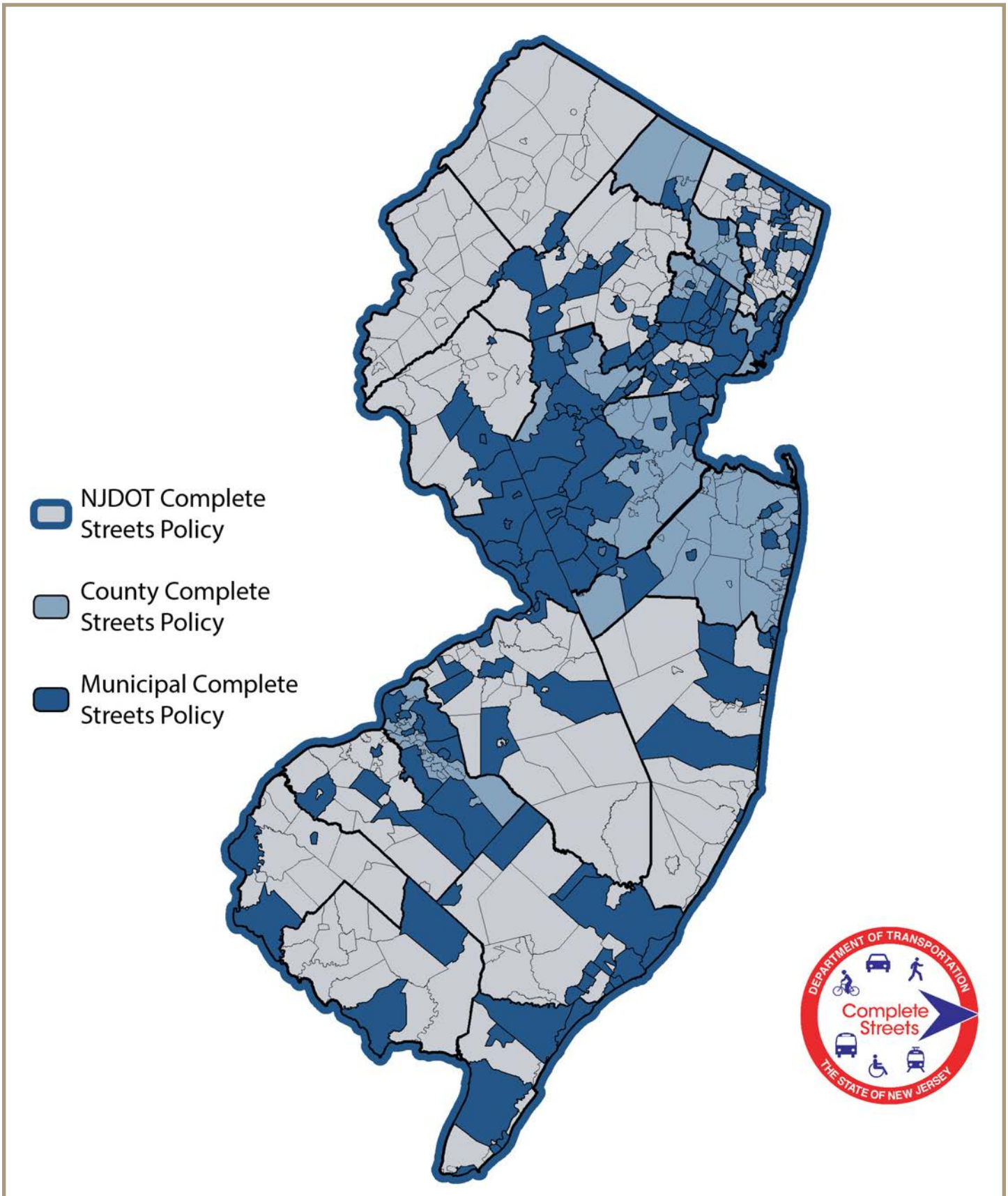


Figure 10. Complete Streets Policies in New Jersey, as of October 15, 2020. Visit http://njbikeped.org/services/complete-streets-policy-compilation/ for a constantly updated list of policies.

Walking Audit Location

Figure 11. Prospect Avenue and Beech Street Study Corridor

Hackensack is a diverse city that is home to approximately 44,381 residents, which makes it the most populated municipality in Bergen County. It is also the county seat. The city comprises an area of 4.2 square miles (US Census Bureau, 2018). The median age is 37.9 years and the estimated median household income is $67,188. The poverty rate in Hackensack is 12.9 percent, which is nearly double the Bergen County rate (7 percent). More than one in three Hackensack residents identifies as Hispanic (38 percent) and 31 percent of residents speak Spanish at home. Hackensack is also home to a larger population of renters than homeowners. One in five Hackensack residents use public transit to get to work, approximately double the rate in the state. Sixty-three percent of residents drive alone to work, while 5 percent walk to work. The study corridor is located in a densely populated section of the city with numerous destinations that attract high volumes of visitors, including the HUMC complex, Hackensack High School, and the nearby Essex Street Train Station.

Prospect Avenue is a north-south corridor with two lanes of bi-directional traffic and on-street parking (Figure 11). Near the intersection at Essex Street, the road expands to four lanes, with three lanes traveling south to accommodate turning traffic. Several large apartment complexes are interspersed among various medical facilities along the western side of the corridor. The medical center is the largest employer in Bergen County and encompasses the entire Prospect Avenue block from Essex Street to Atlantic Street. The main entrance and drop-off location for the hospital portion of the complex is located on Prospect Avenue just north of Essex Street. However, it is important to note that a proposed development for a new hospital pavilion includes relocating the drop-off to Second Street. Currently, the medical center provides an employee shuttle service on Second Street, but there are plans to move the service to Atlantic Street as part of the proposed development. According to the traffic study conducted by Langan Engineering as part of the proposed development, the changes "are expected to positively impact both vehicular and pedestrian conditions in the vicinity of the Pavilion."

Beech Street is an east-west corridor with two lanes of bi-directional traffic and parking on the southern side of the street. The area is similar to Prospect Avenue with various apartment complexes and medical buildings throughout.

Hackensack High School is located in the northeastern section of the corridor, along Beech Street. More than 1,800 students attend the school. Busing is only provided to a small percentage of students who request it; otherwise students are expected to find their own transportation. Walk audit participants noted that a number of students walk to the high school, but bicycling is not common as there are no bicycle racks at the school. Several additional destinations are located just beyond the study corridor including the Hackensack Housing Authority, the downtown commercial center, and the Essex Street Train Station.

The Essex Street Train Station is located less than one-half mile south of the corridor starting point at Essex Street and Prospect Avenue. The station connects the city with communities as far north as Spring Valley, New York and as far south as Hoboken, New Jersey, where transfers are available to other NJ TRANSIT lines, the Hudson Bergen Light Rail, Amtrak, and the PATH. The train station has bicycle racks and also serves other travel modes. NJ TRANSIT bus lines 76, 712, and 780 all stop at the station and provide service to surrounding communities. The NJ TRANSIT 162 bus line stops on Prospect Avenue near Atlantic Street and provides limited weekday service between New York City and Paramus, New Jersey.

Assessment of need

Prospect Avenue and Beech Street were selected due to Hackensack's interest in creating safer pedestrian and bicyclist connections in this densely populated and highly trafficked area of the city. Addressing safety concerns for bicyclists and improving the pedestrian realm is particularly important along this corridor as there have been high numbers of vehicular crashes involving pedestrians and bicyclists. According to police reports, a number of crashes involved high school-aged pedestrians crossing at marked crosswalks, suggesting that infrastructure adjustments may be needed to better ensure safety.

According to feedback from community members and crash data, the research team noted that the corridor is fairly unwelcoming to pedestrians and bicyclists, with limited pedestrian crossings and inconsistent sidewalk availability. Additionally, the high volume of vehicular traffic can make it feel unsafe at times. This is especially true in the area near the HUMC entrance on Prospect Avenue, which attracts a large volume of out-of-town visitors as well as emergency vehicles.

Data

Traffic and Pedestrian Volumes

The 2017 HUMC Pavilion proposal included a traffic analysis with pedestrian and vehicular counts along Prospect Avenue and Atlantic Street during peak weekday morning, afternoon, and evening hours. A total of 408 pedestrians were counted across the three periods at the Essex Street and Prospect Avenue intersection. At the intersection of Prospect Avenue and the HUMC main driveway, a total of 402 pedestrians were counted, including 143 exiting the hospital during the midday peak hours from 11:45 am to 2:00 pm. A total of 145 pedestrians were counted at the intersection of Atlantic Street and Prospect Avenue, though these numbers may increase if the employee shuttle is moved to Atlantic Street.

Just north of the corridor on Prospect Avenue, NJDOT observed an annual average daily traffic (AADT) volume of 10,860 in January of 2015. NJDOT also observed an annual average daily traffic (AADT) volume of 20,991 on Essex Street at the Hackensack University Medical Center in late March 2014. These figures can be used to help determine appropriate improvements for the corridor. For example, the New Jersey Complete Streets Design Guide suggests that uncontrolled intersections with a traffic volume greater than 12,000 should not use striped crosswalks alone. Instead, additional improvements such as flashing lights and/or raised crosswalks should be used to improve the visibility of the crosswalk and slow traffic.

Speed

The speed limit is 25 mph throughout the corridor with one lane of traffic in each direction. Both on-street and off-street parking is available along much of the study corridor. On Beech Street on-street parking is only permitted along the southern side of the street. Traffic speed data was not available for the corridor.

Table 1. Pedestrian and bicycle crashes in study area, 2015-2019.

Approximate Location	Date	Time	Crash Type	Ped./ Cyclist Age	Ped./ Cyclist Gender	Injury Severity	At Intersection	Lighting Condition
Essex & Prospect	9/19/2015	6:25 pm	Pedestrian	Unknown	Female	Minor Injury	Yes	Dawn
Essex & Prospect	2/6/2016	10:17 am	Pedestrian	62	Female	Minor Injury	Yes	Daylight
Essex & Prospect	1/31/2017	6:30 pm	Pedestrian (2)	29 and 29	Both Female	Moderate Injury	No	Dark (street lights off)
Essex & Prospect	7/15/2017	4:48 pm	Pedestrian	24	Male	Minor Injury	Yes	Daylight
Essex & Prospect	3/16/2018	11:11 am	Pedestrian	72	Male	Minor Injury	Yes	Daylight
Essex & Prospect	6/21/2019	10:12 am	Pedestrian (2)	71, Unknown	Both Male	Severe Injury	Yes	Daylight
Essex & Prospect	3/15/2019	10:58 pm	Pedestrian (2)	39, Unknown	Both Male	Severe Injury	Yes	Dark (street lights on)
Essex & Prospect	11/7/2019	6:23 pm	Pedestrian	55	Female	Minor Injury	Yes	Dark (street lights on)
Prospect & Thompson	6/7/2016	1:40 pm	Pedestrian	16	Female	Minor Injury	Yes	Daylight
Prospect & Thompson	3/22/2018	6:24 am	Pedestrian	46	Male	Minor Injury	Yes	Dark (street lights on
Prospect & Thompson	8/24/2019	2:17 pm	Pedestrian	57	Male	Severe Injury	No	Daylight
Prospect & Atlantic	6/6/2018	8:49 am	Bicyclist	15	Male	Moderate Injury	Yes	Daylight
Prospect & Atlantic	10/18/2019	4:46 pm	Pedestrian (2)	15 and Unknown	Both Female	Minor Injury	Yes	Daylight
Prospect & Beech	9/24/2015	8:53 am	Pedestrian	63	Female	Moderate Injury	No	Daylight
Prospect & Beech	5/24/2016	8:04 am	Bicyclist	Unknown	Male	No Injury	Yes	Daylight
Prospect & Beech	12/28/2017	3:28 pm	Pedestrian	57	Female	Minor Injury	No	Daylight
Prospect & Beech	1/3/2017	5:42 pm	Pedestrian	13	Male	Minor Injury	Yes	Dark (street lights on)
Prospect & Beech	4/20/2017	8:18 am	Pedestrian	33	Male	Minor Injury	Yes	Daylight
Prospect & Beech	1/17/2018	6:00 pm	Pedestrian	62	Female	Moderate Injury	No	Dark (street lights on
Beech & 2nd	6/20/2017	9:52 pm	Pedestrian	38	Male	Moderate Injury	Yes	Dark (street lights on
Beech & 2nd	8/29/2017	12:10 pm	Pedestrian	Unknown	Male	Minor Injury	No	Daylight
Beech & 2nd	12/3/2018	8:36 pm	Pedestrian	17	Female	Minor Injury	Yes	Daylight
Beech & 1st	12/11/2015	8:48 am	Pedestrian	18	Female	Minor Injury	Yes	Daylight
Beech & 1st	11/21/2016	4:18 pm	Pedestrian	14	Male	Minor Injury	Yes	Daylight
Beech & 1st	7/17/2017	11:17 am	Pedestrian	Unknown	Male	Minor Injury	Yes	Daylight
Beech & 1st	11/26/2019	8:05 am	Bicyclist (2)	Unknown	Both Male	Minor Injury	Yes	Daylight

Crash History

Over the five-year period from 2015-2019, there were 306 crashes along the study corridor. Twenty-six crashes involved a pedestrian or bicyclist. About one quarter of these crashes involved a high-school-aged pedestrian or bicyclist during daylight hours (see Figure 12 and Table 1).

Figure 12. Map of crashes within the study area, from 2015 to 2019.

Workshop Methodology

Prior to conducting the workshop, the CSTA Program Project Team met virtually with Hackensack officials to discuss the study corridor and gain a better understanding of the roads, location, use, and appropriateness for a walking audit. The municipal team was responsible for selecting a group of stakeholders to attend the workshop. Workshop participants included residents, elected officials, the city planner and engineer, representatives from HUMC and the Hackensack Board of Education, the Bergen County planner, representatives of the EZ Ride Transportation Management Association, and the NJTPA.

