



# Evaluating Tactical Urbanism in New Jersey

December 2019

## **About The Report**

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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, the NJTPA, officials from the Borough of Milltown, and the Middlesex County Office of Planning.

## **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 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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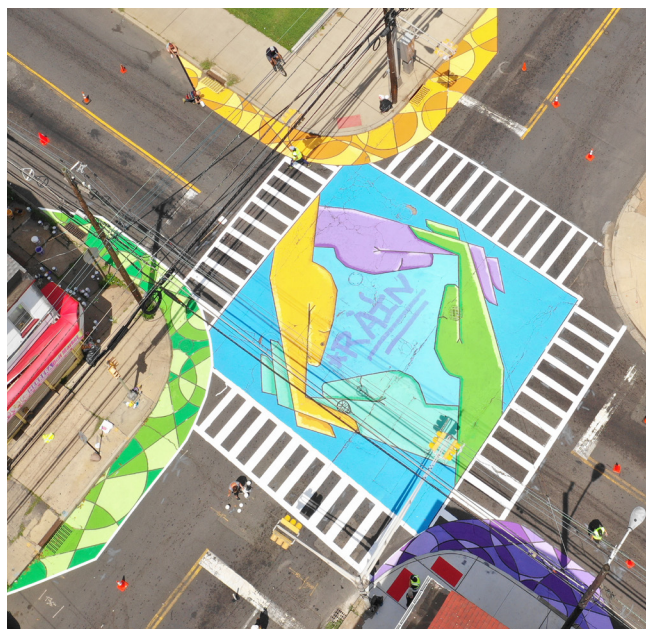
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## Executive Summary

This report was developed for the New Jersey Department of Transportation by the New Jersey Bicycle and Pedestrian Resource Center. It aims to provide an introduction to Tactical Urbanism (TU) that can be used by local officials, community groups, and planners as a starting point for pedestrian and bicycle improvements along roadways in their community. The report begins with an introduction to the benefits and applicability of TU along with examples of TU in action. The introduction is followed by case studies of TU projects in three New Jersey municipalities: Milltown, Red Bank, and Trenton. The case studies include summaries of the planning processes as well as feedback collected from intercept surveys conducted at each location after project implementation. The final section of the report provides recommendations that community representatives should consider when planning TU projects for their community. It should be noted that not all of the treatments described in this report are MUTCD compliant and may not be permitted on certain roadways. Treatments should be addressed on a case by case basis.

## Introduction

Tactical Urbanism (TU)—also referred to as demonstration projects, guerilla urbanism, pop-up urbanism, or D.I.Y. urbanism—refers to roadway interventions that are short-term, low-cost, and scalable.<sup>1</sup> Project for Public Spaces describes TU as “lighter, quicker, cheaper.” These projects aim to create safer, more lively public spaces through a short-term commitment with low risks and potentially high rewards. The approach draws attention to local planning challenges, but focuses on possible solutions and opportunities to test them out with little upfront investment. Often these projects consist of little more than temporary paint or chalk and low-cost accessories, such as seating or planters. Successful TU projects also encourage community involvement and local ownership. These projects vary in size, budget, and scope and can be designed to achieve any number of goals, including calming traffic, boosting economic activity, improving roadway safety, and increasing livability. Commonly used interventions include pop-up bicycle lanes, painted crosswalks, curb extensions, and converting on-street parking to park-like spaces, also known as parklets. Figure 1 provides an example of a TU project which incorporated painted crosswalks, curb extensions, and an intersection mural installed in Trenton, New Jersey.



**Figure 1.** Intersection painting, Trenton, New Jersey

## Benefits

TU has a direct impact on communities and can provide a diverse array of social, economic, and safety benefits, just like their more permanent counterparts. Some of the major benefits of TU are briefly explained below.

<sup>1</sup> Lydon, Mike, et al. *Tactical Urbanism 2: Short Term Action, Long term Change*. 2012.



