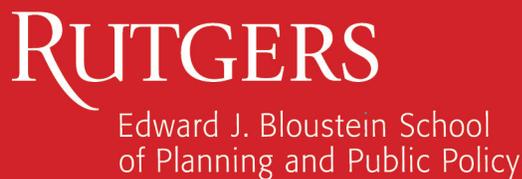




# Bernards Avenue Walkable Community Workshop

Borough of Bernardsville, Somerset County, NJ

2019



## About The Report

This report has been prepared as part of the North Jersey Transportation Planning Authority (NJTPA) Complete Streets Technical Assistance Program, with financing by the Federal Transit Administration and the Federal Highway Administration of the U.S. Department of Transportation. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or its use thereof.

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

## The Alan M. Voorhees Transportation Center (VTC)

The Alan M. Voorhees Transportation Center is a national leader in the research and development of innovative transportation policy. Located within the W. 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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### **North Jersey Transportation Planning Authority**

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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

This report includes a number of recommendations to promote walking in the Bernards Avenue section of Bernardsville. The most significant obstacle to walkability in the study area are the lack of sidewalks and connectivity along the majority of the corridor. Unfortunately, the lack of sidewalks along the corridor forces pedestrians to walk in the street where they compete for space with large commercial trucks serving a nearby construction company and quarry. To address these issues, this report calls for short-term installation of temporary on-street sidewalks to establish a safe and dedicated walking space. Installation of these temporary on-street sidewalks will also serve to narrow the space usable to vehicles, resulting in slower speeds. The long-term recommendation is to install curbs and sidewalks along the corridor. Other recommendations listed in the report include the addition of high-visibility crosswalks, stop-bars, updated road signage, and bicycle accommodations, as well as careful consideration of the installation of green infrastructure to assist with both stormwater management and traffic calming.

The Borough of Bernardsville submitted an application to the North Jersey Transportation Planning Authority (NJTPA)'s Complete Streets Technical Assistance (CSTA) Program in and was one of nine communities selected to receive up to \$10,000 in technical assistance. Bernardsville officials requested a Walkable Community Workshop (WCW) to explore how they could make the community safer and more attractive to people walking and biking.

Municipal employees and borough stakeholders participated in a half-day workshop on December 6, 2018 to learn the benefits of complete streets and proven strategies for making streets safer for the most vulnerable users – pedestrians and bicyclists.

The workshop was led by staff from the Alan M. Voorhees Transportation Center (VTC) at Rutgers, The State University of New Jersey; and supported by staff from Sustainable Jersey (SJ) and the NJTPA.

The workshop was conducted in two parts, an hour-long classroom-style training at Sacred Heart Chapel, and an on-site walking audit along three neighborhood streets: Bernards Avenue, West Street, and Prospect Street (Figure 1). The aforementioned streets link Kiwanis Park and a residential neighborhood to Mt. Airy Road (County Route 525), which in turn provides a connection to downtown Bernardsville, the NJ TRANSIT train station, and other parts of the municipality. Due to the presence of nearby railroad tracks and a brook, Mt. Airy Road is the only connection across town.

The lessons learned during the half-day workshop can be applied to other municipal-owned roads in Bernardsville. The field audit form can be found in this report's appendices and can be repurposed for walk audits of other corridors within the borough. Another resource the NJTPA offers communities is Street Smart NJ, a pedestrian safety campaign that works to raise awareness of New Jersey's pedestrian-related laws and change the behaviors that contribute to pedestrian-vehicle crashes. StreetSmart NJ campaign information, along with a list of potential funding resources, can also be found in the appendices.



Figure 1. Looking west on Bernards Avenue during the audit.

# 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, which was a need identified through the Together North Jersey consortium. Complete streets are roads designed for all users, including vehicles, people walking, bicyclists and public transportation. Sustainable Jersey (SJ) and the Alan M. Voorhees Transportation Center (VTC) at Rutgers, The State University of New Jersey, were retained to provide technical assistance for this program. The CSTA Program was designed to support nine municipal governments seeking to implement complete streets in their communities. Municipalities were selected for the program based on the following criteria: the need for technical assistance, commitment to implementation, stakeholder support, and the strength of the municipal team.

The Bernards Avenue neighborhood is on the southern side of an active NJ TRANSIT rail line. In its application to the CSTA Program, the Borough of Bernardsville stated that in the past, it was easy to walk from the Bernards Avenue neighborhood to the northern side of the rail line using a walking path that connected Mine Avenue to the Bernardsville Train Station by crossing the tracks at-grade. However, many years ago, the path was removed due to safety concerns. Removal of the connection has caused residents of the neighborhood to feel isolated, as the train station, downtown business district, and neighborhood schools all lie to the north of the tracks. Today, residents must take a longer route by walking along residential roads to Mt. Airy Road (County Route 525) to get to the northern side of the tracks. While Somerset County recently rebuilt Mt. Airy Road with improved sidewalks, ramps compliant with the Americans with Disabilities Act (ADA), high-visibility crosswalks, and shoulders, few of the residential roadways feeding to Mt. Airy Road have these features. Where these features are present within the Bernards Avenue neighborhood, they are too infrequent, inadequate, and disconnected.

An additional challenge is the truck traffic generated by multiple construction contractors and landscapers operating out of a light industrial area located deep inside the neighborhood along its western edge, with the only access provided by residential streets. Local residents report that the trucks frequently speed down Bernards Avenue. Next to the construction firm is Kiwanis Park, which hosts popular Little League games and attracts large amounts of vehicles and pedestrians (Figure 2). During baseball season, drivers reportedly speed along Bernards Avenue through the neighborhood to games at Kiwanis Park. Bernards Avenue does not have sidewalks, which presents a number of safety and mobility challenges as pedestrians and motorists compete for limited space along the roadway.



Figure 2. Looking south towards Kiwanis Park.

The Borough of Bernardsville requested a WCW to help identify potential ways to improve walkability in the neighborhood. The municipality expressed its hope that the improvements would better link residents to the rest of borough, encourage walking, and improve safety for pedestrians and bicyclists. Additionally, the borough stated that the WCW would serve as a tool to encourage, educate, and inspire local residents to promote road and safety improvements and understand and empathize with the challenges pedestrians face in the area.

In October 2018, the CSTA project team worked with municipal officials to identify and select a corridor for the workshop (see “Walking Audit Location” section). The project team then encouraged the municipality to invite participants to the workshop and audit. The project team lead a half-day WCW in the neighborhood on December 6, 2018. The workshop included a presentation on complete streets, a walkability audit, and a debrief.

## What is a Complete Street?

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 (Figure 3). Complete streets should be tailored 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 induce a safer setting for students. Meanwhile, streets along transit routes will 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 be used to 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 down to 5 percent at 20 mph (Figure 4)<sup>1</sup>. Complete streets recognize that users of all transportation modes, whether it be car, bus, train, or taxi, at some point during their journey become a pedestrian. Creating a safer environment benefits everyone.



Figure 3. 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.

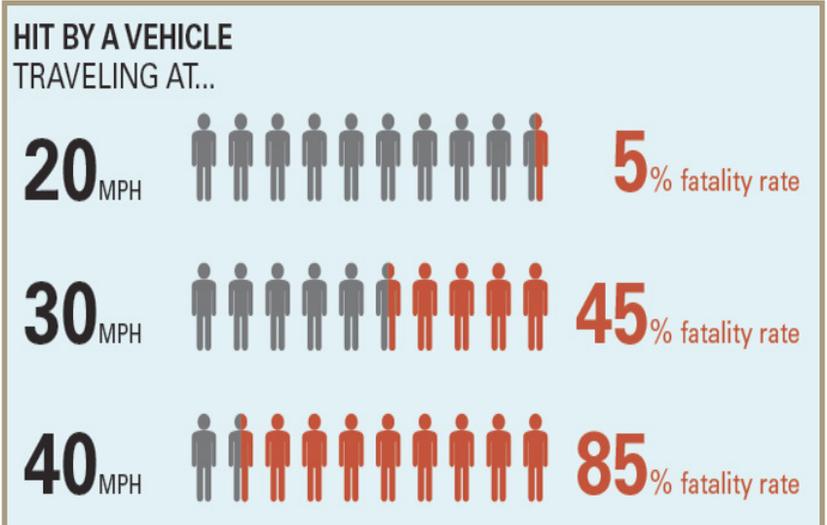


Figure 4. Graphic showing increased fatality rate as vehicle speeds increase.

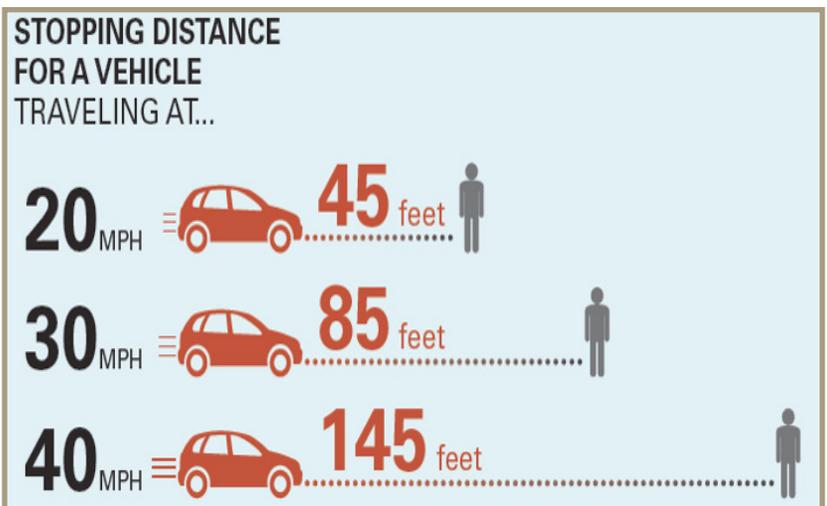


Figure 5. Graphic showing increased stopping distance as vehicle speeds increase.