The virtual WCW included a one-hour presentation on the fundamentals of complete streets and best practices concerning pedestrian design to ensure that all attendees had a common understanding of complete streets and the relationship between road design and behavior. It included instruction on ways to better support walking and bicycling, and insight into the causes of vehicular speeding. Additionally, the presentation explained various traffic engineering techniques to accommodate bicyclists and pedestrians, and proven measures to reduce speeding.

Following the presentation, the project team provided participants with a link to the walking audit forms so that they could fill it out along the virtual audit. The project team conducted a virtual walking audit using Google StreetView, beginning at the intersection of Essex Avenue and Prospect Avenue. The audit continued north along Prospect Avenue, took a small detour onto Atlantic Street, then continued on to Beech Street, ending at the intersection with First Street. The audit consisted of discussing issues, writing observations, and identifying the existing conditions from participant input. A post-audit debrief reviewed the most important findings and potential recommendations for improvements.

Following the virtual walking audit, one member of the project team visited the corridor in person and the team developed a series of recommendations. The project team presented the design recommendations during a public meeting on August 18, 2020, and gathered feedback from participants, which was incorporated into the final designs in this report.

Workshop Findings

This section highlights the study corridor's existing conditions that walking audit participants identified. It begins with corridor-wide commonalities of the study area, including sidewalks, intersections, safety, and comfort. This is followed by a detailed description of conditions along the route.

Corridor Summary

Sidewalks

Sidewalk width and condition along the corridor varies greatly. For example, wide sidewalks at the Essex Street intersection (Figure 13) quickly become narrow (Figure 14) in both directions (Figure 15). In other locations, the planting strip between the sidewalk and the curb consists of asphalt pavement in poor condition (Figure 16). The *New Jersey Complete Streets Design Guide* states that a 5-foot minimum width is required to meet accessibility standards, but sidewalks should be constructed as wide as possible to accommodate pedestrian demand. Some sidewalks along the corridor do not meet this standard and those that are approximately 5 feet wide experience enough demand to warrant widening. Additionally, the guide states that a planted buffer or furnishing zone should be a minimum of 2.5 feet wide (Figure 17). Sidewalk maintenance issues were identified at various locations, including raised and cracked concrete (Figure 18). On the other hand, the northern section of Prospect Street features good sidewalks (Figure 19).

Figure 13. Wide sidewalks at the Essex Street intersection.

Figure 14. Narrow sidewalks on Prospect Ave.

Figure 15. Narrow sidewalks on Essex St.

Figure 16. Unusable planting area due to unmaintained pavement.

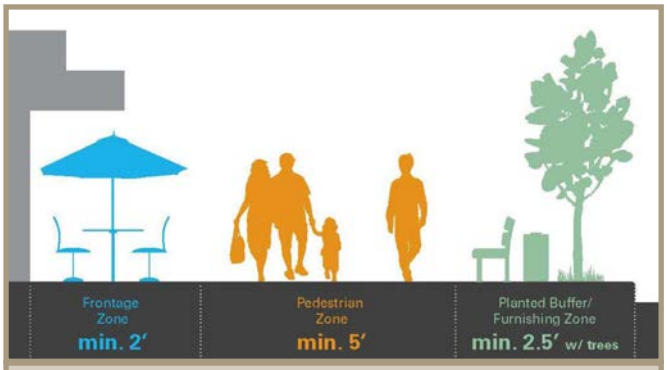


Figure 17. Buffers around pedestrian zone.

Figure 18. Sidewalk maintenance issues.

Figure 19. Good sidewalk on Prospect St. near Beech St.

Intersections and Crosswalks

The condition and availability of crosswalks and ADA-compliant curb ramps varies throughout the corridor. Recent improvements at the intersection of Prospect Avenue and Beech Street feature high visibility crosswalks and ADA-compliant curb ramps with bright truncated domes that direct pedestrians straight into the appropriate crosswalk (Figure 20). Further east on Beech Street at Comet Way, the intersection lacks crosswalks and curb cuts (Figure 21). Many of the curb ramps located at intersections along the route may not comply with ADA guidelines, as the research team noted drainage problems and misaligned ramps (Figure 23 and Figure 24). The traffic signal at the intersection of Beech Street and First Street lacks pedestrian signal heads and activated push buttons, making it difficult for pedestrians to know when they can safely cross the street (Figure 22).

Figure 20. Curb ramps at Prospect Avenue and Beech Street.

Figure 21. Beech Street at the Comet Way intersection.

Figure 22. Beech Street at the Comet Way intersection.

Figure 23. Drainage problems and misaligned ramps along the corridor.

There are limited places for pedestrians to safely cross Prospect Avenue and Beech Street throughout the corridor. Often, marked crosswalks are installed on only a portion of the intersection, such as at Beech Street and Overlook Avenue. The intersection of Comet Way and Beech Street lacks marked crosswalks. Crossing the street near the Prospect Avenue entrance to HUMC and Thompson Street is particularly challenging even with high visibility crosswalk striping and flashing pedestrian signals. A number of crosswalks along the route were observed to be obstructed by stopped vehicles whose drivers advanced beyond the stop bar for better visibility of oncoming traffic (Figure 25).

Figure 24. Poor drainage by a hospital entrance.

Figure 25. Crosswalks along the route regularly obstructed by vehicles.

Safety

When the research team audited the corridor at 6 p.m. on a summer weekday, there was a steady flow of both vehicular and pedestrian traffic. Although the study team did not observe the corridor at night, the distance between the existing overhead cobra lighting fixtures appeared to be spread out too far to provide uniform lighting without excess shadows. Pedestrian-oriented lighting is only provided within the HUMC complex and is not oriented down toward the pedestrian realm (Figure 26). A nighttime observation would be needed to ascertain whether there is a pedestrian visibility problem along the corridor.

The project team did not conduct a speed study; however, the research team noted that it felt that cars were traveling over 25 mph. Drivers also did not yield to pedestrians in the crosswalks. This was especially true at the Thompson Street crosswalk where workshop participants stated that the flashing pedestrian light has not been effective at increasing driver compliance (Figure 27). Additionally, where the sidewalk narrows just north of Essex Street, the research team observed that there is no shoulder and no on-street parking, placing the pedestrian immediately adjacent to the travel lane and creating a sense of discomfort and concern for personal safety. The large volume of traffic, including trucks and buses, exacerbates this issue.

Figure 26. Pedestrian-oriented lighting provided within the HUMC complex.

Figure 27. Attempts have been made to increase driver compliance at the Thompson Street intersection.

Comfort and Appeal

The area was free of litter, graffiti and other quality of life concerns that could discourage walking or bicycling along the corridor. Along Prospect Avenue there are several locations where tree plantings and shrubs were installed by property owners to contribute to visual appeal (Figure 28 and Figure 29), however, the aesthetic is not continued on Beech Street. The area would benefit from pedestrian-oriented lighting and streetscaping efforts, especially those that create a buffer between pedestrians and moving vehicles.

Figure 28. Tree plantings and shrubs along Prospect Ave.

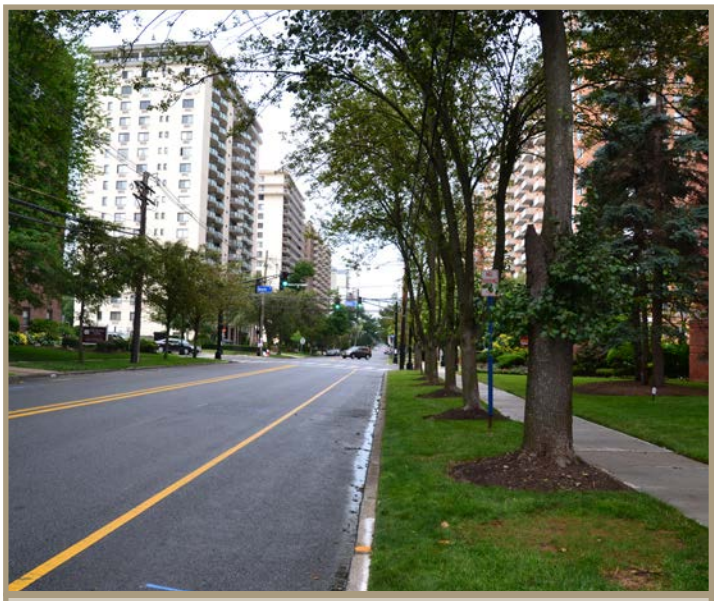


Figure 29. Mature trees along Prospect Ave.

Detailed Conditions

Prospect Avenue: Essex Street to Thompson Street

The southern end of the study corridor begins at the intersection of Prospect Avenue and Essex Street (A in Figure 30). The roadway is 54 feet wide with three lanes traveling south and one traveling north (Figure 31). On-street parking is not permitted but there is a shoulder on the northbound side. The sidewalks measure approximately 5 feet on the western side of Prospect Avenue and 11 feet on the eastern side before narrowing to 4.5 feet.

WCW participants were particularly concerned about the intersection of Essex Street and Prospect Avenue and described it as a challenge for all users. The intersection has a high volume of traffic because of its proximity to nearby schools, HUMC, the courthouse, and major highways. The northeast corner of the intersection is particularly uncomfortable for pedestrians. Pedestrians waiting to cross Essex Street on the east side of the intersection are situated on a narrow sidewalk with about 7 feet between the corner of a brick building and the vehicular travel lane (Figure 32).

Figure 30. Map of study corridor.

Figure 31. Looking north on Prospect Avenue from Essex St.

Figure 32. Looking south on Prospect Ave. toward Essex St. The curb ramps are not ADA compliant and the sidewalk narrows due to the traffic signal.

Fairly constant right-turning traffic encroaches into the crosswalk in order to check for oncoming traffic creating a difficult situation for pedestrians. WCW participants noted that the pedestrian walk phase for Prospect Avenue does not provide enough crossing time for pedestrians to walk the 90-foot crosswalk. These issues combine to create a dangerous condition for pedestrians, which is supported by the eight crashes involving pedestrians that have occurred here since 2015 (see Table 1).

WCW participants noted that crossing guards working at the intersection can create confusion by stopping traffic without regard for the phase of the traffic signal. According to the NJDOT Crossing Guard Training Manual, crossing guards should enter "the street with a 'fresh' green or 'WALK' signal" and must hold the traffic until all pedestrians have left the crosswalk.

Just north on Prospect Avenue is a shopping center that attracts HUMC staff and visitors by foot. WCW participants expressed particular concern about the driveway for this shopping center as vehicles that enter and exit the property are more concerned about making it across three lanes of traffic than watching for pedestrians (Figure 33). There are no marked crosswalks along the driveway and the faded truncated domes are facing into the vehicle travel lane.

On the east side of Prospect Avenue, the sidewalk narrows and is bordered by a fence with brick columns. The brick columns combine with signage clutter to create an uncomfortable experience for pedestrians that lack a buffer from the high volumes of vehicular traffic (Figure 34). Lighting from existing overhead cobra fixtures were not observed at night, but their size and placement suggest that the roadway would benefit from pedestrian-oriented lighting.

Prospect Avenue: Thompson Street to Beech Street

At the intersection with Thompson Street, the road is 49 feet wide with one travel lane in each direction. Left turns onto and off of Thompson Street are not permitted, which is declared on multiple signs on Prospect Avenue and a painted "right turn only" arrow on Thompson Street (Figure 35). A yellow striped shoulder marks "no parking" on both sides of Prospect Avenue along this portion of the corridor.

Figure 33. Driveways to the shopping center.

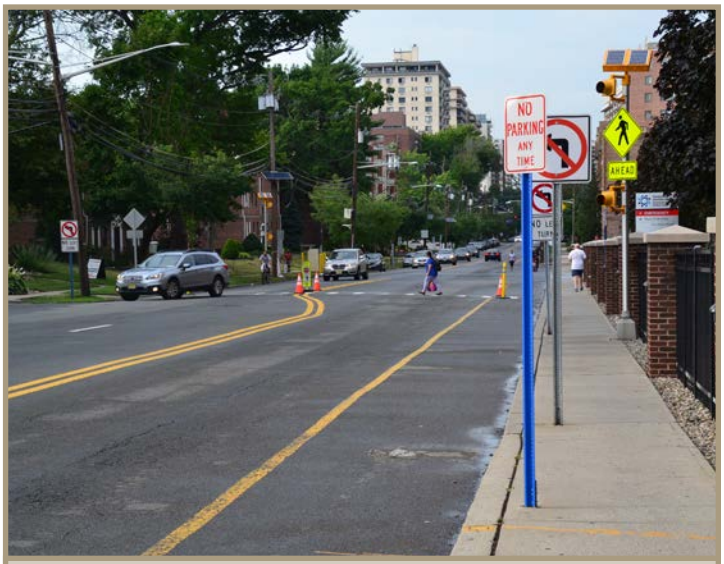


Figure 34. Narrow sidewalk along Prospect Ave.

Figure 35. Prospect Avenue and Thompson Street intersection.

The intersection of Thompson Street and Prospect Avenue was the subject of a 2017 Street Smart NJ educational campaign, conducted by NJTPA and EZ Ride Transportation Management Association in partnership with HUMC. Program participants selected this intersection mainly because of its high volume of pedestrian crashes (three crashes reported between 2015 and 2019, see Figure 12). Pedestrian traffic at the intersection is particularly high because of HUMC visitors and employees walking to and from the restaurants, shops, and parking deck located on and near Thompson Street.

Figure 36. Prospect Avenue and Thompson Street intersection.

Currently, two crosswalks are marked at the Prospect Avenue and Thompson Street intersection (B in Figure 30). A faded ladder crosswalk marks the crossing over Thompson Street. Truncated domes are lacking from the northern side of the intersection and are misaligned on the southern end. One crosswalk is marked over Prospect Avenue at the northern end of the intersection. It is marked by a painted ladder design and additional visual cues including plastic removable bollards, in-street pedestrian crossing stop sign (R1-6a) and an advance warning beacon (Figure 36).