## Affordability

These temporary projects are often implemented using shoestring budgets and employ the assistance of teams of volunteers. Because the projects are temporary, they can make use of low-cost materials such as chalk, paint, and planters in place of more expensive permanent infrastructure upgrades. The affordability of TU projects also makes the projects simpler to install. Without the need for special equipment or training, volunteers can be tasked with assisting with the planning and implementation process. The “lighter, quicker, cheaper” method used by TU allows the community to test new interventions without first having to invest large sums of money upfront. Affordability also allows TU projects a great deal of flexibility, as projects are not locked into a large costly solution.

## Flexible

TU interventions offer flexibility as they are temporary, easy to change, and often quite cheap. One of the main purposes of TU is to observe the effects of the temporary changes and make adjustments that address issues as they arise. For example, rather than extending a concrete curb in a downtown area, the municipality can work with the community to paint a temporary curb extension and place planters and seating in the new sidewalk space. With the temporary solution installed, the municipality can take time to observe the area. Are community members enjoying the new space? Are more people visiting nearby stores? Are there any parking or roadway issues associated with the extension? Adjustments can be made and then tested out again, and the process can continue as needed until a solution that works best for the community is found. This method also provides time for the community to identify funding for the permanent curb extension, should the community determine that is the best option moving forward.

TU projects come in all shapes and sizes, but their flexibility allows for adjustments that meet the needs of the local community. In May of 2012, the Borough of Somerville, in central New Jersey, completed a traffic calming project along Division Street, a commercial corridor connecting downtown Main Street to the train station. When the project was completed in May of 2012, the roadway needed extra time to cure before Division Street could be opened to vehicular traffic. In the meantime, the weather warmed up and Division Street blossomed as a busy pedestrian plaza. After observing the success of the full-time pedestrian plaza, Somerville and its residents determined Division Street should remain car-free (Figure X. Image of Somerville to be inserted after layout). Although the upgrade was not a typical TU project, it demonstrates the surprising successes that can be achieved when flexibility is incorporated into a project.

## Economic Development and Revitalization

By creating a more welcoming environment for pedestrians, TU projects can spur economic development. In fact, in the Division Street example detailed above, retail vacancies along the street went from 50 percent vacant in the years leading up to the new plaza to 100 percent occupied after the plaza was opened solely to pedestrians.<sup>2</sup> But TU projects do not have to drastically change a corridor in order to be successful. With the simple addition of a parklet, restaurants and cafes can increase their seating area and benefit from a boost in customers.



**Figure 2.** Parklet, Trenton, New Jersey

<sup>2</sup> The New Jersey Bicycle and Pedestrian Resource Center at Rutgers, The State University of New Brunswick. *Complete Streets Case Study: Somerville, New Jersey*. 2017.

## Discover the Value of Underutilized Spaces

TU projects can transform an underutilized space allowing local communities to discover the value these spaces offer. For example, a single parking space in a downtown area can be transformed into a seating area for enjoying lunch outdoors or sipping a cup of coffee with a friend or co-worker. In other words, these spaces can be used to build social cohesion. Such parklets can be found across the country and even in towns throughout New Jersey, including New Brunswick, Highland Park, Princeton, and Trenton (see Figure 2). By creating a welcoming environment for pedestrians, these projects encourage community members to gather in public spaces and allow people a moment to stop and take in their surroundings. Slowing pedestrians down in this manner can translate to increased economic activity in commercial areas. Additionally, these spaces provide an opportunity for local artists to highlight a neighborhood's culture or history and attract the attention of passersby through vibrant colors and creative artwork. These transformations contribute to economic revitalization, community building, and safety by encouraging more people to enjoy public spaces.