1. Leaf, William A., and David F. Preusser. 1999. Literature review on vehicle travel speeds and pedestrian injuries. DOT HS 809 021. Washington, DC: U.S. Department of Transportation. <http://www.nhtsa.dot.gov/people/injury/research/pub/HS809012.html>.

## 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 creates mobility opportunities for everyone, including non-drivers, youth, and senior citizens (Figure 6). 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.

### Equity

Complete streets designs decrease the need for people to have automobiles to access 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.

### Health

Complete streets enhance opportunities for increased walking and bicycling which in turn leads to the numerous health benefits associated with increased physical activity (Figure 7). The Center for Disease Control (CDC) supports complete streets as a means to prevent obesity.

### 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 the quality of life thanks to reductions in noise and stress associated with congestion and crashes (Figure 8).



*Figure 6. When a street lacks accessible sidewalks and ramps, it is not complete.*



*Figure 7. Trails, such as this one in Monroe, New Jersey, can encourage exercise and lead to improved health.*



*Figure 8. 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 9)<sup>2</sup>.



Figure 9. 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 10).



Figure 10. Green infrastructure used to narrow the roadway and provide a shorter crossing distance for pedestrians.

## Complete Streets in New Jersey and Bernardsville

New Jersey is a leader in the Complete Streets movement. In 2009, the New Jersey Department of Transportation (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. 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, 153 municipalities have implemented complete streets policies affecting 3.8 million (44 percent) of the state's residents<sup>3</sup>.

Currently, Somerset County has a complete streets policy, however, Bernardsville does not.

2. "Complete Streets Case Study: Somerville, New Jersey," Alan M. Voorhees Transportation Center, 2016.

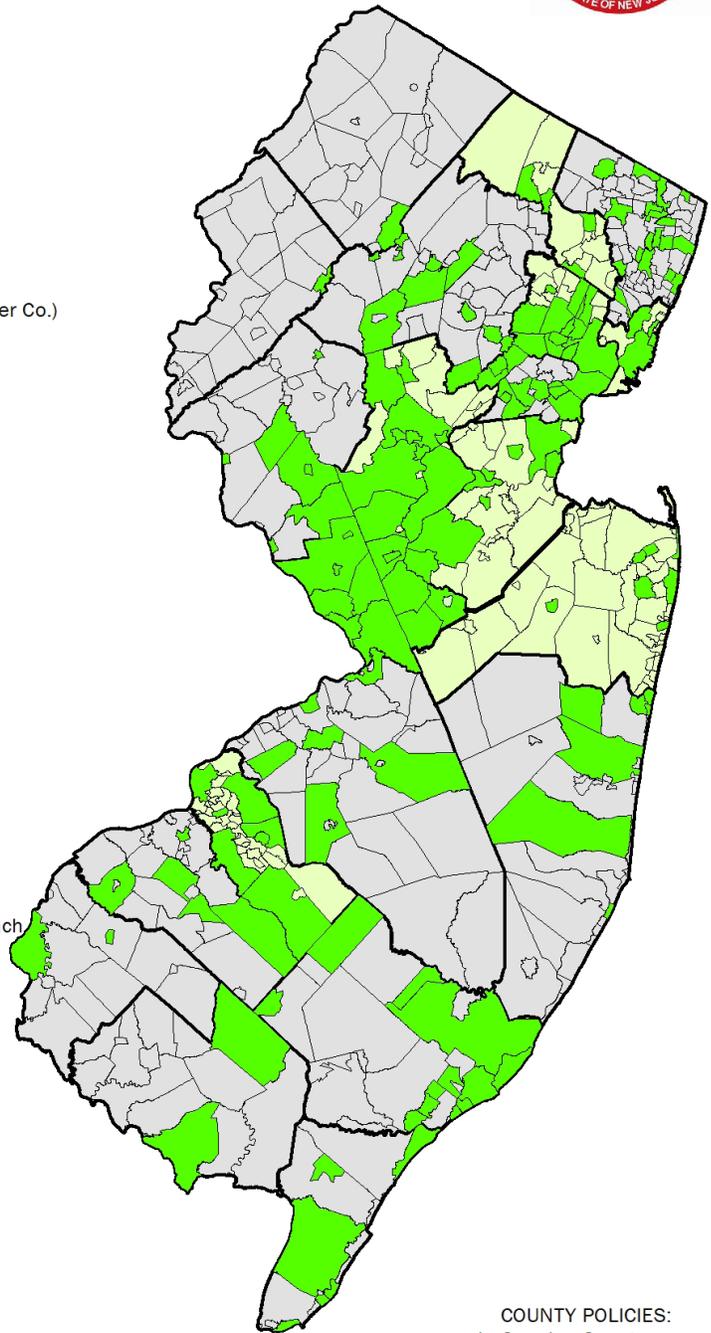
3. New Jersey Bicycle and Pedestrian Resource Center, "NJ Complete Streets Policy Atlas," 2018. <http://njbikeped.org/complete-streets-2/>.

# New Jersey Complete Streets Policies as of June 20, 2019



## MUNICIPAL POLICIES:

1. City of Asbury Park
2. City of Atlantic City
3. Borough of Bay Head
4. Township of Bedminster
5. Borough of Bergenfield
6. Berkeley Heights Township
7. Township of Bloomfield
8. Borough of Bloomingdale
9. Township of Bordentown
10. Borough of Bound Brook
11. Township of Bridgewater
12. City of Brigantine
13. Borough of Buena
14. City of Burlington
15. Borough of Caldwell
16. Borough of Califon
17. City of Camden
18. City of Cape May
19. Borough of Chatham
20. Township of Cherry Hill
21. Township of Chester
22. Township of Cranford
23. Township of Denville
24. Town of Dover
25. Township of Downe
26. Township of East Amwell
27. City of East Orange
28. Township of East Windsor
29. Borough of Eatontown
30. City of Egg Harbor
31. City of Elizabeth
32. Borough of Emerson
33. Township of Ewing
34. Borough of Fair Haven
35. Borough of Fanwood
36. Borough of Far Hills
37. Borough of Flemington
38. Borough of Fort Lee
39. Twnshp of Franklin (Hunterdon)
40. Twnshp of Franklin (Somerset)
41. Borough of Freehold
42. Borough of Frenchtown
43. City of Garfield
44. Borough of Gibbsboro
45. Borough of Glassboro
46. Borough of Glen Ridge
47. Township of Gloucester
48. City of Hackensack
49. Town of Hackettstown
50. Borough of Haddon Heights
51. Township of Hamilton
52. Town of Hammonton
53. Borough of Harvey Cedars
54. Borough of Haworth
55. Borough of Highland Park
56. Borough of Hightstown
57. Township of Hillsborough
58. City of Hoboken
59. Borough of Hopatcong
60. Borough of Hopewell
61. Township of Hopewell
62. Township of Irvington
63. City of Jersey City
64. Township of Lacey
65. Township of Lakewood
66. City of Lambertville
67. Township of Lawrence
68. Leonia Borough
69. City of Linden
70. City of Linwood
71. Township of Little Falls
72. Township of Livingston
73. City of Long Branch
74. Township of Long Hill
75. Borough of Madison
76. Township of Mantua
77. Borough of Manville
78. Township of Maplewood
79. City of Margate
80. Borough of Maywood
81. Township of Medford
82. Borough of Metuchen
83. Township of Middle
84. Township of Millburn
85. Borough of Milltown
86. Township of Monroe (Gloucester Co.)
87. Township of Montclair
88. Township of Montgomery
89. Borough of Montvale
90. Township of Moorestown
91. Town of Morristown
92. Borough of Mount Arlington
93. Borough of Netcong
94. City of New Brunswick
95. Borough of New Milford
96. Borough of New Providence
97. City of Newark
98. Borough of North Haledon
99. City of North Wildwood
100. City of Northfield
101. Borough of Northvale
102. City of Ocean City
103. Township of City of Orange
104. Pemberton Township
105. Borough of Pennington
106. Township of Pennsville
107. City of Perth Amboy
108. Township of Plainsboro
109. City of Pleasantville
110. Borough of Point Pleasant
111. Borough of Point Pleasant Beach
112. Borough of Pompton Lakes
113. Princeton
114. Borough of Ramsey
115. Township of Randolph
116. Borough of Raritan
117. Township of Raritan
118. Borough of Red Bank
119. Village of Ridgewood
120. Borough of River Edge
121. Township of River Vale
122. Township of Robbinsville
123. Borough of Roselle
124. Borough of Roselle Park
125. Borough of Rutherford
126. Township of Scotch Plains
127. Borough of Sea Bright
128. Town of Secaucus
129. City of Somers Point
130. Borough of Somerville
131. Township of South Brunswick
132. Township of S. Orange Village
133. City of Summit
134. Borough of Tenafly
135. Township of Toms River
136. City of Trenton
137. City of Union City
138. City of Ventnor
139. City of Vineland
140. Township of Voorhees



## COUNTY POLICIES:

1. Camden County
2. Essex County
3. Hudson County
4. Mercer County
5. Middlesex County
6. Monmouth County
7. Passaic County
8. Somerset County

- NJDOT Complete Streets Policy
- County Complete Streets Policies
- Municipal Complete Streets Policies

141. Township of West Orange
142. Township of West Windsor
143. Township of Westampton
144. Town of Westfield
145. Borough of Westwood
146. City of Wildwood
147. Township of Winslow
148. Borough of Woodbine
149. Township of Woodbridge
150. City of Woodbury
151. Borough of Woodstown
152. Township of Woolwich
153. Township of Galloway

Figure 11. Complete Streets Policies in New Jersey, as of June 20, 2019.

# Walking Audit Location

The Borough of Bernardsville is home to 7,800 residents and comprises an area of 13 square miles. The median age is 41.5, and 69 percent of residents have a college degree. The community enjoys an 85 percent homeownership rate, with an estimated median household income of \$128,333. Seventy percent of residents drive alone to work, while 9 percent use public transit, and 4 percent walk to work (US Census Bureau, 2017).