WCW participants noted several issues regarding the advance warning beacon. Participants stated the beacon is often active when there is no pedestrian present. It seems that drivers are aware of this, which may have had a negative impact on the signal's effectiveness and the likelihood that a passing car will stop when the lights are flashing. Participants also stated that they have witnessed several drivers failing to stop for pedestrians even when the yellow lights were active. A CSTA team member confirmed this during an independent site visit. During the 2017 Street Smart NJ pre-campaign intersection observations, 51 percent of cars did not stop for pedestrians in the crosswalk. Additionally, the signal heads on the beacon south of the crosswalk are angled across the street in such a way that makes them less visible to drivers approaching the crosswalk (Figure 37).

Figure 37. Beacon warning motorists of the upcoming crosswalk.

North of the Thompson Street intersection the road transitions to one lane of travel in each direction, with parking allowed on the west side, and measures approximately 49 feet wide. WCW participants noted impatient drivers commonly take advantage of the wide travel lanes to pass slow or turning drivers using the ample road width provided. This creates a dangerous situation for bicyclists, pedestrians, and the drivers stopping for them.

Continuing north there is an intersection with a large HUMC entrance on the eastern side of Prospect Avenue (C in Figure 30). A high volume of pedestrian and vehicular traffic passes through this intersection including emergency vehicles, visitors, and employees entering and exiting the property. WCW participants raised several issues regarding the safety of this intersection.

Figure 38. A large brick HUMC sign at the center of the crosswalk.

Figure 39. A newly-installed flashing stop sign at the HUMC exit.

Figure 40. Looking south on Prospect Avenue at the HUMC entrance, where a driver blocks the crosswalk while waiting to make a left turn.

Figure 41. Prospect Ave south of the Atlantic Street intersection.

The crosswalk over the HUMC entrance is marked with a well-maintained and highly visible ladder crosswalk, but it is approximately 110 feet long. A large brick HUMC sign (Figure 38) located in a planted median at the center of the crosswalk creates visibility issues for both pedestrians and drivers and does little to provide refuge to pedestrians through the long crosswalk. WCW participants noted that cars turning left have been observed exiting the hospital without making a full stop; however, a flashing stop sign was recently installed at the HUMC exit to help address this issue (Figure 39). Lastly, cars block the crosswalk in order to view oncoming traffic when preparing to turn left onto Prospect Avenue (Figure 40).

To address this challenging intersection, WCW participants made several suggestions including barring left-hand turns, encouraging traffic to use the Atlantic Street entrance, and installing a traffic signal. Barring left-hand turns and encouraging traffic to use the Atlantic Street exit may simply create a similar issue at the Atlantic Street entrance. Installing a traffic signal could help address the high volume of crashes at this intersection while increasing pedestrian safety. A controlled intersection would provide an additional opportunity for pedestrians to cross Prospect Avenue safely. A traffic study is needed to determine if traffic volume warrant a new signal.

Prospect Avenue narrows to 39 feet just south of the Atlantic Street intersection (Figure 41). Parking begins on both sides of the road just north of the Atlantic Street intersection, aside from a marked bus stop (Figure 42). The narrowed travel lane combined with on-street parking creates a challenge for bicyclists, who must merge into traffic lanes. So, while the area becomes more accommodating for pedestrians, it becomes more challenging for bicyclists. According to WCW participants, exchanging some on-street parking for a bicycle lane would not be possible as residents of the nearby apartment buildings rely on this parking.

Moving north along the corridor the character of the road transitions and provides a more comfortable pedestrian experience. At first, the buffer between the sidewalk and travel lane is comprised of crumbling asphalt (Figure 43). Further north along the corridor, this space is occupied by grass and mature trees providing an abundance of shade (Figure 44). These planting strips act in combination with on-street parking to create an enjoyable buffer between pedestrians on the sidewalk and passing vehicles. One WCW participant described walking through this section of the sidewalk as "very pleasant."

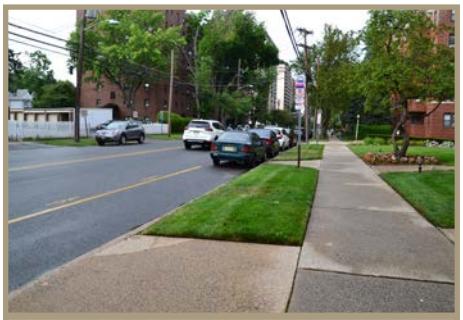


Figure 42. Location of the bus stop along Prospect Avenue.

Figure 43. Crumbling pavement between the sidewalk and travel lane.

Figure 44. Grass and mature trees between the sidewalk and travel lane.

The intersection of Prospect Avenue and Beech Street was recently upgraded from a four-way stop to a signalized intersection with new ADA-compliant curb cuts and highly visible crosswalks (Figure 45 and D in Figure 30). WCW participants noted the intersection is heavily trafficked by high school students walking to the school on Beech Street. They also noted that the light used to be sensor controlled and would automatically change as traffic approached, but now seems to be operating on a timer. The timer creates long wait times for pedestrians attempting to cross. Wait times are further extended because the pedestrian phase does not activate unless the pedestrian presses the crossing button. Failure to activate the pedestrian phase leaves pedestrians waiting needlessly and may encourage them to cross unsafely.

Figure 45. New traffic signal at Beech Street.

Atlantic Street

Atlantic Street is an east-west corridor that runs from Prospect Avenue to downtown Hackensack (E in Figure 30). It is approximately 35 feet wide with one travel lane in either direction. At the intersection with Prospect Avenue two turning lanes are provided for turning onto Prospect Avenue. The ladder crosswalk at this intersection measures approximately 52 feet. Truncated domes are installed on both sides of the crosswalk, but they orient pedestrians toward the center of the intersection rather than the crosswalk (Figure 46). Water pooling at the base of the curb ramp at the northern end of the intersection was seen during the site visit (Figure 47). WCW participants and CSTA team members witnessed cars blocking the full width of the crosswalk to check for oncoming traffic on Prospect Avenue.

Figure 46. Intersection of Prospect Ave and Atlantic St.

Figure 47. Pooling of water at the base of the ramp.

The sidewalk along Atlantic Street is narrower than Prospect Avenue's sidewalk, measuring approximately 3 feet wide with a 2-foot buffer. Along the north side of Atlantic Street, the buffer is comprised of grass (Figure 48), while the southern side is paved (Figure 50). An entrance into the HUMC complex is located approximately 250 feet east of the Prospect Avenue intersection. The crosswalk is missing truncated domes and experiences pooling of rainwater (Figure 49). A parking deck is located across Atlantic Street from this entrance. While a bridge to the parking deck is accessible from within the HUMC building, WCW participants noted that pedestrians often cross Atlantic Street at this intersection to reach the parking deck.

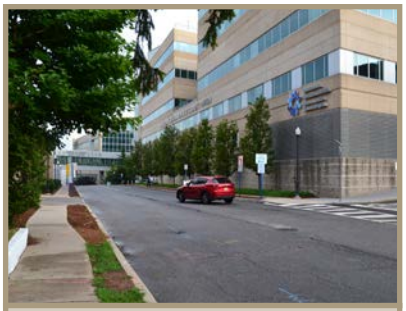


Figure 48. Buffer comprised of grass along the north side of Atlantic Street.

Figure 49. Pooling of rainwater at an entrance into the HUMC complex.

Figure 50. Paved buffer along the southern side of Atlantic Street.

Beech Street

Beech Street is an east-west corridor that connects Hackensack High School with residential areas to the west, including several large apartment complexes. It is approximately 40 feet wide with one travel lane in either direction and has a significant downward slope traveling east (Figure 51). The steep slope combined with poor pavement maintenance deters bicyclists from using this corridor, according to WCW participants. Parking is permitted along the southern side of Beech Street. At the time of the audit, the travel lanes and crosswalks over Beech Street were not striped, except for the areas approaching the two signalized intersections. There are no painted crosswalks across Beech Street between Prospect Avenue and 1st Street, a distance of 1,400 feet with three intersections.

The sidewalk along the south side of Beech Street is approximately 5 feet wide, while the sidewalk along the north side does not meet accessibility standards, measuring approximately 4 feet. Hedges extended into the sidewalk on both sides of the street (Figure 52). The sidewalk on the south side of Beech Street slopes toward the road (Figure 53).

A parallel crosswalk was recently installed at the intersection of Beech Street and Overlook Avenue, with new curb cuts and truncated domes (Figure 54, F in Figure 30). CSTA team members witnessed cars stopping beyond the stop line and blocking the crosswalk in order to view oncoming traffic on Beech Street (Figure 55). The crosswalk over Beech Street is not marked. Across from the intersection is an apartment complex driveway with yellow painted curbs signifying "no parking" within 25-feet of this driveway. WCW participants noted that the curb paint has not been effective in deterring parking here, which creates significant visibility issues.

Figure 51. Looking east on Beech Street, near Prospect Avenue.

Figure 52. Looking east on Beech Street, between Prospect Ave and Overlook Ave.

Figure 53. Looking west on Beech Street near Overlook Avenue.

Figure 54. Looking across Beech Street at the Overlook Avenue crosswalk.

Figure 55. Looking east on Beech Street at Overlook Avenue.

Beyond Overlook Avenue, Beech Street becomes significantly steeper. WCW participants noted the steep hill combined with the afternoon sun creates visibility issues for drivers traveling west on Beech Street. This poses a safety concern for pedestrians and bicyclists and should be considered when designing crosswalks over Beech Street. Mature trees along the planted buffer provide nice shade along this section of the corridor.

Crosswalks, curb cuts, and truncated domes are missing from the Beech Street and Comet Way intersection (Figure 56) and the 2nd Street intersection (Figure 57; Figure 58). This section of Beech Street has large volumes of school-related traffic, which is often at a stand-still during school drop-off and pick-up times especially near the drop off location at the front of the school, according to WCW participants (Figure 59, student drop-off location). The sidewalk in front of the high school is wide, but in need of maintenance (Figure 60).

The intersection of Beech Street and 1st Street is controlled by a traffic signal that WCW participants described as confusing (G in Figure 30). Pedestrian signal heads are missing from the northeast and southwest corners of the intersection (Figure 61). High visibility ladder crosswalks are installed at all four sections, but truncated domes are missing along the western side of the intersection (Figure 62). Any changes to this intersection will require approval and coordination with Bergen County, as 1st Street is county-owned.

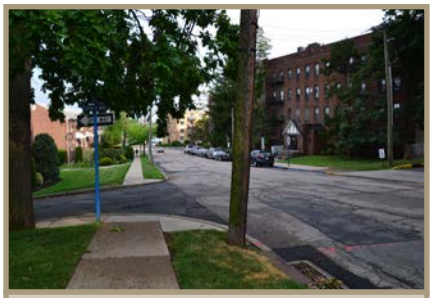


Figure 56. Looking east on Beech at the Comet Avenue intersection.

Figure 57. Looking south across Beech Street at 2nd Street.

Figure 58. Looking west on Beech Street at 2nd Street, there is no curb ramp.

Figure 59. Looking north on Beech Street at the entrance to the high school.

Figure 60. Looking west on Beech Street in front of the high school.

Figure 61. Looking south across Beech Street at 1st Street.

Figure 62. Looking east across 1st Street.

Recommendations

During the workshop, participants expressed the desire to encourage and support walking and bicycling throughout the corridor, and to improve safety for those already walking and biking.

1. Create a Complete Streets Implementation Plan

Adopting a complete streets policy, as Hackensack did in 2012, is an important first step toward implementation, as it defines the meaning of complete streets, establishes goals, and lays out the ways in which the municipality will accomplish the goals. The CSTA team recommends that Hackensack adds to the existing policy by adopting an implementation plan and checklist to ensure that the municipality remains on the right path year after year. In 2013, NJDOT released *A Guide to Creating a Complete Streets Implementation Plan*. Alternatively, Hackensack can renew its commitment to complete streets by passing a new policy using the latest language recommended by NJDOT in the *Complete & Green Streets for All: Model Complete Streets Policy and Guide* that was published in 2019. These resources are among those available at http://njbikeped.org/complete-streets-resources. Forming a Complete Streets Advisory Committee could also prove beneficial in promoting implementation. Additionally, points are available to municipalities who are seeking Sustainable Jersey certification for adopting and instituting a complete streets policy.

2. Install Pedestrian Amenities

Prospect Avenue and Beech Street are important travel corridors with many destinations that attract visitors, residents, and workers. The HUMC and Hackensack High School attract particularly large volumes by car, foot, and bicycle. The corridor is also a popular running location. While some sections of Prospect Avenue have trees that provide shade and well-maintained sidewalks, much of the corridor lacks inviting amenities characteristic of walkable neighborhoods. Installing pedestrian-oriented lighting would help the area's sense of place. Union Township provides an example of a downtown with key aspects that make it appear attractive and safe, including wide sidewalks, short highly visible crosswalks, trees and other plantings, and seating.(Figure 63).

Figure 63. Downtown lighting with banners and planters in Union, New Jersey. (Photo and design courtesy of Arterial LLC)

Walking audit participants noted the inconsistency of sidewalks and crosswalks along the corridor. While some sections offered smooth wide concrete, other sidewalks were narrow and in disrepair. A buffer between pedestrians on the sidewalk and passing cars is either missing or paved over along much of the corridor. An example of pedestrian oriented lighting and green infrastructure as a buffer between pedestrians and traffic can be seen in Union Township (Figure 64).

Figure 64. A well-lit midblock crossing along a sidewalk with green infrastructure providing visual appeal and acting as a buffer on Stuyvesant Avenue in Union Township, New Jersey. (Photo and design courtesy of Arterial LLC)

Many intersections lack marked crosswalks. At several locations where crosswalks are marked, safety is compromised by the length of the crosswalk and/or vehicles blocking them to check for oncoming traffic. In addition to the pedestrian-oriented lighting suggested above, each crosswalk along the corridor should be well lit.

3. Address Intersection Improvements

Prospect Avenue and Essex Street

WCW participants expressed concern about the length of the 90-foot crosswalk at Essex Street and the continuous volume of traffic making right-hand turns onto Prospect Avenue. These concerns can be addressed by reallocating space on Prospect Avenue and adjusting the signal timing and permitted intersection movements.