## Community Input and Public Involvement

Successful TU projects incorporate the public throughout the brainstorming, development, and implementation phases. This helps to ensure that projects are designed with local needs in mind. It also helps to build a sense of community ownership that can lead to local maintenance, future expansions, new projects, and even transitions to permanence. Engaging the public before project implementation is important in developing support for such changes and provides the community with an opportunity to put their own artistic and cultural spin on a project.

TU projects take the debate from hypothetical scenarios on a drawing board to real world streets. They allow community members to participate in an important process. First, they experience the challenges of an area, such as difficulty crossing a street due to speeding traffic. Then, they have an opportunity to provide ideas through brainstorming, which can take place through community meetings and workshops, and participate in the project development and implementation. This allows community members to incorporate local culture in the final product, which is especially powerful for TU projects that incorporate artwork. In Figure 3, volunteers can be seen painting crosswalks in Trenton. The mural in the center of the intersection was designed by a local artist and incorporates the area's cultural diversity and connections with Dr. Martin Luther King, Jr. Finally, community members can experience and evaluate the temporary solution and suggest adjustments before deciding if a permanent solution is needed.



**Figure 3.** Volunteers painting a crosswalk, Trenton, New Jersey



This sequence of events provides the public with a better understanding of possible solutions and builds community support. The public should also be encouraged and invited to participate during the installation process. Painting an entire intersection, as they did in Trenton (Figure 3), is quite an undertaking, but with the help of dozens of community volunteers, the work is made much lighter and those neighbors that came out to paint now feel a sense of connection with and pride in the project.

## Examples of Tactical Urbanism

Successful TU projects are identified as low risk with high returns, which inspires communities to think about their local challenges and brainstorm ideas to address them. Some examples of TU include installing bollards or painting crosswalks and curbs for pedestrian safety and using art to improve the aesthetics of an area. There are a variety of examples of TU projects of all shapes and sizes. After all, the best TU projects are those that are shaped to fit the unique needs and characteristics of a specific community. The following projects provide a small sampling of solutions developed through TU.



**Figure 4.** Painted Curb in Jersey City, New Jersey.  
Photo credit: Street Plans



**Figure 5.** Volunteers painting temporary bicycle lanes in Princeton, New Jersey

## Painted Curb Extensions – Jersey City, NJ

The City of Jersey City, New Jersey organized six walkability workshops at locations that were identified as unsafe for pedestrians. Each workshop included a public feedback board, tables and chairs, wayfinding signage, planters, and colorful paint. Residents were able to experience the safety benefits of a shortened crosswalk and were provided an opportunity to provide feedback for future projects.

## Beta Bike Lane – Princeton, NJ

Volunteers, equipped with 16,000 feet of tape, dozens of cans of white spray paint, and several laminated signs, installed 5-foot wide bike lanes along Hamilton Avenue and Wiggins Street, a corridor spanning two grade schools and a public library. The intervention lasted 10 days; meanwhile, the municipality eliminated on-street parking to create space for bicyclists and encourage K-12 students to bike to school.



**Figure 6.** Parklets, Montclair, New Jersey



## Parklets – Jersey City, NJ

Parklets are parking spaces that are temporarily changed into parks to provide additional public space for people to gather. Parklets often have seating, lighting, art, games, and plantings that enliven an area. Montclair installed parklets, which allowed pedestrians to sit and enjoy the area (see Figure 6). Initiatives like this provide people with additional space to socialize and relax. To provide a safe space, the parklets were separated from parked cars and travel lanes with proper barriers.

## Crosswalks

TU can also be used to enliven pedestrian safety infrastructure. For example, the generic white-striped



**Figure 7.** Rainbow Crosswalk, Asbury Park, NJ



**Figure 8.** Piano crosswalk, New Brunswick, New Jersey

crosswalks have been transformed into colorful and creative pieces of artwork that speak to the local community's identity. Artwork along crosswalks can provide an excellent opportunity to engage the community as they can provide input or take the lead on reshaping their own street space with interesting patterns and colors. The bright or striking patterns also enhance the visibility of pedestrians in the crosswalk and improve pedestrian safety. Below are two examples of creative crosswalks installed in New Jersey.