While most of Bernardsville is served by a network of winding rural roadways, the Bernards Avenue neighborhood comprises a street grid with multiple connections to Mt. Airy Road, a north-south corridor that connects the downtown to Interstate 287. The road has an annual average daily traffic (AADT) volume of 8,668, according to 2015 data from NJDOT. The other main thoroughfare in Bernardsville, Route 202 (Mine Brook Road), runs east-west and bisects the borough's downtown. Route 202 has an AADT of 14,258, according to 2011 NJDOT data. The borough's local retail and commercial services are clustered along Route 202.



Commuters can use the Bernardsville train station to access the NJ TRANSIT Gladstone branch of the Morris and Essex rail line. This line provides direct service into Newark and Hoboken, with two daily trains running into New York Penn Station. The station is located along Route 202, 650 feet west of the intersection with Mt. Airy Road, and features a small parking lot. Lakeland Bus Lines also operate rush-hour service into Manhattan from the train station.

Bernardsville is part of the K-12 Somerset Hills Regional School District, which also serves students from Far Hills, Peapack-Gladstone, and Bedminster. The district's three schools, Bedwell Elementary School, Bernardsville Middle School, and Bernards High School, are located north of Route 202. Moreover, the school district no longer provides courtesy busing, thus requiring students living within a 2-mile radius to provide their own transportation or pay a fee for bus service. Approximately 50 percent of the district's student body, including residents in the study area, live within 2 miles of a school.



Figure 13. Looking east on Bernards Avenue.

## Assessment of Need

Within the neighborhood, Bernards Avenue is the primary road feeding into Mt. Airy Road. On the western end, Bernards Avenue curves south and continues up a small hill until it terminates at Pine Street. The construction firms are located along this section, and Kiwanis Park fronts Pine Street. Although Bernards Avenue does continue straight to Mt. Airy Road, the municipality noted that many pedestrians prefer to use the smaller roads to get as close to downtown as possible before walking along Mt. Airy Road. This is mainly because there is a sufficient volume of vehicular traffic and a scarcity of designated space for people to walk, which can make walking along the street uncomfortable. Boylan Terrace is closer to downtown than Prospect Street, but the narrow width and railroad frontage make it less attractive for pedestrians to use, as it can be perceived as being even less safe for walking. Given these challenges, the audit looked at West Street from Bernards Avenue to Prospect Street, and then Prospect Street from West Street to Mt. Airy Road.

All the roads in the study area are primarily fronted by residential properties, with the majority containing single-family detached houses. As previously mentioned, the neighborhood is close to downtown and the distance is well-suited for bicycling and walking. However, the lack of sidewalks and existence of commercial truck traffic deter people from doing so. While no schools are located in the neighborhood, children do walk to schools on the other side of the borough.

The properties along Bernards Avenue do not have driveways and garages, requiring residents to park along the street. Bernards Avenue is technically wide enough to support on-street parking on one side of the road, but most residents along the corridor appear to have instead chosen to pave over portions of their front lawn to create parking spaces. The paving of the front lawns in this area probably began due to residents desiring additional space between their vehicles and the truck traffic using the road. However, it is unclear where exactly the municipal right of way ends.

## Data

### Traffic

In support of this project, the Bernardsville Police Department conducted traffic counts on Bernards Avenue from November 6 to November 10, 2018. The observation recorded an average of 2,093 vehicles per day on the road, with a peak of 2,545 vehicles on Tuesday. The report highlights that traffic is generally spread out over the course of the day, with a maximum of 144 vehicles going east between 7 a.m. and 8 a.m. and 133 vehicles driving west between 5 p.m. and 6 p.m.

### Speed

The Bernardsville Police Department also collected traffic speeds during its investigation. The study found that the 85th percentile speed was 29 mph. This indicates that 15 percent of vehicles were traveling above 29 miles per hour on a road with a speed limit of 25 mph. Only 53 percent of vehicles were traveling at or below the 25 mph speed limit. The fastest speed observed was one vehicle driving between 56 mph and 60 mph at 5 p.m.

### Crash History

The study area does not have an extensive crash history. There were no reported crashes involving bicyclists or pedestrians between 2014 and 2018. In that same period, three motor-vehicle crashes were reported involving parked vehicles.

# Workshop Methodology

Prior to conducting the workshop, the CSTA project team visited Bernardsville and observed the study area to gain a better understanding of the roads, their location, use, and appropriateness for a walk audit (Figure 14). The municipal team was responsible for selecting a group of stakeholders to attend the workshop. Workshop participants included residents, representatives from the Bernardsville Police Department, Somerset County planners, elected officials, and representatives from RideWise transportation management association (TMA).

The 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. The walk audit provided an opportunity to educate the attendees on the difficulties pedestrians face in an environment without sidewalks.

Following the indoor presentation, participants were outfitted with safety vests, clipboards, and audit forms and divided into two groups. Both groups audited both sides of the study corridor, beginning at the intersection of Bernards Avenue and Pine Street. Participants identified and discussed notable issues and challenges, documented observations, and took photographs. The CSTA project team led a post-audit debrief for participants to discuss the most important findings and potential recommendations for improvements.



Figure 14. Looking north on Bernards Avenue during the initial site visit.

# Workshop Findings and Potential Considerations

This section highlights the existing conditions of the study corridor that were identified during the walk audit. 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

Most of the study corridor does not have sidewalks. Along Bernards Avenue, the space between the edge of the road and the buildings has been mostly paved over to be used for parking (Figure 15). Sidewalks that do exist usually only front a single property, with no connections to other sidewalks. The sidewalks are mostly 5-foot wide, which is appropriate for the context (Figure 16).

### Intersections and Crosswalks

There are no painted crosswalks at any of the intersections along the corridor, except at the end of the corridor for the crossing with Mt. Airy Road. At that intersection, there are high visibility crosswalks across both Prospect Street and Mt. Airy Road. Due to the lack of sidewalks along the corridor, there are also no accessible ramps, again except for the intersection with Mt. Airy Road (Figure 18).

Visibility is limited at some intersections due to the presence of hedges or other vegetation on private property (Figure 17). Vehicles parked too close to corners can also block visibility for drivers and pedestrians.



Figure 15. Parking instead of a sidewalk along Bernards Avenue (looking west).



Figure 16. High school students along Prospect Street using one of the few sidewalks on their way home from school (Prospect Street, looking west).



Figure 17. Poor visibility at Bernards Avenue and Garibaldi Street (looking south).



Figure 18. Sidewalk lacking wheelchair accessible ramp, and no painted crosswalks in any direction.

## Safety

When the corridor was audited at 2 p.m. on a weekday, both vehicular and pedestrian traffic was light. Although the study area was not observed at night, overhead cobra lighting exists along the corridor but the distance between lighting fixtures appears to be too great to provide uniform lighting (Figure 21). A nighttime observation would be needed to ascertain whether there is a pedestrian visibility problem.

The speed study conducted by the Bernardsville Police Department showed that average speeds are in excess of 25 mph. Additionally, the large commercial trucks that use the corridor do not make the space feel as if it can be safely shared with people walking.

## Comfort and Appeal

There were no litter, graffiti, or other quality of life concerns observed that could discourage walking or bicycling along the corridor. One older property on West Street, currently used as a garage, is not well maintained (Figure 20). Overall, the study area has a lot of greenery, which adds to the visual appeal of the neighborhood.



Figure 19. Traffic on Bernards Avenue picked up at school dismissal time. The roadway layout of the roadway allows speeding.



Figure 20. Aside from this older property on West Street, the area is well maintained.

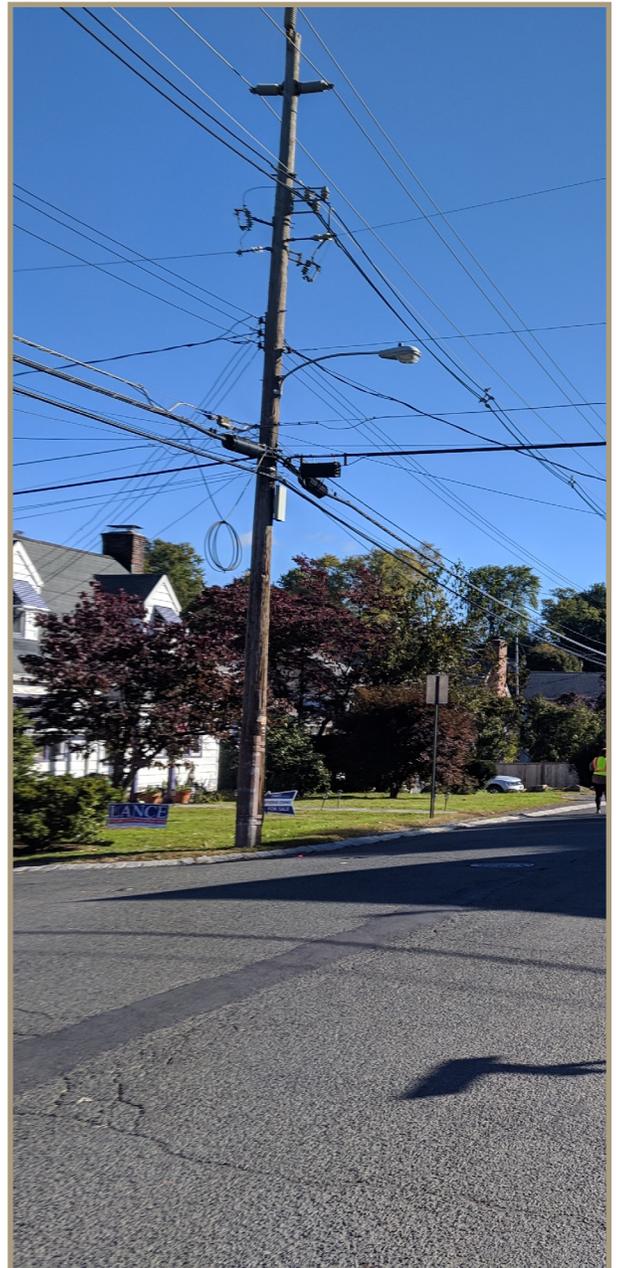


Figure 21. Overhead cobra lighting, as pictured, is found along the study corridor.