The City should consider modifying the Essex Street traffic signal to provide a leading pedestrian interval, which gives pedestrians a few extra seconds to cross the road before the traffic light turns green for vehicles. Additionally, the signal modification should give pedestrians a longer crossing time. According to the US Access Board, extending the time for pedestrian crossing beyond the calculated requirement should be done if the crosswalk length is greater than 50 feet with no intermediate pedestrian refuges. The signal should also be accessible to those with disabilities, and include an audible announcement locator tone, so blind pedestrians can locate the signal, and an audible counter announcing the walk phase. Limiting or prohibiting right turns on red can also ensure pedestrians have the time needed to cross safely.

Installing a median to include a pedestrian island that measures at least 6 feet by 6 feet provides an additional layer of safety. This median can also serve to beautify the area and ensure left-hand turns are not made at the shopping center or Thompson Street. The median provides a space for plantings that can simultaneously beautify the area, slow speeding traffic, and help address any water pooling issues.

In the short term, a median can be created using only paint and signage (Figure 65). This approach, referred to as a demonstration project or Tactical Urbanism, uses short-term, low-cost, scalable interventions to affect long-term change related to street safety and public space. This method can draw attention to perceived shortcomings, widen civic engagement, test interventions, and inspire action. Demonstration projects champion flexibility because improvements can be temporary. This allows residents and policymakers to witness the improvement and weigh in on its effects. This also allows for data collection, and modifications for the final permanent design based on findings from the temporary installation. As funding allows, the city can advance or upgrade the project to permanent installation.

Figure 65. An example of a painted curb extension in Seattle, WA.

Just north of the intersection, the crosswalks over the shopping center entrance and exit should be clearly marked with high visibility striping and should provide ADA-compliant curb ramps. WCW participants noted that this exit is especially challenging for drivers turning south onto Prospect Avenue to make a left on Essex Street. The road diet discussed in the following section seeks to alleviate some of these challenges.

Prospect Avenue and Thompson Street

The Prospect Avenue crosswalk can be shortened and made more visible to drivers by installing curb extensions on either side of the road. Painted curb extensions are bicycle friendly and can be enhanced with bollards. As mentioned previously, curb extensions can be piloted with low-cost materials. Alternatively, a concrete curb extension can be installed just beyond the bicycle lane. Street lights should be installed at the crosswalks, as recommended in the EZ Ride Street Smart study. A narrower median can continue through this section of the corridor.

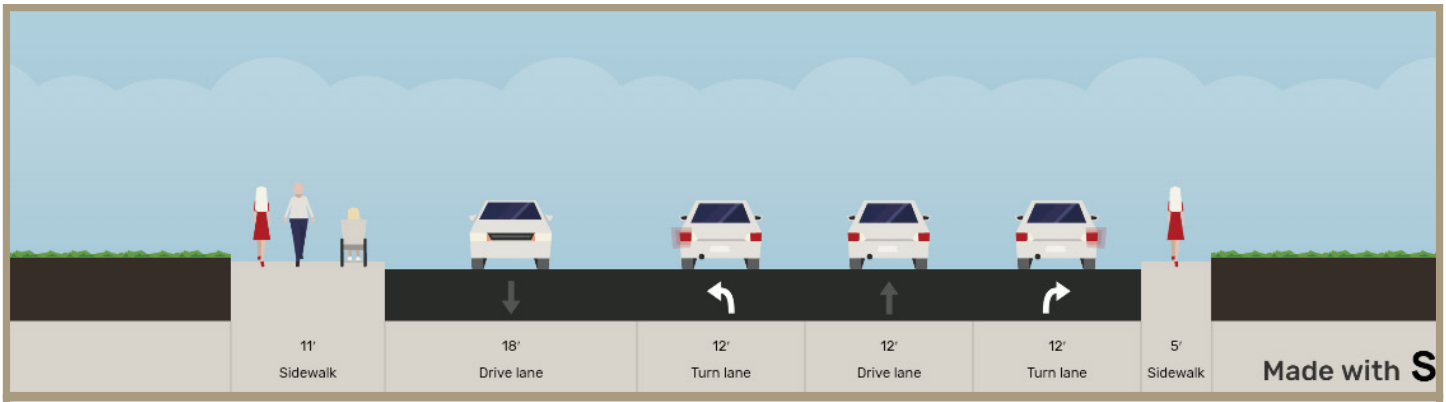


Figure 66. Current allocation of space on Prospect Avenue at the Essex Street intersection, looking south.

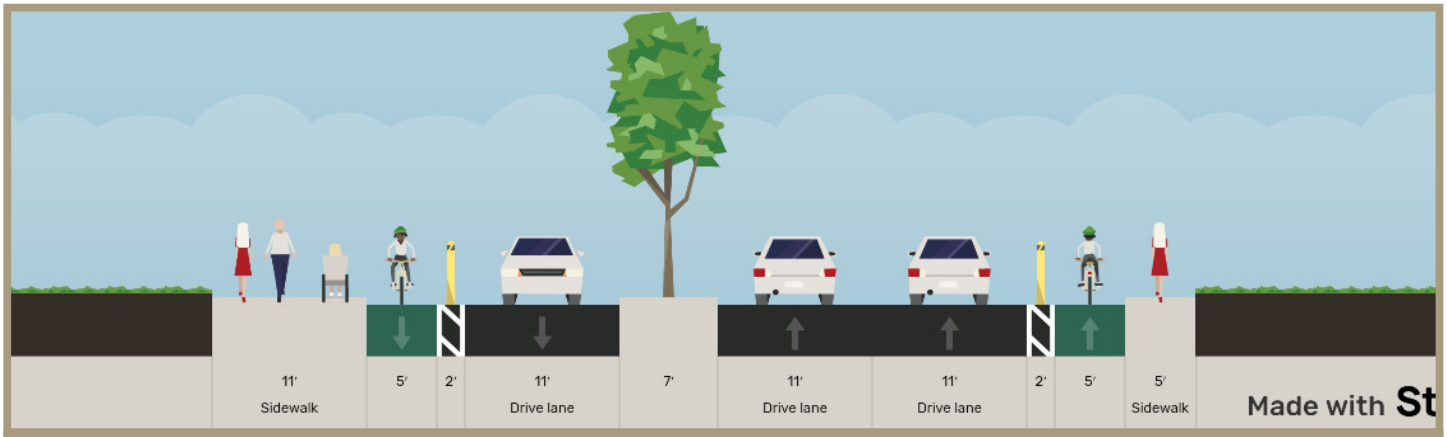


Figure 67. Prospect Avenue with a median and buffered bicycle lanes, looking south.

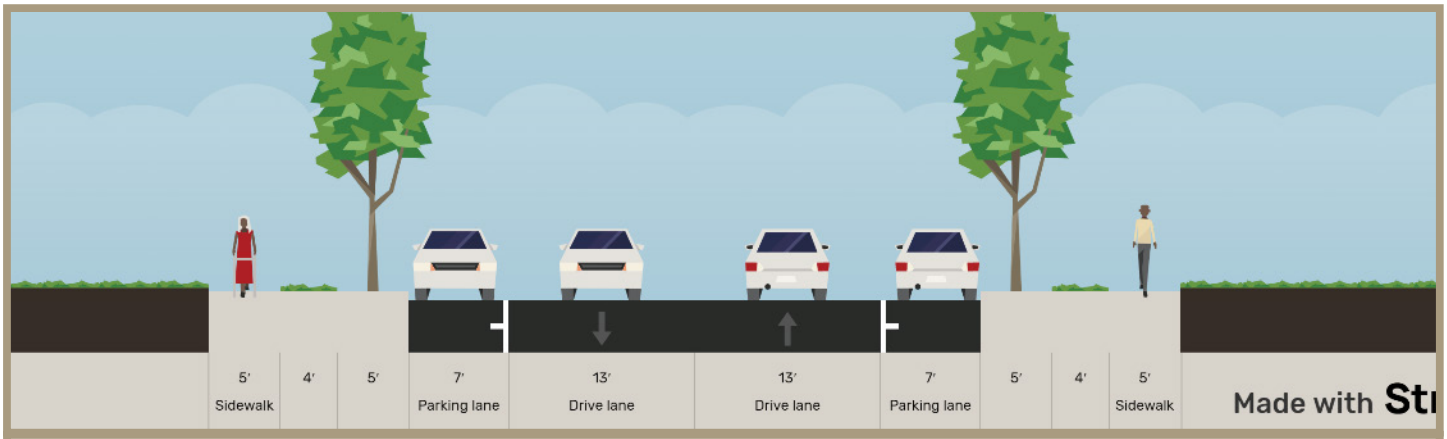


Figure 68. Current allocation of space on Prospect Avenue north of Atlantic Street, looking south.

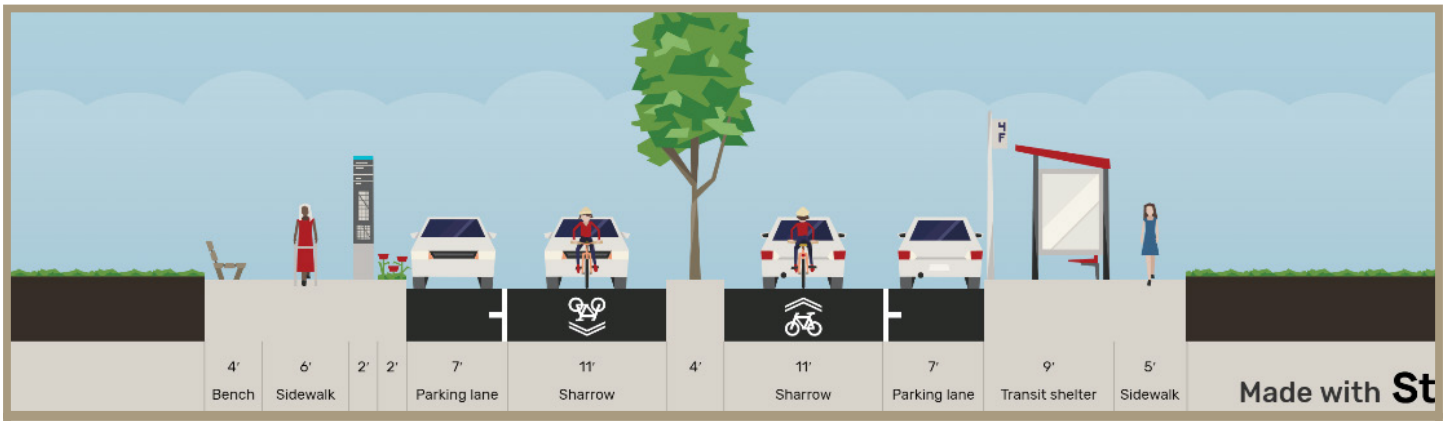


Figure 69. Prospect Avenue north of Atlantic Street with a median, sharrows, and pedestrian amenities, looking south.

4. Investigate Road Diet Options

Currently, roads throughout the corridor are wider than necessary. Reallocating some space for other uses can help slow traffic, discourage illegal movements, and create a safer environment for all road users.

Prospect Avenue

WCW participants noted a variety of unsafe behavior that can be addressed through a road diet that narrows the travel lanes to a more appropriate width. By narrowing the travel lanes to 11 feet and eliminating one of the turning lanes, a significant amount of space becomes available. This space can be used in a variety of ways and Figure 67 provides one such example. Five-foot bicycle lanes on either side of the road with a two-foot buffer provide safety for bicyclists and help to narrow the road to slow traffic. Installing a median of at least 6 feet will also help to narrow the road and provide added protection to crossing pedestrians. The median can be designed so that emergency vehicles can cross over it, if needed.

North of Atlantic Street, the road narrows (Figure 68). The median may continue north along Prospect Avenue, but must narrow to approximately 4 feet wide (Figure 69). Bicycle lanes should transition to sharrows at Atlantic Street. Parking may remain on much of the corridor, but the pavement directly in front of the bus stops should be painted to deter illegal parking. A bus shelter in the southbound direction with ADA compliant landing pad should be added in the existing planting strip. The area would also benefit from a number of pedestrian amenities including benches, planting strips along the buffer, and pedestrian-oriented lighting.

Beech Street

Beech Street provides extra-wide travel lanes for vehicles while minimizing the available space for other uses (Figure 70). Figure 71 depicts a number of amenities that increase walkability and promote safe driving speeds in front of the high school. Pedestrian-oriented lighting can be used in combination with banners to display pride in the high school and provide an additional visual cue to drivers that they have entered a school zone. Trees and planting strips can provide shade for pedestrians and help decrease traffic speeds.

The CSTA team recommends a bicycle lane in the uphill direction as bicyclists will be moving much slower than other traffic due to the slope of the hill. As there is only space available for one bicycle lane, sharrows should be added in the downhill direction, where bicyclists will be moving faster.

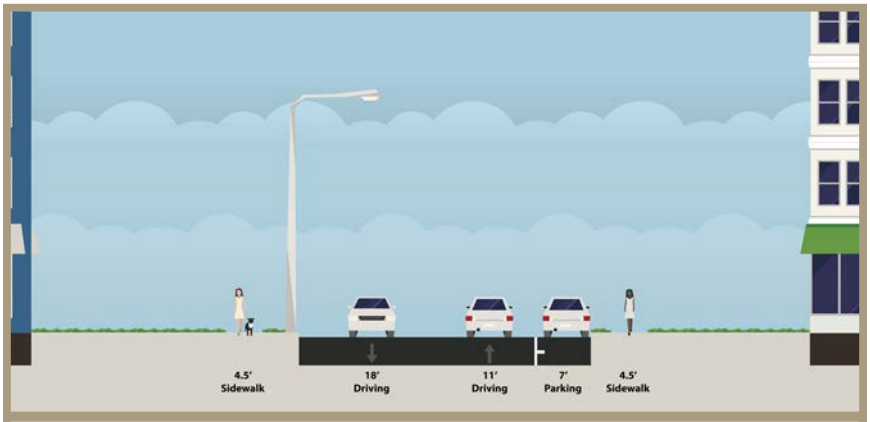


Figure 70. Current Allocation of space on Beech Street, looking east (downhill).