# Study Area Map



## Detailed Conditions

### Bernards Avenue: Pine Street to Grove Street

The study corridor begins at the intersection of Bernards Avenue and Pine Street, adjacent to Kiwanis Park (Location A on map). Although Bernards Avenue appears to continue south, it is a private driveway to access an electrical facility. There is no striping or signage at this intersection. Instead of a concrete curb, there are mountable Belgium blocks to mark the boundary between the asphalt road and the grass. There are no sidewalks or bicycle facilities (Figure 22).

To the north, Bernards Avenue slopes downhill and is about 20-feet wide. Vehicles were parked on dirt along the west side of the street, adjacent to the quarry property (Figure 23). A “no parking any time” sign is posted on the east side of the street. There are 25 mph speed limit signs posted in both directions. Halfway down the hill there is an entrance to the parking lot for the Pine Ridge Townhouses development (Figure 24). Lighting is provided by overhead cobra fixtures. The fixtures were not observed at night, but their size and placement suggest that the roadway is probably dark at night.

At the bottom of the hill, Bernards Avenue curves eastward in a wide arc. There is no signage warning of the curve in either direction or road edge striping. Deep tire tracks in the grass on the southeast side of the curve clearly indicate that large-tire vehicles (likely trucks) are leaving the roadbed while turning, possibly to avoid slowing while turning. (Figure 25). A “no trucks” sign is posted, but it is ineffective as trucks are common along this corridor (Figure 26).



Figure 22. Bernards Avenue and Pine Street. Kiwanis Park can be seen in the left corner (looking south).



Figure 23. Parked cars along Bernards Avenue (looking north).



Figure 24. 25mph speed limit sign and townhouse driveway.



Figure 25. Tire tracks visible where drivers cut the curve.



Figure 26. “No trucks” sign posted on Bernards Avenue.

## Bernards Avenue: Grove Street to West Street

Just east of the curve, Bernards Avenue intersects Grove Street (Location B on map). This is a very minor intersection, and there is no signage or striping associated with it. East of Grove Street, Bernards Avenue widens to about 30 feet, but it is sometimes difficult to establish where the public street ends and off-street parking areas begin. This is because many properties have paved their entire front yards to create parking, and there is no curb separating the road from the parking areas. Some of these parking areas may be in the public right-of-way and some on private property. They occupy space that might typically be used for sidewalks and planting strips (Figure 27, Figure 28).

Bernards Avenue intersects Maple Street in a four-way intersection. The Maple Street legs have stop signs, and Bernards Avenue has the right of way. There are no stop bars or crosswalks. On the southwest corner, a small private paved parking area extends to both the Maple Street and Bernards Avenue road edges, leaving the location of the corner undefined. On the southeast corner of the intersection there is a large parking lot for Sacred Heart Church. Stone blocks define the corner, and there is a grassy area with a tree and mailbox along the Maple Street frontage (Figure 29). East of the corner along Bernards Avenue, the church lot pavement extends to the road. A school bus was observed using the church parking lot to make a U-turn. Just to the east, a 25 mph sign is posted in the westbound direction. Multiple outdated “SLOW Children at Play” signs are installed in the eastbound direction. These signs are no longer recommended by professionals for pedestrian safety as they are not endorsed by the federal Manual on Uniform Traffic Control Devices (MUTCD) and have not been shown to increase safety.

Garibaldi Street is the next road to intersect Bernards Avenue. Like Maple Street, it is a standard four-way intersection where Bernards Avenue has the right of way. The proximity of homes to the intersection, along with decorative bushes, limits the visibility for drivers on Garibaldi Street. This likely requires drivers to pull out into Bernards Avenue to determine whether there are oncoming vehicles. The homeowner on the northwest corner does not have a garage, but instead has paved a parking area at the corner. When a vehicle is parked there, visibility is reduced (Figure 30). The Bernardsville Police Department has previously recommended a four-way stop at this location to address the poor visibility.

Additional speed limit signs are posted in both directions between Garibaldi Street and West Street. As with the preceding sections, there is an absence of sidewalks and striping, and most properties have a paved parking area directly adjacent to the roadway.



Figure 27. Driveways along Bernards Avenue, looking east.



Figure 28. Parking on Bernards Avenue, looking east.



Figure 29. Bernards Ave. and Maple Street, southwestern view. Church parking lot can be seen on the left.



Figure 30. Garibaldi Street intersection, looking northeast.

## West Street: Bernards Avenue to Prospect Street

West Street extends northward from Bernards Avenue, forming an offset intersection with Hill Street, which begins 40 feet to the east on the south side of Bernards Avenue (Location C on map). The northeast corner of the intersection features the first sidewalk seen along the route, although it lacks curb ramps at the corners. The sidewalk extends about 20 feet and ends at a driveway (Figure 31). Along the northwest corner a desired path, which is created when frequent pedestrian traffic tramples the grass and exposes the dirt, is visible. A hedge along the northwest corner blocks the view for southbound drivers on West Street (Figure 32). A single overhead cobra light is placed diagonally over the intersection. West Street has a stop sign that has been defaced with graffiti.

West Street is 32 feet wide and supports bi-directional traffic and parking. Like Bernards Avenue, there is no hard curb between the roadway edge and the residential yards. However, all the homes along West Street have dedicated driveways, which decreases the demand for street parking. There are no signs of lawns being used for parking.

A short block of townhomes along the west side of West Street have an interior sidewalk leading to West Street, but there are no curb ramps at the intersection. Just north of the townhomes, Franklin Court extends west from West Street forming a T-intersection (Figure 33). Franklin Court has a sidewalk along the north side of the road, but it also ends without a curb ramp. Further north on the east side of West Street, a sidewalk begins just before Prospect Street. This sidewalk is steeply sloped where it crosses a residential driveway, so it is not ADA-compliant. Along the west side, a sign indicates that parking is not allowed.



Figure 31. Sidewalk ending at driveway on West Street. Looking east on Bernards Avenue.



Figure 32. Hedge blocking visibility on the corner of Bernards Avenue and West Street.

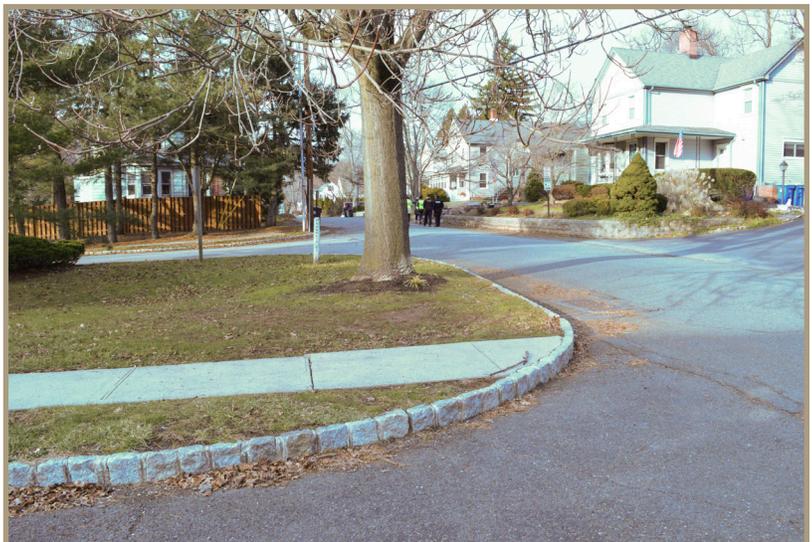


Figure 33. West Street and the townhome driveway. Franklin Court is visible in the background.

## Prospect Street: West Street to Mt. Airy Road

Prospect Street extends eastward from West Street, creating a T-intersection (Location D on map) (Figure 34). North of this intersection, West Street is narrower and one-way in the southbound direction. Prospect Street has a stop sign, but no striped stop bar. A “no trucks” sign is posted facing the southbound direction of West Street at the intersection (Figure 35). A single overhead cobra light is located over the intersection. The sidewalk on the southeast corner ends at a curb ramp that is not ADA-compliant. Continuing east, Prospect Street is bi-directional, with parking allowed only on the north side. The roadway is approximately 30 feet wide. There are no additional sidewalks between West Street and Center Street.

Center Street and Prospect Street create a standard intersection. Center Street has stop signs in each direction, and Prospect Street has the right of way. Center Street has a single sidewalk on the west side of the street north of Prospect Street. It ends at the corner with a ramp that is not ADA-compliant. A single overhead cobra light rests diagonally over the intersection.

East of Center Street, there is a sidewalk on the north side of Prospect Street, which continues to Mt. Airy Road (Figure 36). It does not have a curb ramp at Center Street. Shortly before Mt. Airy Road, an old sidewalk appears on the south side of Prospect Street as well. However, it is in very poor condition and does not properly connect with the new sidewalk on Mt. Airy (Figure 38). Next to this sidewalk, there is a sunken storm drain that may pose a hazard to pedestrians. On the north side, there is a “no trucks” sign visible to westbound traffic.

The intersection with Mt. Airy Road is well striped (Location E on map). Prospect Street has a double yellow line before the intersection, and a painted stop bar. There are high visibility crosswalks and ADA-compliant curb ramps (Figure 37). Pedestrian crossing signs are posted before the crosswalk across Mt. Airy Road.



Figure 34. Looking west on Prospect Street, at the intersection with West Street.



Figure 35. Looking south on West Street, at the intersection with Prospect Street.



Figure 36. Looking west on Prospect Street, towards the intersection with Center Street.



Figure 37. High visibility crosswalks, ADA compliant ramps, and pedestrian signage at Mt. Airy Road.



Figure 38. Disconnected sidewalk on Prospect Street, looking east towards Mt. Airy Road.

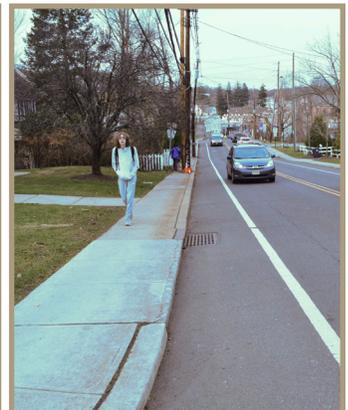


Figure 39. Pedestrians along Mt. Airy Road, looking north.

# Recommendations

During the workshop, participants expressed the desire to encourage walking among residents and to improve the safety of those already walking around the neighborhood.

## 1. Adopt a Complete Streets Policy

Adopting a complete streets policy is an important first step toward implementing complete streets, as it defines the meaning of complete streets, establishes goals, and lays out the ways in which the municipality will accomplish the goals. The most successful policies state that complete street practices and principles should be a standard part of regular roadway maintenance, planning, and design. An implementation plan and checklist can also be developed to ensure that the municipality remains on the right path year after year. Additionally, points are available to municipalities who are seeking Sustainable Jersey certification for adopting and instituting a complete streets policy. The New Jersey Department of Transportation offers a guide to policy development and a separate guide on how to create an implementation plan. These resources are among those available at <http://njbikeped.org/complete-streets-resources/>. The state recently released a new model policy guide, which should be used as a template for a new municipal policy ([https://www.state.nj.us/transportation/eng/completestreets/pdf/CS\\_Model\\_Policy\\_2019.pdf](https://www.state.nj.us/transportation/eng/completestreets/pdf/CS_Model_Policy_2019.pdf)).

## 2. Establish a Safe Walking Space

The Bernards Avenue neighborhood is well suited for walking, thanks to the interconnected nature of its streets and proximity to the high school, downtown shops, and the train station. However, the lack of sidewalks makes walking uncomfortable.

In the long-term, sidewalks should be built along the observed streets, at least along one side of the road. Sidewalks should be at least 5 feet wide and have ADA-compliant curb ramps at corners. High visibility crosswalks should be striped in all directions at the intersections. Along Bernards Avenue, between Mt. Airy Road and Grove Street, the north side of the roadway is the most natural place to build a sidewalk, as there is already an existing section of sidewalk east of Center Street. Residents who currently park in the front of their property can be accommodated by parking within the roadway, as it is wide enough for bidirectional traffic (two ten-foot travel lanes) and parking on one side (one eight-foot parking lane). Currently, the Borough prohibits overnight street parking during the late fall through spring - this policy will have to be modified for Bernards Avenue. Moving parked vehicles into the roadway can help to calm traffic by narrowing the roadway. On Bernards Avenue, between Grove Street and Pine Street, a sidewalk along the eastern side would best serve the townhouses and Kiwanis Park.

Building sidewalks can take many years. As the borough looks for funding for a sidewalk network, steps should be taken to immediately improve safety in the community. An opportunity exists to create on-street sidewalks in the neighborhood. On-street sidewalks are sections of the roadway that are designated for the exclusive use of pedestrians with paint and low-cost infrastructure including parking-stops to prevent incursion by vehicles (Figure 40).



Figure 40. On-street sidewalk in Seattle. Photo: SDOT.



Figure 41. On-street sidewalk in Seattle. Photo by the Seattle Department of Transportation (SDOT).

The creation of on-street sidewalks also serves to decrease the space available to motorists, which helps to slow drivers down. These temporary on-street sidewalks should be linked with high visibility crosswalks and include ADA treatments such as truncated domes. Only the section of Bernards Avenue between Pine Street and Grove Street is too narrow for this treatment.

Currently, there are no bicycle facilities along the corridor. Due to the low traffic volumes, bicycle lanes are not necessary. Instead, bicyclists can be accommodated with shared-lane markings (sharrows) within the existing lanes. These marking remind motorists that bicyclists have the right to use the full lane and should be expected to do so (Figure 42). For bicyclists, the sharrows help to position them where they are most visible. As many New Jersey drivers are not familiar with sharrows, they should be accompanied by “bicycles may use full lane” signs to reinforce their purpose. On Bernards Avenue, between Pine Street and Grove Street, additional signage and markings can be installed to indicate that pedestrians are also sharing the roadway.



Figure 42. Shared-lane pavement markings in Ocean City, New Jersey.

The installation of on-street sidewalks and sharrows should help calm motor vehicle traffic. However, other steps can be taken to lower speeds along the corridor. The Bernards Avenue neighborhood could greatly benefit from green infrastructure that helps to calm traffic, add greenery, and manage stormwater (Figure 43). Curb extensions at corners, combined with green infrastructure, can also help prevent illegal parking near intersections that can reduce visibility. Increased use of curb extensions can add gentle curves to a roadway, which also helps to lower speeds and calm traffic (Figure 44). However, it is important that the design of these features takes into account the space required by the trucks accessing the construction firm.



Figure 43. Green infrastructure used to narrow the roadway in Philadelphia, PA.



Figure 44. Traffic calming chicanes with green infrastructure on 17th Avenue NE in Shoreline, WA.

Vertical traffic calming, such as speed bumps, can be an effective way to slow traffic. However, they are not optimal along truck routes due to the noise created when those vehicles drive over them. Bernardsville should explore building a raised crosswalk with curb extensions across Bernards Avenue at Maple Street, connecting the Sacred Heart Chapel to its parking lot across the street. A raised crosswalk brings the roadway up to the sidewalk level, like a speed bump, but is flat on top for pedestrians to use. This design slows drivers while not creating as much noise as a regular speed bump would (Figure 45).



Figure 45. A speed table with a marked crosswalk (a raised crosswalk).

### 3.3. Use Demonstration Projects

Demonstration projects, also called Tactical Urbanism, is an approach to neighborhood building that uses short-term, low-cost, scalable interventions to effect long-term change related to street safety and public space. This approach can draw attention to perceived shortcomings, widen public engagement, test interventions, and inspire action. The proposed on-street sidewalks are an example of demonstration projects.

#### Benefits of Demonstration Projects

##### Speed

These projects allow a municipality to quickly make necessary safety and livability improvements while the permanent improvements move through the various project design and funding steps.

##### Flexibility

Demonstration projects champion flexibility in that its improvements can be temporary. Rather than debating the costs and benefits of a sidewalk extension, municipalities can paint one and observe the new dynamic between pedestrians and drivers without committing to a permanent change. This allows residents and policymakers to witness the improvement and determine its effects. It also allows for data to be collected, and the final permanent design to be modified based on what was learned during the temporary installation.

##### Affordability

These projects offer a “lighter, quicker, cheaper” implementation through which the municipality can test new concepts—like a new bicycle lane or pocket park—without breaking the bank. This means using low-cost materials such as paint and plastic bollards instead of concrete.

##### Community Input

At its core, these projects are designed to spark a conversation about long-term change in the direction of complete streets.

Demonstration projects solicit local ideas for planning challenges, taking the debate out of City Hall and placing it on the street where people can visualize and respond to the proposed project. They seek to spur conversation around neighborhood improvements and allow residents to evaluate changes before permanent installation.

##### Economic Development

By creating a more welcoming environment for pedestrians, demonstration projects can spur economic development in commercial corridors that rely on walk-in consumers. They can also provide new outdoor space for restaurants by converting a single parking space into a protected seating area. These projects develop social capital between citizens and organizational capacity between public and private institutions.

##### Resources

The “Tactical Urbanist’s Guide to Materials and Design” (<http://tacticalurbanismguide.com/guides/tactical-urbanists-guide-to-materials-and-design/>) provides an excellent guide on what materials are appropriate to use for demonstrations, pilots, or semi-permanent installations.



Figure 46. New Brunswick, NJ, uses plastic bollards to prevent illegal parking near intersections.



Figure 47. Tactical Urbanism pilot in Red bank, NJ.

## Detailed Recommendations

### Bernards Avenue: Pine Street to Grove Street

(Location A to location B on corridor map)

- Investigate installing continuous permanent sidewalk on east side of Bernards Avenue, with ADA-compliant slopes at driveways and ADA-compliant curb ramps at corners (Figure 48)
- Investigate addition of signage and stencils on roadway indicating that pedestrians share the travel lane
- Install high visibility crosswalks on the two legs of the Pine Street and Bernards Avenue intersection
- Install shared lane markings in each direction along with “bicycle may use full lane” (R4-11) signage (Figure 49)
- Prevent drivers from cutting across the grass at the Bernards Avenue corner by installing a higher curb or other vertical obstacle, such as soft-hit bollards
- Install road edge striping where Bernards Avenue curves west of Grove Street
- Confirm need or placement of “no trucks” sign at Bernards Avenue and Grove Street



Figure 48. Curb ramps should direct pedestrians into the crosswalk.



Figure 49. “Bicycle May Use Full Lane” sign.

### Bernards Avenue: Grove Street to West Street

(Location B to location C on corridor map)

- Investigate installing continuous permanent sidewalk on north side of Bernards Avenue, with ADA-compliant slopes at driveways and ADA-compliant curb ramps at corners.
- Install temporary painted on-street sidewalk on one side of Bernards Avenue
  - Parking stops and/or plastic bollards should be used at intersections to prevent incursion into the painted sidewalk by vehicles
- Build raised crosswalk with green infrastructure curb extensions across Bernards Avenue at Maple Street or use green infrastructure curb extensions to create traffic calming chicane
- Stripe high visibility crosswalks at all intersections along and across Bernards Avenue
- Stripe stop bars prior to crosswalks
- Work with property owners to ensure vegetation does not block visibility at corners
- Install bicycle shared lane markings in each direction along with “bicycle may use full lane” (R4-11) signage
- Replace signs that have faded

### West Street: Bernards Avenue to Prospect Street

(Location C to location D on corridor map)

- Investigate installing continuous permanent sidewalk on one side of West Street, with ADA-compliant slopes at driveways and ADA-compliant curb ramps at corners.
  - Replace sloped sidewalk at residential driveway
- Install temporary painted on-street sidewalk on one side of West Street
  - Parking stops and/or plastic bollards should be used at intersections to prevent incursion by vehicles
- Stripe high visibility crosswalks at Franklin Court and Prospect Street
- Stripe stop bars prior to crosswalks
- Work with property owners to ensure vegetation does not block visibility at corners
- Install shared lane markings in each direction along with “bicycle may use full lane” (R4-11) signage
- Replace signs that have faded

## Prospect Street: West Street to Mt. Airy Road

(Location D to location E on corridor map)

- Investigate installing permanent sidewalk on one side of Prospect Street, with ADA-compliant slopes at driveways and ADA-compliant curb ramps at corners.
- Install temporary painted on-street sidewalk on one side of Prospect Street
  - Parking stops and/or plastic bollards should be used at intersections to prevent incursion by vehicles
- Stripe high visibility crosswalks at Center Street
- Stripe stop bars prior to crosswalks on Center Street
- Work with property owners to ensure vegetation does not block visibility at corners
- Install shared lane markings in each direction along with “bicycle may use full lane” (R4-11) signage
- Replace signs that have faded
- Repair sunken drain near intersection of Prospect Street and Mt. Airy Street



Figure 50. Sacred Heart Chapel on Bernards Avenue.