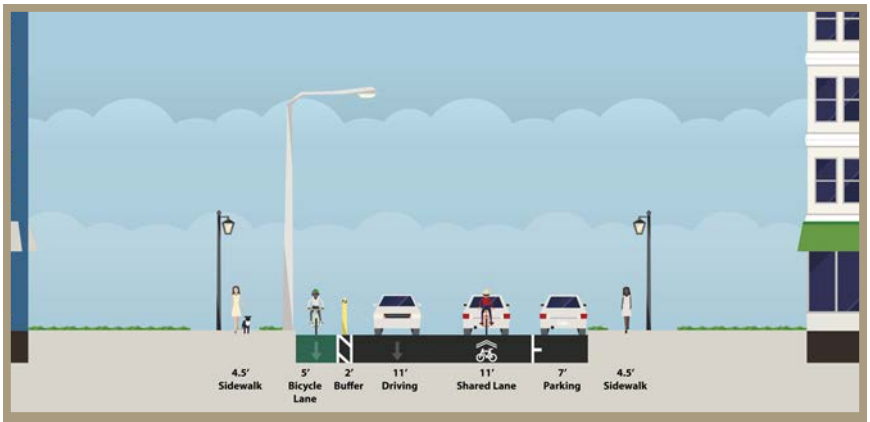


Figure 71. Beech Street with an uphill buffered bicycle lane, shared downhill lane, and added pedestrian lighting.

5. HUMC Entrance

WCW participants were eager to see either a traffic signal installed at the HUMC entrance or to eliminate left hand turns from the exit. While a traffic study would need to take place in order to determine if a traffic signal is warranted, a number of simple improvements can increase safety in the meantime. The crosswalk at the entrance can be significantly shortened by making some minor changes. First, the entrance can be narrowed from three lanes to one lane of traffic, shortening the crossing distance for pedestrians by 20 feet. To accommodate vehicles, the single lane of traffic can widen again into three lanes of traffic just beyond the crosswalk. On the exit side, the travel lanes can be narrowed to 11 feet. These two adjustments can shorten the crosswalk distance by more than 30 feet.

The stop bar for exiting traffic should be moved up into the current crosswalk and the crosswalk itself should be moved approximately six feet towards Prospect Avenue. This curb extension addresses the vehicles that have been seen stopping in the crosswalk in order to check for oncoming traffic. It also helps to narrow Prospect Avenue at the crosswalk, creating an additional visual reminder for drivers that pedestrians may be present.

If a traffic study determines that a signal is appropriate for this intersection, WCW participants suggested that it should synchronize with the Essex Street and Beech Street signals. Adding a traffic signal will also allow for the addition of signalized crosswalks.

6. Traffic Signals

All traffic signals along the study corridor should be upgraded to include auditory pedestrian cues with pedestrian countdowns at all four crossings. Prohibiting turns on red will make these busy intersections safer for pedestrians. Pedestrian phases should allow pedestrians sufficient time to cross the intersection regardless of their abilities. NACTO recommends 60 to 90 seconds for pedestrian crossings, taking into account the length of the crosswalk and the types of pedestrians attracted to the area. Given the proximity to the hospital, the Essex Street crossing should provide closer to 90 seconds of crossing time.

Detailed Recommendations

Prospect Avenue: Essex Street to Thompson Street

- No turn on red at Essex Street and Prospect Ave. Ensure the crosswalk timers meet standards for areas with high volumes of senior citizens and consider providing a leading pedestrian interval or pedestrian-only crossing phase.
- Install a median to shorten the crosswalk in conjunction with a pedestrian refuge island (Figure 72). The refuge island should be at least 6 feet wide and 6 feet long. The median could continue down Essex Street at a narrower width to add visual appeal, slow traffic, and prevent left turns. Ensure the median allows emergency vehicles access to Thompson Street.
- Clearly mark the crosswalk at the shopping center driveway and ensure ADA-compliant ramps are installed at both ends of the crossing and the driveway median.
- Consider a bicycle lane or extended curb space for pedestrians; the bicycle lane and median should allow for the movement of emergency vehicles. Plans should be developed to integrate the bicycle lane into a broader bicycle network.
- Install pedestrian amenities such as pedestrian-oriented lighting, benches, and wayfinding signs.
- Investigate the road diet, bicycle infrastructure, and streetscaping improvements suggested earlier.
- Upgrade all curb ramps to comply with ADA regulations and angle them such that they direct pedestrians into the crosswalks rather than into the center of the intersection.

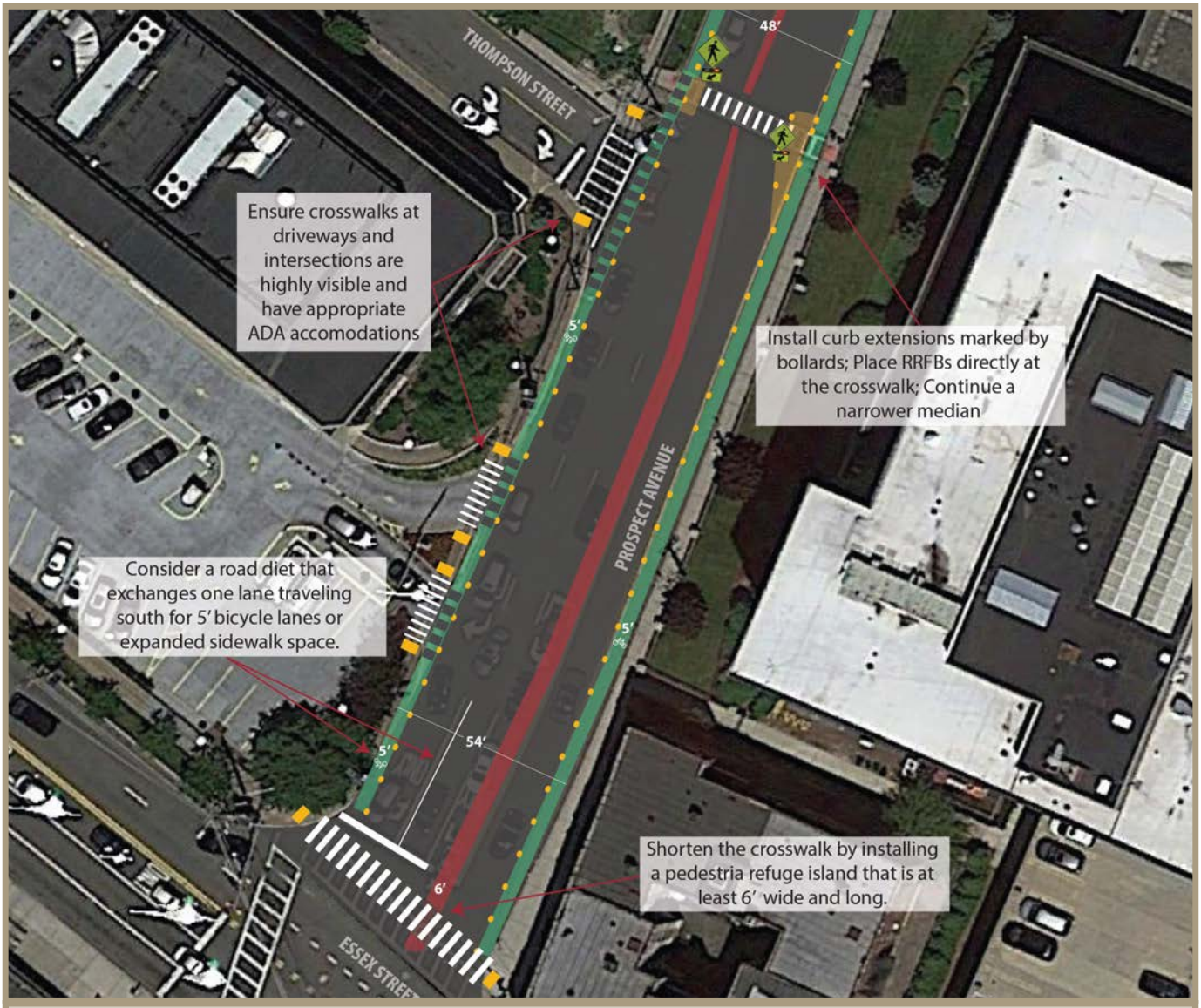


Figure 72. Prospect Avenue improvements from Essex Street to Thompson Street.

Prospect Avenue: Thompson Street to Beech Street

In addition to the EZ Ride recommendation to install streetlights over the Prospect Avenue crosswalk, the CSTA team recommends the following improvements:

- Install a push-button activated rapid rectangular flashing beacon (RRFB):
  - RRFBs look like standard crosswalk signs but produce a flashing light pattern when activated. They can be activated passively with a sensor that detects pedestrians, or directly via a button that pedestrians push when they are ready to cross. This flashing light is highly visible to motorists, and more drivers comply with the requirement to stop for pedestrians when it's used. The lights are only activated on demand, and last for just a few seconds, so they are not disruptive to nearby residents. These installations can be powered by solar panels or connected to the electrical grid.
  - Situate the RRFBs directly at the crosswalk and ensure the flashing lights face oncoming traffic directly;
  - Install or paint curb extensions of approximately 5 to 6 feet on both sides of the crosswalk that accommodate bicycle traffic.
- Explore the road diet previously detailed to restrict northbound traffic to a single lane:
  - Reduce travel lanes to 11 feet;
  - Install 5- to 6-foot bicycle lanes with a 2-foot buffer that transitions to sharrows where parking begins north of Atlantic Street;
  - Install a median that narrows with the road heading north.
- Upgrade all curb ramps to be ADA-compliant and angle them such that they direct pedestrians into the crosswalks rather than into the center of the intersection.
- Address the turning conflicts at the HUMC entrance (Figure 73):
  - Consider a traffic study to determine if a traffic signal is warranted;
  - Install curb extensions to shorten the crosswalk over the entrance;
  - Narrow the entrance to a single lane that immediately splits back to three lanes after the crosswalk;
  - Narrow the exiting traffic lanes to 11 feet and install an 11-foot curb extension;
  - Move the crosswalk and stop bar closer to Prospect Avenue so that vehicles do not need to block the crosswalk to check for oncoming traffic;
  - Install a crosswalk over Prospect Avenue.

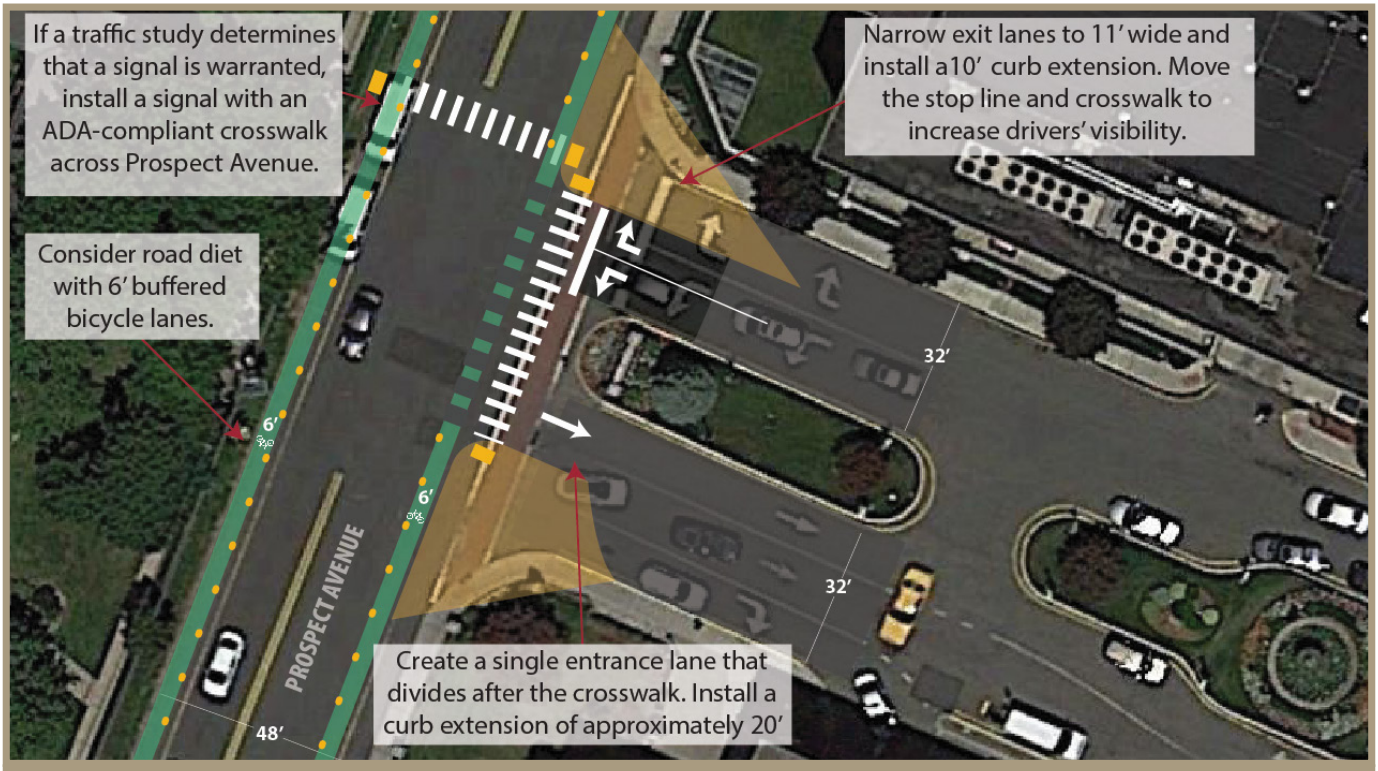


Figure 73. HUMC entrance improvements.