# Conclusion

Walking should be the mode of choice for many daily trips for residents in the Bernards Avenue neighborhood of Bernardsville. Unfortunately, the lack of sidewalks has inhibited this option. Local officials aware of this challenge sought the help of the NJTPA's Complete Streets Technical Assistance Program to audit current conditions and recommend potential improvements. As part of this assistance, local stakeholders participated in a course on complete streets and were instructed on how to audit a corridor.

The installation of sidewalks on at least one side of roads in the study area would vastly improve walking and should be a long-term goal for the community. However, installing sidewalks can be a slow and costly process. An on-street sidewalk is an improvement that can be done quickly and at a low cost, using only paint and other materials. Doing so will give pedestrians a dedicated place to walk, and better define how the roadway is used among the various modes. In a similar manner, striping and signage can make bicycling safer by reminding motorists that cyclists are sharing the road with vehicles.

It is important that Bernardsville consider green infrastructure when designing permanent improvements. Stormwater management can work hand-in-hand with traffic calming to improve safety while ensuring that area properties do not suffer from local flooding.

While every corridor is unique, Bernardsville likely has other roads similar to Bernards Avenue. The lessons learned through this project can be applied to other streets, with the end goal of developing a complete network of pedestrian and bicycle-friendly corridors. Complete streets will ensure that Bernardsville continues to be an attractive and family-friendly community that prioritizes safety, community, and the environment.



# Appendices

- A. Workshop Flyer
- B. Workshop Agenda and Field Audit Form
- C. StreetSmart Campaign Resources
- D. Potential Funding Resources
- E. Design Resources



# WALKABLE COMMUNITY WORKSHOP

Thursday, December 6, 2018  
1 pm to 5 pm

**JOIN US TO ADDRESS WALKABILITY ON BERNARDS AVENUE!**

Sacred Heart Chapel  
47 Bernards Avenue  
Bernardsville, NJ

For more information email:  
[heasleya@tcnj.edu](mailto:heasleya@tcnj.edu)

To RSVP visit: <http://bit.ly/BernardsvilleWCW>

**WORKSHOP AGENDA**

1:00 pm  
Welcome and Walkable Community Presentation

2:00 pm  
Walking Audit

4:00 pm  
Debrief and Next Steps

5:00 pm  
Adjourn



A Walkability Workshop engages town employees, residents, business owners and workers on issues regarding walking and biking in a community. After training on what to look for, workshop participants will walk a half-mile corridor assessing their existing streets and sidewalks and identifying issues to overcome to ensure safer conditions for pedestrians and bicyclists. After the workshop, a report will be prepared with recommendations on improvements to address key locations and issues identified in the workshop.

This effort is part of the Complete Streets Technical Assistance Program, which is a collaborative venture between Sustainable Jersey (SJ), the Voorhees Transportation Center at Rutgers University (VTC), and the North Jersey Transportation Planning Authority (NJTPA). Funded by the NJTPA, the program is designed to support municipal government efforts to implement complete streets.



# BERNARDS AVENUE

## WALKABLE COMMUNITY WORKSHOP

Thursday, December 6, 2018 | 1 pm to 5 pm  
Sacred Heart Chapel, 47 Bernards Avenue, Bernardsville, NJ

### WORKSHOP AGENDA

- 1:00 pm**      **Welcome and Walkable Community Presentation**  
Complete Streets Technical Assistance (CSTA) project team will lead a presentation to train town employees, residents, business owners and workers on what to look for when auditing walking and biking infrastructure.
- 2:15 pm**      **Walking Audit**  
Participants will walk a half-mile corridor assessing their existing streets and sidewalks and identifying issues to overcome to ensure safer conditions for pedestrians and bicyclists.
- 4:00 pm**      **Debrief and Next Steps**  
Participants will generate planning level recommendations to improve the safety, convenience, and comfort of the walking environment of what they observed on the walking audit to be incorporated as recommendations into the final report.
- 5:00 pm**      **Adjourn**



This effort is part of the Complete Streets Technical Assistance Program, which is a collaborative venture between Sustainable Jersey (SJ), the Voorhees Transportation Center at Rutgers University (VTC), and the North Jersey Transportation Planning Authority (NJTPA). Funded by the NJTPA, the program is designed to support municipal government efforts to implement complete streets.



**FIELD AUDIT**

Thursday, December 6, 2018 | 1 pm to 5 pm

<b>Contact</b>	Person Completing: _____							
	Email: _____							
	Phone: _____							
<b>Prospect Street from Mt Airy Road/RT 525 to West Street</b>								
<b>Design</b>	How many lanes are there? _____ Are there crosswalks? _____							
	What is the speed limit? _____ Is there a median? _____							
<b>Driver Behavior</b>	<b>Circle all that apply:</b>							
	<table border="0"> <tr> <td>a. Speeding</td> <td>e. Loud music</td> </tr> <tr> <td>b. Blocking crosswalk</td> <td>f. Loud engine</td> </tr> <tr> <td>c. Not stopping for pedestrians</td> <td>g. Not stopping for traffic control</td> </tr> <tr> <td>d. Double parking</td> <td></td> </tr> </table>	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
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								
<b>Sidewalk Condition</b>	<b>Are sidewalks present?</b>							
	No      One Side (Which?)      Both Sides							
	<b>Any problems you observed:</b>							
	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?								



**FIELD AUDIT**

Thursday, December 6, 2018 | 1 pm to 5 pm

<b>Curb Cuts/Ramps</b>	<p><b>Circle all that apply:</b></p> <p>a. Missing</p> <p>b. Non ADA compliant curb cuts/rams (too steep, not passable, etc.)</p> <p>c. Aligned with crosswalk: yes or no</p> <p>d. Truncated domes present: yes or no</p> <p>e. Truncated domes placed correctly: yes or no</p> <p>f. Curb extensions: yes or no</p> <p>g. Other concerns:</p>	
<b>Signage</b>	<p><b>Streets are labeled:</b>    Excellent    Average    Poor    None</p> <p><b>Pedestrian oriented directions:</b>    Excellent    Average    Poor    None</p> <p><b>Car oriented directions:</b>    Excellent    Average    Poor    None</p>	
<b>Parking</b>	<p>Side 1</p> <p><input type="checkbox"/> Yes: Parallel or Angled</p> <p><input type="checkbox"/> No</p>	<p>Side 2</p> <p><input type="checkbox"/> Yes: Parallel or Angled</p> <p><input type="checkbox"/> No</p>
<b>Amenities</b>	<p><b>Check all that apply:</b></p> <p><input type="checkbox"/> Bench</p> <p><input type="checkbox"/> Trash Can</p> <p style="padding-left: 20px;"><input type="checkbox"/> Overflowing? Yes or No</p> <p><input type="checkbox"/> Bus shelter</p> <p><input type="checkbox"/> Bicycle Racks</p>	
<b>Lighting</b>	<p><input type="checkbox"/> Overhead cobra</p> <p><input type="checkbox"/> Historic</p> <p><input type="checkbox"/> Pedestrian oriented</p>	<p>Is there lighting over the crosswalk?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>





**FIELD AUDIT**

Thursday, December 6, 2018 | 1 pm to 5 pm

<b>West Street from Prospect Street to Bernards Avenue</b>		
<b>Design</b>	How many lanes are there?	Are there crosswalks?
	What is the speed limit?	Is there a median?
<b>Driver Behavior</b>	<b>Circle all that apply:</b>	
	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	
<b>Sidewalk Condition</b>	Are sidewalks present?	
	<b>No</b>	<b>One Side (Which?)</b>
		<b>Both Sides</b>
	<b>Any problems you observed:</b>	
	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?		
<b>Curb Cuts/Ramps</b>	<b>Circle all that apply:</b>	
	a. Missing	
	b. Non ADA compliant curb cuts/rams (too steep, not passable, etc.)	
	c. Aligned with crosswalk: yes or no	
	d. Truncated domes present: yes or no	





**FIELD AUDIT**

Thursday, December 6, 2018 | 1 pm to 5 pm

**Bernards Avenue from West Street to Maple Street**

<b>Design</b>	How many lanes are there?	Are there crosswalks?
	What is the speed limit?	Is there a median?

<b>Driver Behavior</b>	<b>Circle all that apply:</b>	
	<ul style="list-style-type: none"> <li>a. Speeding</li> <li>b. Blocking crosswalk</li> <li>c. Not stopping for pedestrians</li> <li>d. Double parking</li> </ul>	<ul style="list-style-type: none"> <li>e. Loud music</li> <li>f. Loud engine</li> <li>g. Not stopping for traffic control</li> </ul>

<b>Sidewalk Condition</b>	<b>Are sidewalks present?</b>		
	No	One Side (Which?)	Both Sides
<b>Sidewalk Condition</b>	<b>Any problems you observed:</b>		
	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?		