- Provide pedestrian amenities that improve walkability:
  - Exchange paved buffer space for expanded sidewalks, benches, plantings, pedestrian-oriented lighting, and/or wayfinding signage.
- Install bus stop amenities at the Prospect Avenue and Atlantic Street stop:
  - Add ADA-compliant landing pad in both directions;
  - Install a bus shelter with route signage and information in the southbound direction;
  - Add "bus stop" stencils on pavement to deter drivers from illegally blocking the bus stop.
- Install pedestrian-oriented lighting, especially over each crosswalk in the corridor.
- Adjust the Prospect Avenue and Beech Street traffic signal so it is sensor-controlled rather than timed.

Atlantic Street

- Realign the intersection (Figure 74):
  - Install curb extension to create a right-angled intersection;
  - Move the stop line and crosswalk closer to Prospect Avenue so that stopped vehicles do not block the crosswalk.
- Transition bicycle lanes to sharrows on Prospect Avenue.
- Install a marked crosswalk over Prospect Avenue.
- Improve pedestrian-oriented lighting, especially over the crosswalks.
- Install 5-foot buffered bicycle lanes on Atlantic Street to provide a safe route for bicyclists uncomfortable using sharrows. The buffered bicycle lane is especially helpful on Atlantic Street because it allows bicyclists an opportunity to safely ride up the steep hill without blocking vehicular traffic.
- Upgrade all curb ramps to be ADA-compliant and angle them such that they direct pedestrians into the crosswalks rather than into the center of the intersection.

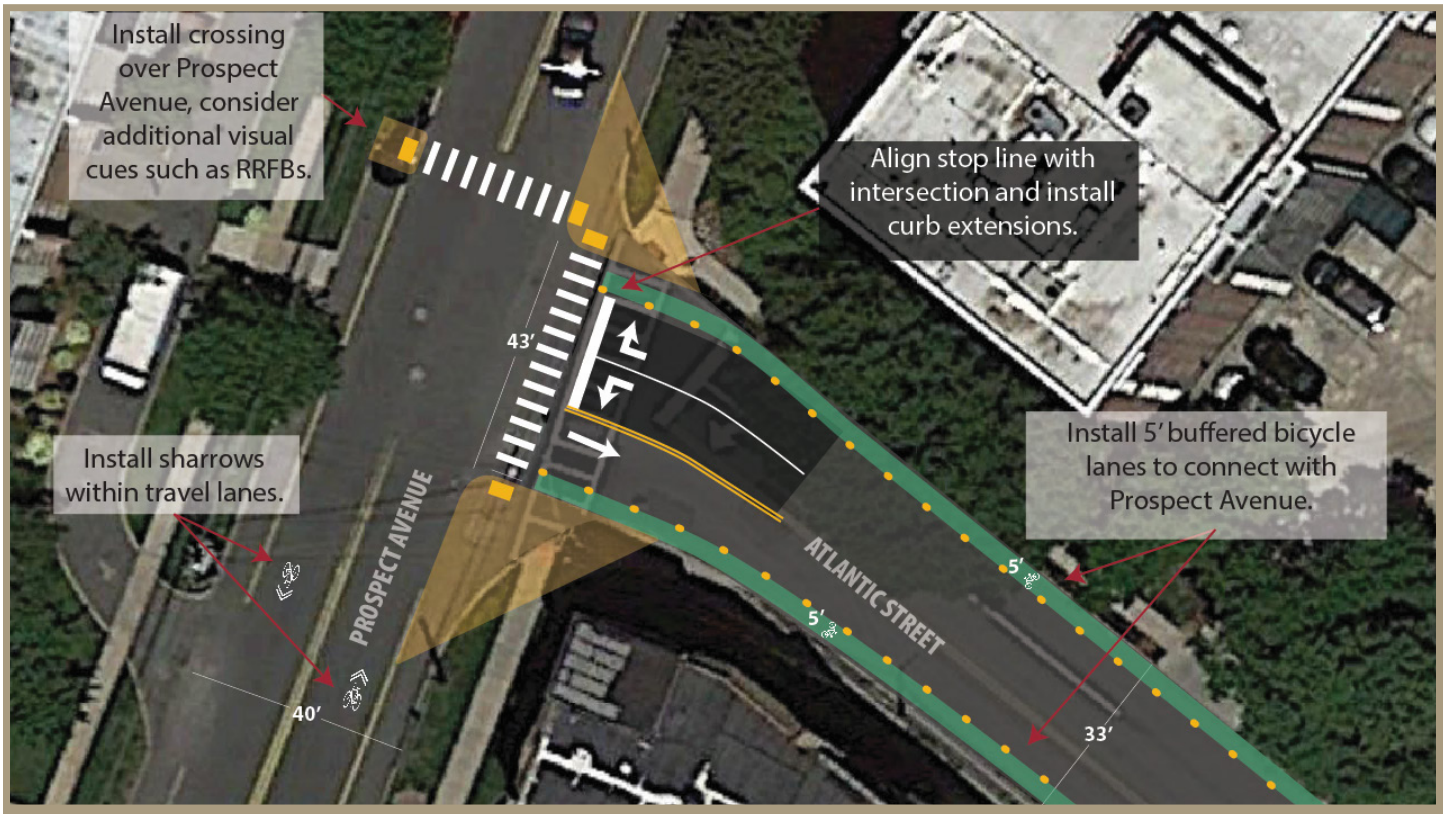


Figure 74. Atlantic Street intersection and roadway improvements.

Beech Street

- Explore the road diet options detailed above including narrowing the travel lanes and installing a bicycle lane and sharrows.
- Improve safety at the intersection of Beech Street and Overlook Avenue (Figure 75):
  - Realign the Overlook Avenue intersection by installing curb extensions and moving the stop line closer to Beech Street;
  - Stripe a crosswalk over Beech Street with RRFBs to ensure drivers see pedestrians even during times when the sun makes visibility challenging;
  - Shorten the crosswalk by installing curb extensions on either side of Beech Street;
  - Stripe yellow "no parking" shoulders near the apartment driveway, across from Overlook Avenue intersection.
- Install pedestrian amenities along the corridor, including:
  - Pedestrian-oriented lighting, these could include banners displaying the high school mascot;
  - Provide planting strips along the buffer of the sidewalk and trees to provide shade, especially closer to the school.
- Explore opportunities to widen narrow sidewalks.
- Ensure all crosswalks are marked and upgrade all curb ramps to be ADA-compliant and angle them such that they direct pedestrians into the crosswalks rather than into the center of the intersection.
- Provide signage at the unwanted drop-off location at the front of the school that directs drivers to the intended drop-off location on the side of the school.
- Upgrade the traffic signal at Beech Street and First Street so that pedestrian signals are located at all four corners with countdowns that provide adequate crossing time; install ADA-compliant curb ramps at all four corners.

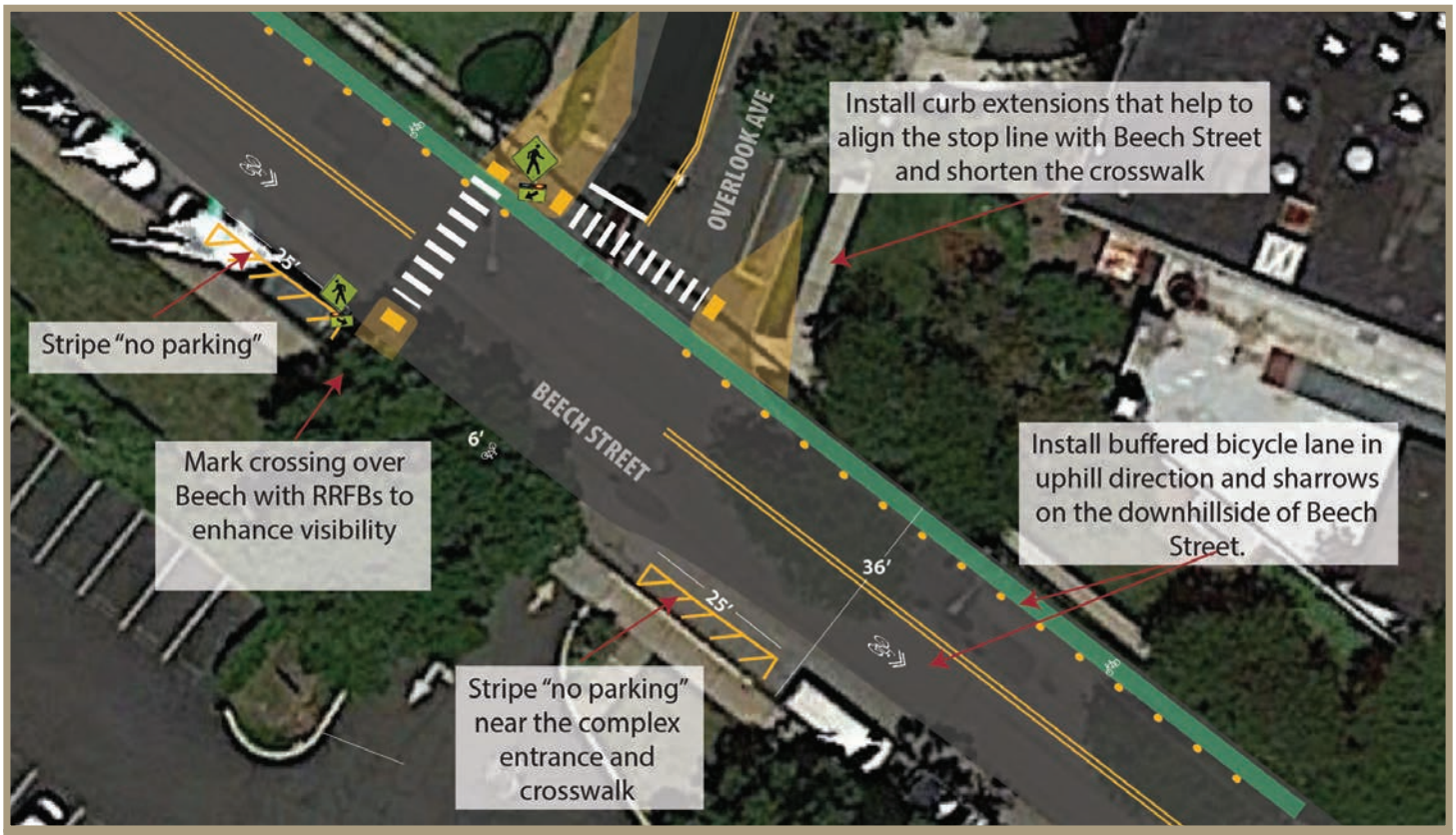


Figure 75. Beech Street and Overlook Avenue intersection improvements.

Conclusion

Prospect Avenue and Beech Street provide important connections between Hackensack's nearby residential areas and Hackensack High School and HUMC. With a few improvements, the corridor could become an attractive and safe location for walking and bicycling. HUMC visitors and employees and Hackensack High School students can more safely and conveniently reach their destinations by better balancing the needs of each travel mode. Local officials aware of the challenge sought the help of the CSTA Program to audit current conditions and recommend potential improvements. As part of this assistance, local stakeholders received a course on complete streets and guidance on how to audit a corridor.

Road diets, continuous sidewalks, and bicycle infrastructure would greatly improve the walkability and bikeability of the area and encourage an increase in bicycling and walking trips. Changes to county roads will require approval and coordination with county officials. Additionally, the City can deploy demonstration projects to test for the suggested changes on municipal roadways along the corridor. The City of Hackensack can use the findings from the WCW as a starting point to help inform future complete streets plans citywide.

Appendix

A. Workshop Flyers

B. Workshop Agenda and Field Audit Form

C. Street Smart NJ Campaign Resources

D. Potential Funding Resources

E. Design Resources

A. Workshop Flyers

City of Hackensack
Walkable Community Workshop

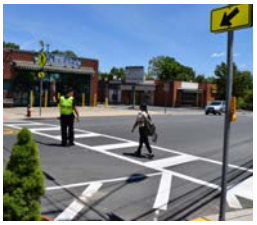
ONLINE MEETING TUESDAY, JULY 7, 2020 10:00AM TO NOON

HACKENSACK IS INTERESTED in improving pedestrian connections along Prospect Avenue and Beech Street near the Hackensack High School and Hackensack University Medical Center. Workshop participants will learn to identify safety concerns for pedestrians and discuss possible solutions. The suggestions made during the workshop will be compiled into a final report along with recommendations to make walking a safer and more attractive option for residents of all ages and abilities.

Please join us in a virtual meeting to learn about making Hackensack's streets safer for pedestrians and provide your feedback! The meeting is open to all, pre-registration is required.

Register here: https://go.rutgers.edu/HackensackWCW

For more information, email: heaslya@tcnj.edu



The Complete Streets Technical Assistance Program is a collaboration between Sustainable Jersey, the Voorhees Transportation Center at Rutgers University, and the North Jersey Transportation Planning Authority. Funded by the NJTPA, the program is designed to support municipal government efforts to advance complete streets initiatives.

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

SUSTAINABLE JERSEY CERTIFIED

RUTGERS

Ciudad de Hackensack

Curso Práctico: Comunidades Transitables

REUNIÓN VIRTUAL MARTES, JULIO 7, 2020 10:00AM A MEDIODÍA

HACKENSACK ESTÁ INTERESADO en mejorar las conexiones peatonales a lo largo de Prospect Avenue y Beech Street cerca de la escuela secundaria y el Centro Médico de Hackensack. Los participantes aprenderán a identificar preocupaciones de seguridad para los peatones y a hablar de posibles soluciones. Las sugerencias hechas durante el taller se compilarán en un informe final junto con recomendaciones para hacer que caminar sea una opción más segura y atractiva para residentes de todas las edades y capacidades.

Por favor únete a nosotras en una reunión virtual para aprender cómo hacer que las calles de Hackensack sean más seguras para peatones y dar su opinión! La reunión está abierta a todos, pero se requiere inscripción previa.

Regístrese aquí: https://go.rutgers.edu/HackensackWCW

Para más información, envíe un correo electrónico: heaslya@tcnj.edu

El programa de asistencia técnica de calles completas es una colaboración entre Sustainable Jersey, el Voorhees Transportation Center de Rutgers University, y el North Jersey Transportation Planning Authority (NJTPA). Financiado por el NJTPA, el programa está diseñado para apoyar los esfuerzos del gobierno municipal para avanzar las iniciativas de calles completas.

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

SUSTAINABLE JERSEY CERTIFIED

RUTGERS

City of Hackensack
Walkable Community Meeting

ONLINE MEETING TUESDAY AUGUST 18, 2020 2:00 to 3:00 PM

HACKENSACK IS INTERESTED in improving pedestrian along Prospect Avenue and Beech Street near the Hackensack High School and Hackensack University Medical Center. On July 7, 2020 a virtual public workshop gave participants the opportunity to analyze the area, discuss pedestrian safety concerns, and consider possible solutions. Based on this input, the study team developed recommendations that aim to make walking a safer and more attractive option for residents of all ages and abilities. Your feedback is needed to help us finalize these recommendations.

Please join us in a virtual meeting to learn about the findings, view the initial design concepts, and provide your feedback! The meeting is open to all, but pre-registration is required.

Register here: https://go.rutgers.edu/HackensackWCW2

For more information, email: heaslya@tcnj.edu

The Complete Streets Technical Assistance Program is 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 is designed to support municipal government efforts to advance complete streets initiatives.

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY SUSTAINABLE JERSEY CERTIFIED RUTGERS

B. Workshop Agenda and Field Audit Form

CITY OF HACKENSACK
WALKABLE COMMUNITY WORKSHOP
PROSPECT AVE & BEECH ST

July 7, 2020 | 10:00 AM to NOON

VIRTUAL WORKSHOP AGENDA

10:00 am **Welcome and Walkable Community Presentation**
The Complete Streets Technical Assistance project team will lead a presentation for town employees, residents, business owners and employees about what to look for when auditing walking and biking infrastructure.

11:00 am **Virtual Walking Audit**
Participants will virtually walk the corridor using Google Street View, assessing the existing streets and sidewalks and identifying issues to overcome to provide safer conditions for pedestrians and bicyclists.

11:45 am **Debrief and Next Steps**
Participants will share recommendations to improve the safety, convenience, and comfort of the walking environment based upon what they observed during the walking audit.

12:00 pm **Adjourn**

The Complete Streets Technical Assistance Program is a collaboration between Sustainable Jersey, the Voorhees Transportation Center at Rutgers University, and the North Jersey Transportation Planning Authority. Funded by the NJTPA, the program is designed to support municipal government efforts to advance complete streets initiatives.

WALK AUDIT

July 7, 2020 | 10:00 AM to NOON

Contact

Person Completing: _____

Email: _____

Phone: _____

Section 1: Prospect Avenue from Essex Street to Thompson Street

Design

How many lanes are there?

Are there crosswalks?

What is the speed limit?

Is there a median?

Driver Behavior

Circle all that apply:

a. Speeding
b. Blocking crosswalk
c. Not stopping for pedestrians
d. Double parking
e. Loud music
f. Loud engine
g. Not stopping for traffic control

Sidewalk Condition

Are sidewalks present?

No One Side (Which?) Both Sides

Any problems you observed:

a. Sidewalks or paths started and stopped, where?

b. Sidewalks were broken or cracked, where?

c. Sidewalk slope problems, where?

d. Sidewalks were blocked with parked cars, signs, shrubs, etc., where?

e. Sidewalks not wide enough, where?

f. Sight obstructions, where?

Curb Cuts/Ramps	**Circle all that apply:** a. Missing b. Non ADA compliant curb cuts/ramps (too steep, not passable, etc.) c. Aligned with crosswalk: yes or no d. Truncated domes present: yes or no e. Truncated domes placed correctly: yes or no f. Curb extensions: yes or no g. Other concerns:
Signage	**Streets are labeled**: Excellent Average Poor None **Pedestrian oriented directions**: Excellent Average Poor None **Car oriented directions**: Excellent Average Poor None
Parking	Side 1 ☐ Yes: Parallel or Angled ☐ No Side 2 ☐ Yes: Parallel or Angled ☐ No
Amenities	**Check all that apply:** ☐ Bench ☐ Trash Can ▪ Overflowing? Yes or No ☐ Bus shelter ☐ Bicycle Racks
Lighting	☐ Overhead cobra ☐ Historic ☐ Pedestrian oriented Is there lighting over the crosswalk? ☐ Yes ☐ No

Trees

- ☐ Frequent, good shape
- ☐ Infrequent, good shape
- ☐ Frequent, poor shape
- ☐ Infrequent, poor shape
- ☐ Mostly empty tree wells
- ☐ No tree wells

Additional Notes:

Section 2: Prospect Avenue from Thompson Street to Beech Street

Design

How many lanes are there?

Are there crosswalks?

What is the speed limit?

Is there a median?

Driver Behavior

Circle all that apply:

a. Speeding
b. Blocking crosswalk
c. Not stopping for pedestrians
d. Double parking
e. Loud music
f. Loud engine
g. Not stopping for traffic control

Sidewalk Condition

Are sidewalks present?

No **One Side (Which?)** **Both Sides**

Any problems you observed:

a. Sidewalks or paths started and stopped, where?
b. Sidewalks were broken or cracked, where?
c. Sidewalk slope problems, where?
d. Sidewalks were blocked with parked cars, signs, shrubs, etc., where?
e. Sidewalks not wide enough, where?
f. Sight obstructions, where?

Curb

Circle all that apply:

a. Missing
b. Non ADA compliant curb cuts/ramps (too steep, not passable, etc.)
c. Aligned with crosswalk: yes or no
d. Truncated domes present: yes or no

e. Truncated domes placed correctly: yes or no

f. Curb extensions: yes or no

g. Other concerns:

Signage

Streets are labeled: Excellent Average Poor None

Pedestrian oriented directions: Excellent Average Poor None

Car oriented directions: Excellent Average Poor None

Parking

Side 1

- ☐ Yes: Parallel or Angled
- ☐ No

Side 2

- ☐ Yes: Parallel or Angled
- ☐ No

Amenities

Check all that apply:

- ☐ Bench
- ☐ Trash Can
  - Overflowing? Yes or No
- ☐ Bus shelter
- ☐ Bicycle Racks

Lighting

- ☐ Overhead cobra
- ☐ Historic
- ☐ Pedestrian oriented

Is there lighting over the crosswalk?

- ☐ Yes
- ☐ No

Trees

- ☐ Frequent, good shape
- ☐ Frequent, poor shape
- ☐ Mostly empty tree wells
- ☐ Infrequent, good shape
- ☐ Infrequent, poor shape
- ☐ No tree wells

Additional Notes:

_____

_____

_____

Section 3: Atlantic Street

Design

How many lanes are there?

Are there crosswalks?

What is the speed limit?

Is there a median?

Driver Behavior

Circle all that apply:

a. Speeding
b. Blocking crosswalk
c. Not stopping for pedestrians
d. Double parking
e. Loud music
f. Loud engine
g. Not stopping for traffic control

Sidewalk Condition

Are sidewalks present?

No One Side (Which?) Both Sides

Any problems you observed:

a. Sidewalks or paths started and stopped, where?
b. Sidewalks were broken or cracked, where?
c. Sidewalk slope problems, where?
d. Sidewalks were blocked with parked cars, signs, shrubs, etc., where?
e. Sidewalks not wide enough, where?
f. Sight obstructions, where?

Curb

Circle all that apply:

a. Missing
b. Non ADA compliant curb cuts/ramps (too steep, not passable, etc.)
c. Aligned with crosswalk: yes or no
d. Truncated domes present: yes or no

e. Truncated domes placed correctly: yes or no

f. Curb extensions: yes or no

g. Other concerns:

Signage

Streets are labeled: Excellent Average Poor None

Pedestrian oriented directions: Excellent Average Poor None

Car oriented directions: Excellent Average Poor None

Parking

Side 1	Side 2
☐ Yes: Parallel or Angled	☐ Yes: Parallel or Angled
☐ No	☐ No

Amenities

Check all that apply:

☐ Bench	☐ Bus shelter
☐ Trash Can ▪ Overflowing? Yes or No	☐ Bicycle Racks

Lighting

☐ Overhead cobra	Is there lighting over the crosswalk?
☐ Historic	☐ Yes
☐ Pedestrian oriented	☐ No

Trees

☐ Frequent, good shape	☐ Infrequent, good shape
☐ Frequent, poor shape	☐ Infrequent, poor shape
☐ Mostly empty tree wells	☐ No tree wells

Additional Notes:

_____

_____

_____

Section 4: Beech Street		
Design	How many lanes are there?	Are there crosswalks?
	What is the speed limit?	Is there a median?
Driver Behavior	**Circle all that apply:**	
	a. Speeding	e. Loud music
	b. Blocking crosswalk	f. Loud engine
	c. Not stopping for pedestrians	g. Not stopping for traffic control
	d. Double parking	
Sidewalk Condition	**Are sidewalks present?**	
	No One Side (Which?)	Both Sides
	Any problems you observed:	
	a. Sidewalks or paths started and stopped, where?	
	b. Sidewalks were broken or cracked, where?	
	c. Sidewalk slope problems, where?	
	d. Sidewalks were blocked with parked cars, signs, shrubs, etc., where?	
	e. Sidewalks not wide enough, where?	
	f. Sight obstructions, where?	
Curb	**Circle all that apply:**	
	a. Missing	
	b. Non ADA compliant curb cuts/ramps (too steep, not passable, etc.)	
	c. Aligned with crosswalk: yes or no	
	d. Truncated domes present: yes or no	

e. Truncated domes placed correctly: yes or no

f. Curb extensions: yes or no

g. Other concerns:

Signage

Streets are labeled: Excellent Average Poor None

Pedestrian oriented directions: Excellent Average Poor None

Car oriented directions: Excellent Average Poor None

Parking

Side 1	Side 2
☐ Yes: Parallel or Angled	☐ Yes: Parallel or Angled
☐ No	☐ No

Amenities

Check all that apply:

☐ Bench	☐ Bus shelter
☐ Trash Can ▪ Overflowing? Yes or No	☐ Bicycle Racks

Lighting

☐ Overhead cobra	Is there lighting over the crosswalk?
☐ Historic	☐ Yes
☐ Pedestrian oriented	☐ No

Trees

☐ Frequent, good shape	☐ Infrequent, good shape
☐ Frequent, poor shape	☐ Infrequent, poor shape
☐ Mostly empty tree wells	☐ No tree wells

Additional Notes:

_____

_____

Section 5: First Street

Design

How many lanes are there?

Are there crosswalks?

What is the speed limit?

Is there a median?

Driver Behavior

Circle all that apply:

a. Speeding

b. Blocking crosswalk

c. Not stopping for pedestrians

d. Double parking

e. Loud music

f. Loud engine

g. Not stopping for traffic control

Sidewalk Condition

Are sidewalks present?

No One Side (Which?) Both Sides

Any problems you observed:

a. Sidewalks or paths started and stopped, where?

b. Sidewalks were broken or cracked, where?

c. Sidewalk slope problems, where?

d. Sidewalks were blocked with parked cars, signs, shrubs, etc., where?

e. Sidewalks not wide enough, where?

f. Sight obstructions, where?

Curb

Circle all that apply:

a. Missing

b. Non ADA compliant curb cuts/ramps (too steep, not passable, etc.)

c. Aligned with crosswalk: yes or no

d. Truncated domes present: yes or no

e. Truncated domes placed correctly: yes or no

f. Curb extensions: yes or no

g. Other concerns:

Signage

Streets are labeled: Excellent Average Poor None

Pedestrian oriented directions: Excellent Average Poor None

Car oriented directions: Excellent Average Poor None

Parking

Side 1	Side 2
☐ Yes: Parallel or Angled	☐ Yes: Parallel or Angled
☐ No	☐ No

Amenities

Check all that apply:

- ☐ Bench
- ☐ Bus shelter
- ☐ Trash Can
  - Overflowing? Yes or No
- ☐ Bicycle Racks

Lighting

- ☐ Overhead cobra
- ☐ Historic
- ☐ Pedestrian oriented

Is there lighting over the crosswalk?

- ☐ Yes
- ☐ No

Trees

- ☐ Frequent, good shape
- ☐ Infrequent, good shape
- ☐ Frequent, poor shape
- ☐ Infrequent, poor shape
- ☐ Mostly empty tree wells
- ☐ No tree wells

Additional Notes:

_____

_____

Final Questions

How safe did this area feel?	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
How afraid would you be to walk ALONE in the area during ***daytime***?	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
How afraid would you be to walk ALONE in the area during ***night***?	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
How well cared for did this area feel?	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Additional Notes:

C. Street Smart NJ Campaign Resources

STREET SMART

STREET SMART NJ FACT SHEET

What is Street Smart NJ?

Street Smart NJ is a public education, awareness and behavioral change pedes- trian safety campaign created by the North Jersey Transportation Planning Authority (NJTPA). The campaign combines grassroots public awareness efforts with social media, public outreach efforts and law enforcement to address pedestrian safety.

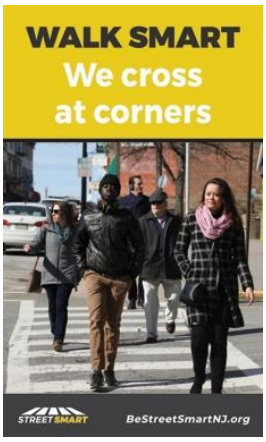
There are a number of different ways communities can participate. Nearly all campaigns enlist the involvement of community leaders, businesses and organizations and ask police to step up enforcement of pedestrian safety laws. Some campaigns have an evaluation component, including pre- and post-campaign surveys and observations at crash prone locations. Smaller campaigns may be limited to handing out information at community events and dis- playing signage around town.

More than 140 communities have participated in Street Smart in some way since the program's inception in 2013. NJTPA's goal is to continue growing the program across the state. Communities everywhere are invited to use the strategies and materials on the Street Smart website, bestreetsmartnj.org, to create their own campaigns. The website includes a 'How To' guide, printable materials, social media posts and a sample press release among other resources.

NJTPA staff are available to sit down with interested towns to discuss how to bring Street Smart NJ to their community.