<b>Curb Cuts/Ramps</b>	<b>Circle all that apply:</b>	
	a. Missing	
	b. Non ADA compliant curb cuts/rams (too steep, not passable, etc.)	
	c. Aligned with crosswalk: yes or no	
	d. Truncated domes present: yes or no	

**FIELD AUDIT**

Thursday, December 6, 2018 | 1 pm to 5 pm

	e. Truncated domes placed correctly: yes or no f. Curb extensions: yes or no g. Other concerns:			
<b>Signage</b>	<b>Streets are labeled:</b> Excellent    Average    Poor    None <b>Pedestrian oriented directions:</b> Excellent    Average    Poor    None <b>Car oriented directions:</b> Excellent    Average    Poor    None			
<b>Parking</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">                     Side 1  <input type="checkbox"/> Yes: Parallel or Angled  <input type="checkbox"/> No                 </td> <td style="width: 50%; border: none;">                     Side 2  <input type="checkbox"/> Yes: Parallel or Angled  <input type="checkbox"/> No                 </td> </tr> </table>	Side 1 <input type="checkbox"/> Yes: Parallel or Angled <input type="checkbox"/> No	Side 2 <input type="checkbox"/> Yes: Parallel or Angled <input type="checkbox"/> No	
Side 1 <input type="checkbox"/> Yes: Parallel or Angled <input type="checkbox"/> No	Side 2 <input type="checkbox"/> Yes: Parallel or Angled <input type="checkbox"/> No			
<b>Amenities</b>	<b>Check all that apply:</b> <input type="checkbox"/> Bench <input type="checkbox"/> Trash Can ▪ Overflowing? Yes or No <input type="checkbox"/> Bus shelter <input type="checkbox"/> Bicycle Racks			
<b>Lighting</b>	<input type="checkbox"/> Overhead cobra <input type="checkbox"/> Historic <input type="checkbox"/> Pedestrian oriented Is there lighting over the crosswalk? <input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>Trees</b>	<input type="checkbox"/> Frequent, good shape <input type="checkbox"/> Frequent, poor shape <input type="checkbox"/> Mostly empty tree wells <input type="checkbox"/> Infrequent, good shape <input type="checkbox"/> Infrequent, poor shape <input type="checkbox"/> No tree wells			
Additional Notes: <hr/> <hr/>				



**FIELD AUDIT**

Thursday, December 6, 2018 | 1 pm to 5 pm

<b>Bernards Avenue from Maple Street to Pine Street</b>									
<b>Design</b>	<p>How many lanes are there? <span style="float: right;">Are there crosswalks?</span></p> <p>What is the speed limit? <span style="float: right;">Is there a median?</span></p>								
<b>Driver Behavior</b>	<p><b>Circle all that apply:</b></p> <table style="width: 100%;"> <tr> <td>a. Speeding</td> <td>e. Loud music</td> </tr> <tr> <td>b. Blocking crosswalk</td> <td>f. Loud engine</td> </tr> <tr> <td>c. Not stopping for pedestrians</td> <td>g. Not stopping for traffic control</td> </tr> <tr> <td>d. Double parking</td> <td></td> </tr> </table>	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	
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									
<b>Sidewalk Condition</b>	<p>Are sidewalks present?</p> <p><b>No      One Side (Which?)      Both Sides</b></p> <p><b>Any problems you observed:</b></p> <p>a. Sidewalks or paths started and stopped, where?</p> <p>b. Sidewalks were broken or cracked, where?</p> <p>c. Sidewalk slope problems, where?</p> <p>d. Sidewalks were blocked with parked cars, signs, shrubs, etc, where?</p> <p>e. Sidewalks not wide enough, where?</p> <p>f. Sight obstructions, where?</p>								
<b>Curb Cuts/Ramps</b>	<p><b>Circle all that apply:</b></p> <p>a. Missing</p> <p>b. Non ADA compliant curb cuts/ramps (too steep, not passable, etc.)</p> <p>c. Aligned with crosswalk: yes or no</p> <p>d. Truncated domes present: yes or no</p>								



**FIELD AUDIT**

Thursday, December 6, 2018 | 1 pm to 5 pm

	e. Truncated domes placed correctly: yes or no			
	f. Curb extensions: yes or no			
	g. Other concerns:			
<b>Signage</b>	<b>Streets are labeled:</b>	Excellent	Average	Poor None
	<b>Pedestrian oriented directions:</b>	Excellent	Average	Poor None
	<b>Car oriented directions:</b>	Excellent	Average	Poor None
<b>Parking</b>	Side 1	Side 2		
	<input type="checkbox"/> Yes: Parallel or Angled <input type="checkbox"/> No	<input type="checkbox"/> Yes: Parallel or Angled <input type="checkbox"/> No		
<b>Amenities</b>	<b>Check all that apply:</b>			
	<input type="checkbox"/> Bench <input type="checkbox"/> Trash Can ▪ Overflowing? Yes or No	<input type="checkbox"/> Bus shelter <input type="checkbox"/> Bicycle Racks		
<b>Lighting</b>	<input type="checkbox"/> Overhead cobra <input type="checkbox"/> Historic <input type="checkbox"/> Pedestrian oriented	Is there lighting over the crosswalk? <input type="checkbox"/> Yes <input type="checkbox"/> No		
	<input type="checkbox"/> Frequent, good shape <input type="checkbox"/> Frequent, poor shape <input type="checkbox"/> Mostly empty tree wells	<input type="checkbox"/> Infrequent, good shape <input type="checkbox"/> Infrequent, poor shape <input type="checkbox"/> No tree wells		
Additional Notes:				
<hr/> <hr/>				



## FIELD AUDIT

Thursday, December 6, 2018 | 1 pm to 5 pm

### 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 care for did this area feel?      0   1   2   3   4   5   6   7   8   9   10



# STREET SMART

## STREET SMART NJ FACT SHEET

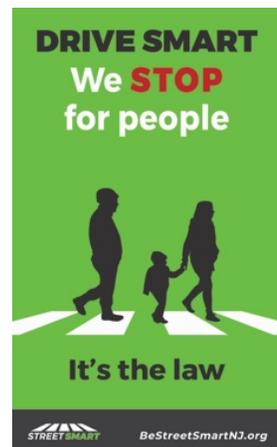
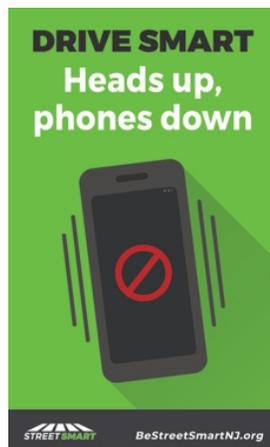
### What is Street Smart NJ?

Street Smart NJ is a public education, awareness and behavioral change pedestrian 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 displaying signage around town.

More than 80 communities have participated in Street Smart in some way since the program's inception in 2013. NJTPA's goal is to increase that number to 100 campaign partners. Communities everywhere are invited to use the strategies and materials on the Street Smart website, [bestreetsmartnj.org](http://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](http://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 2018, 175 pedestrians died as a result of pedestrian-vehicle crashes in New Jersey. From 2014 to 2018, 870 pedestrians were killed and thousands were injured on New Jersey’s roadways. That translates to one death every two days and 11 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 28 percent reduction in pedestrians jaywalking or crossing against the signal and a 40 percent reduction in drivers failing to yield to crossing pedestrians or cyclists following campaigns the NJTPA managed in March 2016.

## 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/municipalaid.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 NJDOT's 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](mailto: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://www.state.nj.us/transportation/business/localaid/srts.shtm>

**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://www.state.nj.us/transportation/business/localaid/alternatives.shtm>

**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/index.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:

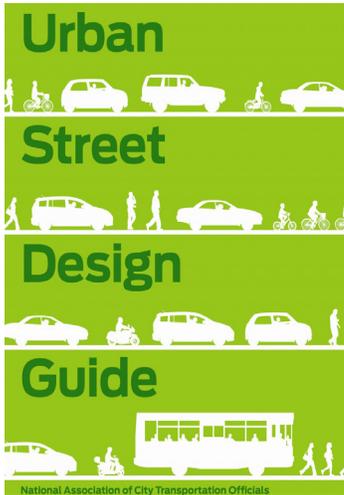
**Sustainable Jersey Grants Portal:** <http://www.sustainablejersey.com/grants-resources/grants-portal/>

**Together North Jersey Funding and Resources Database:** [https://togethernorthjersey.com/?page\\_id=25162](https://togethernorthjersey.com/?page_id=25162)

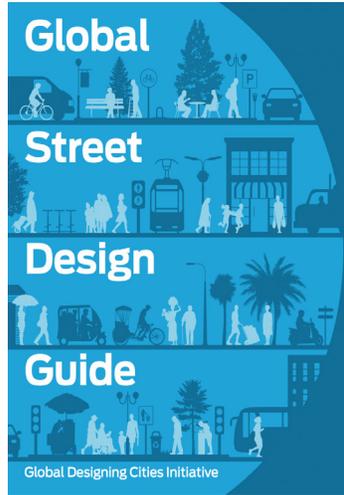
<b>Federal Funding</b>
<b>1. US Department of Transportation (USDOT)</b>
a. Better Utilizing Investments to Leverage Development (BUILD, replaced TIGER)
<b>2. Federal Highway Administration (FHWA) Programs</b>
a. Congestion Mitigation and Air Quality Improvement (CMAQ)
b. Surface Transportation Program (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
<b>3. National Highway Traffic Safety Association</b>
a. NHTSA Section 402 State Highway Safety Program
b. NHTSA Section 405 Non-Motorized Safety Grants
<b>4. Federal Transit Administration Programs</b>
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
<b>State Funding</b>
<b>5. Municipal Aid (\$140m)</b>
<b>6. County Aid (\$150m)</b>
<b>7. Local Bridges (\$44m)</b>
<b>8. Safe Streets to Transit (\$1m)</b>
<b>9. Transit Village (\$1m)</b>
<b>10. Bikeways (\$1m)</b>
<b>11. Local Aid Infrastructure Fund (\$7.5m)</b>
<b>12. Safe Corridors Highway Safety Funds</b>
<b>13. Urban Aid (\$10m)</b>
<b>14. New Jersey Trails Program (Department of Environmental Protection)</b>
<b>15. Other Funding Sources</b>
<b>16. Regional/Local CMAQ Initiatives Program (NJTPA)</b>
<b>17. NJ Division of Highway Traffic Safety</b>
<b>18. Open Space &amp; Farmland Preservation</b>
<b>19. Homeland Security Transit Security Grant Program (TSGP)</b>
<b>Other Sources</b>
<b>20. County Capital Program</b>
<b>21. Municipal Capital Programs</b>
<b>22. Foundations</b>