BeStreetSmartNJ.org

StreetSmartNJ **NJStreetSmart**



Why do we need Street Smart?

Part of the impetus behind Street Smart NJ was that the Federal Highway Administration identified New Jersey as a pedestrian "focus" state due to the high incidence of pedestrian injuries and fatalities. In 2019, 179 pedestrians died as a result of pedestrian-vehicle crashes in New Jersey. From 2015 to 2019, 876 pedestrians were killed and thousands were injured on New Jersey's roadways. That translates to one death every two days and 12 injuries daily.

Campaign Messages

The Street Smart NJ campaign urges pedestrians and motorists to keep safety in mind when traveling New Jersey's roads. The program's core message is "Walk Smart – Drive Smart – Be Street Smart" with specific messages including We look before crossing; Heads up, phones down; We slow down for safety; We stop for people – it's the law; We use crosswalks; We cross at corners; We cross at the light; and We wait for the walk. The NJTPA has developed pedestrian safety tip cards, in English and Spanish, for public distribution built around the messages. The messages are also printed on posters, banners, street signs, coasters, tent cards and coffee sleeves.

Police Enforcement

One of the keys to Street Smart NJ's success is law enforcement participation. Police officers engage and educate, rather than simply issue citations. In many communities that participate in Street Smart NJ police have issued warnings rather than citations and even rewarded good behavior with coupons, gift cards and free t-shirts. Street Smart NJ public awareness efforts are often conducted in conjunction with this increased enforcement.

Results

Evaluations of previous Street Smart NJ campaigns have shown positive results. There was a 60 percent improvement in drivers stopping for people crossing before turning right at a red light or stop sign and 45 percent reduction in drivers running a red light or stop sign, based on an analysis of eight campaigns conducted in 2018 and 2019. There was also a 40 percent improvement in drivers stopping for pedestrians before turning at a green light and a 21 percent reduction in the number of people crossing unsafely against a signal or outside a crosswalk. The full report can be viewed at **BeStreetSmartNJ.org**.

D. Potential Funding Resources

This appendix provides a list of common 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. Links to two online databases with additional funding sources has also been included. Grants listed are highly competitive and grant application requirements should be carefully reviewed before making the decision to apply. From the reviewers' perspective, application review is time-consuming and often applications will not be reviewed if all the required elements are not received by the published deadline. The most successful applications tell the story of the populations most in need of the proposed improvements, especially disadvantaged communities or vulnerable groups such as seniors. Applications should use compelling pictures, data and other documentation, and indicate how and why improvements are prioritized.

New Jersey Department of Transportation

The Division of Local Aid and Economic Development at the New Jersey Department of Transportation (NJDOT) provides funds to local public agencies such as municipal governments for construction projects to improve the state's transportation system. The state's Transportation Trust Fund and the federal Safe, Accountable, Flexible, Efficient Transportation Equity Act — A Legacy for Users (SAFETEA-LU) legislation provides the opportunity for funding assistance to local governments for road, bridge and other transportation projects. NJDOT and the three metropolitan planning organizations that cover the state administer federal aid programs. 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 municipalities in New Jersey 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://www.state.nj.us/transportation/business/localaid/municaid.shtm

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://www.state.nj.us/transportation/business/localaid/countyaid.shtm

Bikeways: This program funds bicycle projects that create new bike path mileage, working towards NJDOTs goal of 1,000 miles of dedicated bikeways in New Jersey. Special consideration will be given to bikeways physically separated from vehicle traffic, but on-road bike lanes or other bike routes are also eligible for funding. Learn more here: https://www.state.nj.us/transportation/business/localaid/bikewaysf.shtm

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, in order to promote increased usage of transit by all segments of the population and decrease private vehicle use. Learn more here: https://www.state.nj.us/transportation/business/localaid/safe.shtm

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 Commissioner of Transportation and the inter-agency Transit Village Task Force in order to be eligible to apply. Learn more here: https://www.state.nj.us/transportation/business/localaid/transitvillagef.shtm

Other NJDOT Assistance

Bicycle and Pedestrian Planning Assistance: NJDOT offers Local Technical Assistance (LTA) funding through the Office of Bicycle and Pedestrian Programs. Under this program, on-call consultants are paired with communities to complete a variety of projects including bicycle and pedestrian circulation and master plan studies, safety assessments, trail feasibility studies, bikeway plans, and improvement plans for traffic calming projects. For more information, please contact the state bicycle and pedestrian program coordinator at bikeped@dot.nj.gov

Federal Aid Infrastructure Grant Programs

Safe Routes to School: The Safe Routes to School Program provides federal funds for infrastructure projects that enable and encourage children in grades K-8, 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 Street Policy and Transit Village designation. Learn more here: https://njdotlocalaidrc.com/federally-funded-programs/safe-routes-to-school

Transportation Alternatives Program: The Transportation Alternatives Program 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 and are a designated Transit Village. Learn more here: https://njdotlocalaidrc.com/federally-funded-programs/transportation-alternatives

New Jersey Department of Environmental Protection: The Recreational Trails 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. Learn more here: https://www.nj.gov/dep/greenacres/trails/grants.html

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 here: http://www.sustainablejersey.com/

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.sustainablejerseyschools.com

New Jersey Healthy Communities Network: The New Jersey Healthy Communities Network is a partnership of grantees, funders and advocate organizations who seek to have collective impact on community well-being to support healthy eating and active living. The Community Grant Program provides opportunities to develop healthy environments for people to live, work, learn and play by funding policies, projects and programs that support walking and bicycling. Learn more here: https://www.njhcn.org/

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:

Sustainable Jersey Grants Portal: https://www.sustainablejersey.com/grants/

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

Federal Funding

1. US Department of Transportation (USDOT)

a. Better Utilizing Investments to Leverage Development (BUILD, replaced TIGER)

2. Federal Highway Administration (FHWA) Programs

a. Congestion Mitigation and Air Quality Improvement (CMAQ)

b. Surface Transportation Program (STP)

c. Highway Safety Improvement Program (HSIP)

d. National Highway Performance Program (NHPP)

e. Transportation Alternatives Program (TAP)

f. Safe Routes to School (SRTS)

g. Local Safety / High Risk Rural Roads Program (HRRR)

h. National Highway System (NHS)

i. Recreational Trails Program - Including hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles.

j. Federal Lands Access Program (FLAP) - The Access Program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.

k. Emergency Relief - Repair or reconstruction after national disaster, can include bicycle and pedestrian facilities

3. National Highway Traffic Safety Association

a. NHTSA Section 402 State Highway Safety Program

b. NHTSA Section 405 Non-Motorized Safety Grants

4. Federal Transit Administration Programs

a. Urbanized Area Formula Program (UZA) - Public transit and bike routes to transit

b. Fixed Guideway Capital Investment Grants - Transit systems and bike parking

c. Bus and Bus Facilities Formula Grants - Includes bike parking facilities

d. Enhanced Mobility of Seniors and Individuals with Disabilities - Access to transit facilities for seniors

State Funding

5. Municipal Aid ($140m)

6. County Aid ($150m)

7. Local Bridges ($44m)

8. Safe Streets to Transit ($1m)

9. Transit Village ($1m)

10. Bikeways ($1m)

11. Local Aid Infrastructure Fund ($7.5m)

12. Safe Corridors Highway Safety Funds

13. Urban Aid ($10m)

14. New Jersey Trails Program (Department of Environmental Protection)

15. Other Funding Sources

16. Regional/Local CMAQ Initiatives Program (NJTPA)

17. NJ Division of Highway Traffic Safety

18. Open Space &Farmland Preservation

19. Homeland Security Transit Security Grant Program (TSGP)

Other Sources

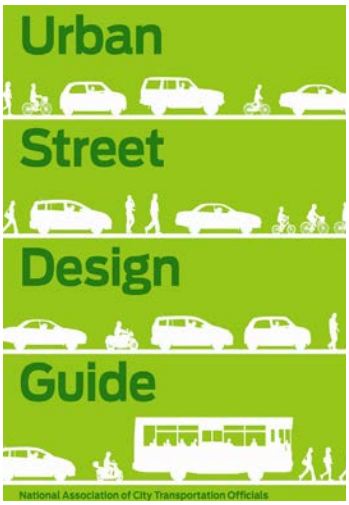
20. County Capital Program

21. Municipal Capital Programs

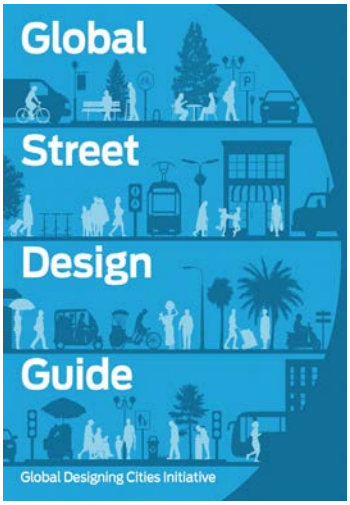
22. Foundations

E. Design Resources

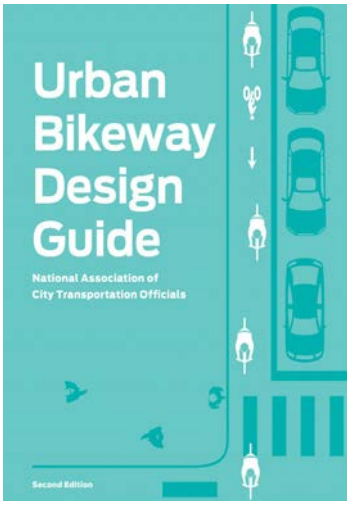
NACTO Guides



Urban Street Design Guide

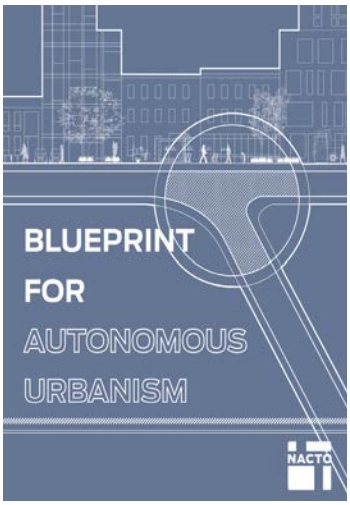


Global Street Design Guide



Urban Bikeway Design Guide

Transit Street Design Guide

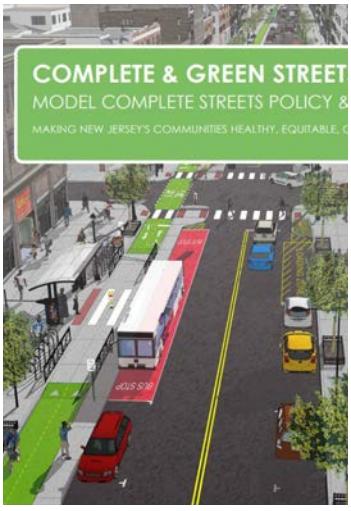


Blueprint for Autonomous Urbanism

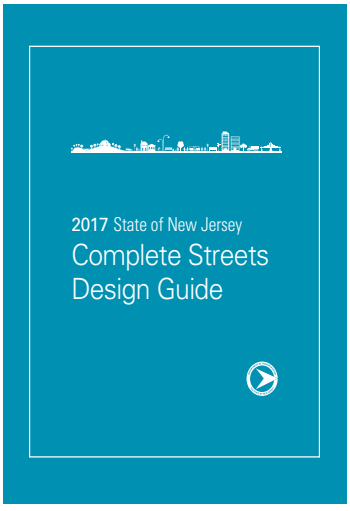
Urban Street Stormwater Guide

Bike Share Station Siting Guide

NJDOT Guides



Complete & Green Streets for All: Model Policy and Guide

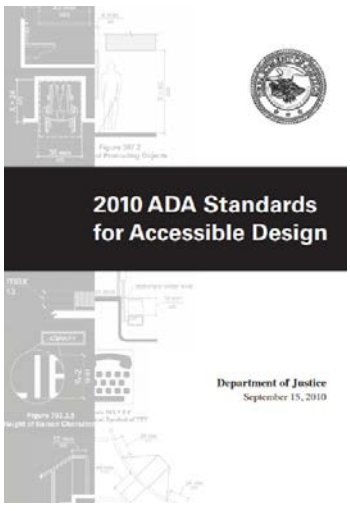


2017 State of New Jersey Complete Streets Design Guide

A Guide to Policy Development

A Guide to Creating A Complete Streets Implementation Plan

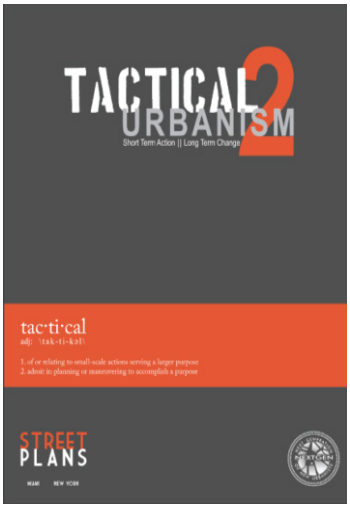
ADA Guidelines



ADA Standards for Accessible Design

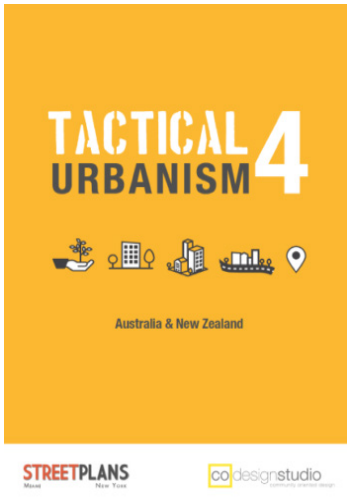
Tactical Urbanism Guides

Tactical Urbanism 1



Tactical Urbanism 2

Tactical Urbanism 3



Tactical Urbanism 4

Tactical Urbanism 5

Tactical Urbanism

Tactical Urbanist's Guide to Materials and Design Version 1.0

The Open Streets Guide

Mercado: Lessons from 20 Markets Across South America

Public Space Stewardship Guide