# E. Design Resources

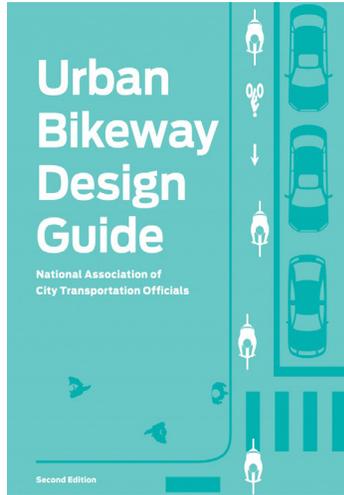
## NACTO Guides



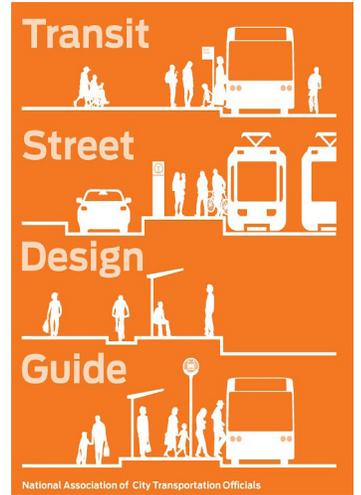
[Urban Street Design Guide](#)



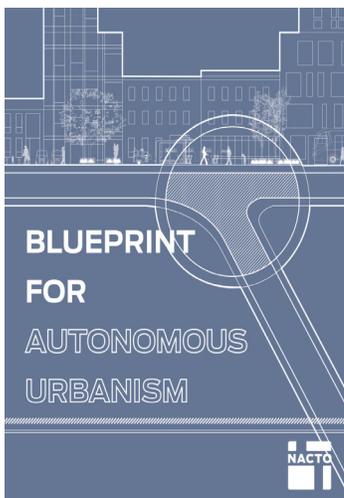
[Global Street Design Guide](#)



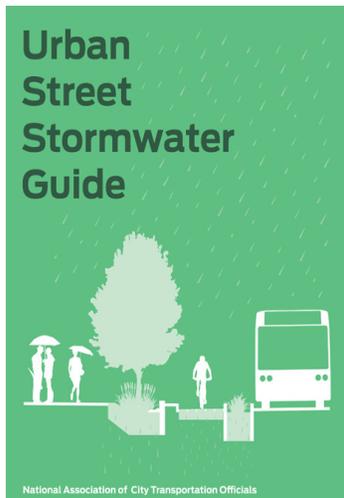
[Urban Bikeway Design Guide](#)



[Transit Street Design Guide](#)



[Blueprint for Autonomous Urbanism](#)

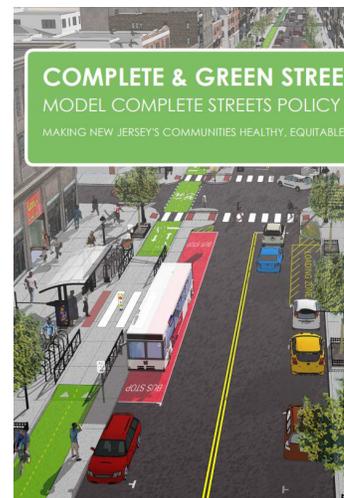


[Urban Street Stormwater Guide](#)

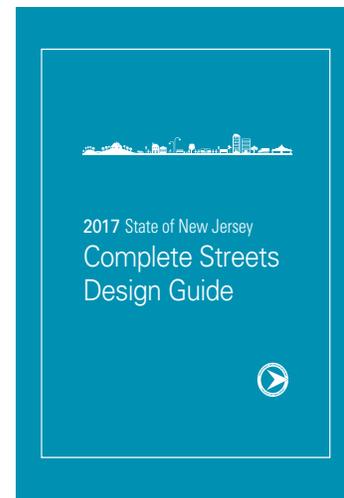


[Bike Share Station Siting Guide](#)

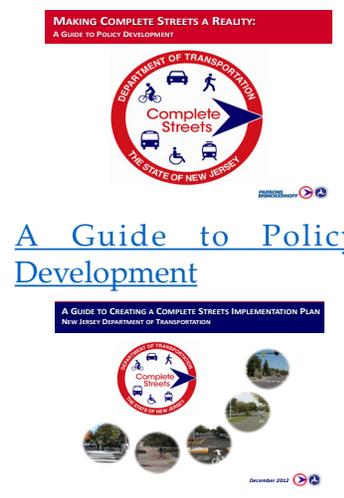
## NJDOT Guides



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

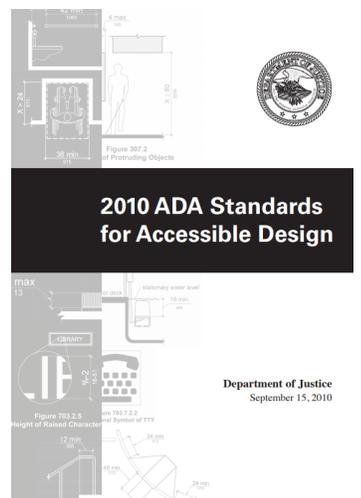


[2017 State of New Jersey Complete Streets Design Guide](#)



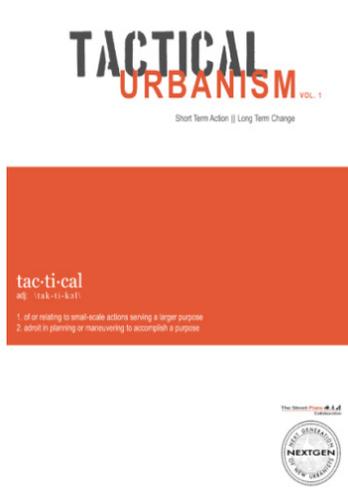
[A Guide to Policy Development](#)  
[A Guide to Creating a Complete Streets Implementation Plan](#)

## ADA Guidelines

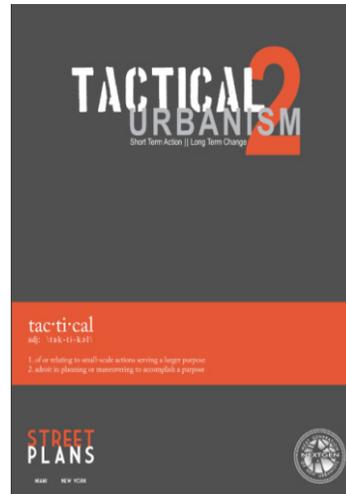


[ADA Standards for Accessible Design](#)

# Tactical Urbanism Guides



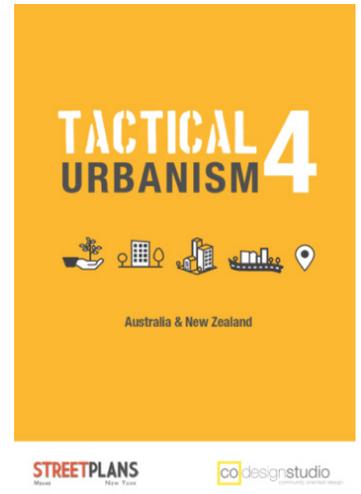
[Tactical Urbanism 1](#)



[Tactical Urbanism 2](#)



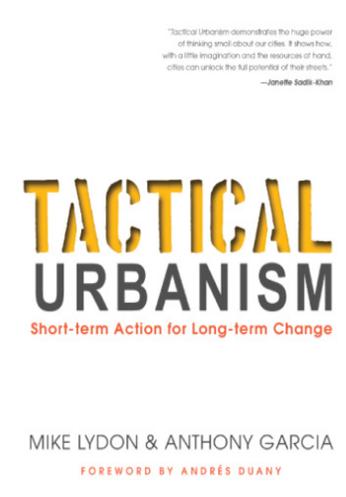
[Tactical Urbanism 3](#)



[Tactical Urbanism 4](#)



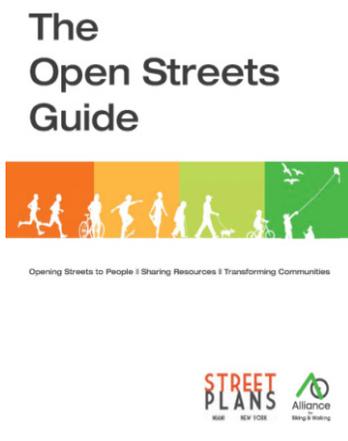
[Tactical Urbanism 5](#)



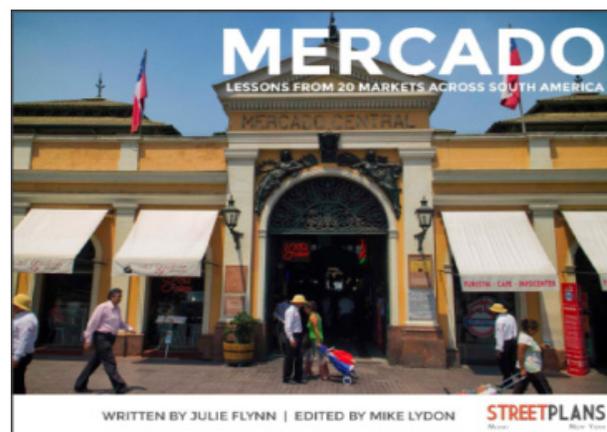
[Tactical Urbanism](#)



[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](#)