### Rainbow Crosswalk – Asbury Park, NJ

A highly trafficked pedestrian crossing in Asbury Park, New Jersey was painted to reflect the community's LGBTQ support (Figure 7). The "pride crosswalk" is located at the intersection of Ocean Avenue and Asbury Avenue, in front of the Empress Hotel. It was originally installed during October's LGBTQ History Month and was inspired by a similar rainbow crosswalk in Maplewood, New Jersey.<sup>3</sup> The crosswalk signifies the city's inclusivity.<sup>4</sup> Similarly colorful crosswalks in varying designs have since been installed at locations around the city.

<sup>3</sup> Asbury Park, New Jersey. *Resolution Authorizing Installation of Rainbow Crosswalk*. 2018.

<sup>4</sup> Asbury Park, New Jersey. *Resolution Authorizing Installation of Rainbow Crosswalk*. 2018.



## Piano Crosswalk – New Brunswick, NJ

Outside New Brunswick's vibrant theater district, between the entrances to the New Jersey State Theater and the New Brunswick Performing Arts Center, a less colorful though similarly unique crosswalk was installed (Figure 8). The piano keys crosswalk speaks to the area's theatrical roots. The crosswalk was completed in August, 2019, along with the recently opened New Brunswick Performing Art Center. This midblock crosswalk links the theaters and restaurants to the Monument Square Park which provides a seating area for waiting audiences and passersby.

## Festivals and Open Streets

The previous examples depict TU as it addresses issues of infrastructure, but the temporary nature of TU can also be used to enliven underutilized spaces and connect neighborhoods that are usually divided by roadways or other physical or social barriers. It can also be used to encourage pedestrian activities in areas that are usually off-limits or unsafe. The examples below describe festivals, ciclovias, and events that create a temporary gathering space to promote active healthy lifestyles and foster community cohesion.

### Camden Night Gardens, Camden, NJ

This free nighttime festival transformed a forgotten and blighted urban space into a lively community gathering place. The former prison site, located in a low-income part of the city, was situated in a prime location along Camden's waterfront at the foot of the Benjamin Franklin Bridge. Community development groups within the city saw the location's potential, especially given the beautiful nighttime skyline views across the Delaware River. Camden Night Gardens was established to celebrate the community's rich history, diverse culture, and wealth of artistic talent (Figure 9). The first Camden Night Gardens event hosted approximately 3,000 attendees. The temporary event allowed residents and city officials to witness the potential for the site. Today, the site has been transformed with permanent solutions and is home to a beautiful waterfront pathway and a large playground. The Camden Night Gardens was a temporary solution that inspired lasting change allowing the abandoned property to be permanently transformed into a valuable community asset.



Figure 9. New Brunswick Ciclovía



## New Brunswick Ciclovía

Ciclovías are events that temporarily close streets to vehicular traffic and open them to people for all kinds of uses including walking, bicycling, meeting community members, visiting local businesses, and participating in various games and activities. The first Ciclovía was held in Bogotá, Colombia and has become a weekly tradition there. Every Sunday, the city shuts down major roadways and opens them to people, connecting communities that are usually divided by lanes of traffic and allowing residents to walk and bicycle to businesses they would normally have to drive to.

One of New Jersey's most successful open street events is held several times throughout the year in New Brunswick (Figure 10). The New Brunswick Ciclovía is a free, family-friendly, citywide initiative. The main goal behind organizing a Ciclovía is to promote healthy active living. The New Brunswick Ciclovía works toward this end by setting up tables along the route with health checks, workout classes, active games, and information stands. During the event, the streets are completely car-free, allowing the residents to enjoy walking, bicycling, and family-friendly events and explore areas of the city they may not often visit. This is especially important in connecting New Brunswick's university neighborhoods with the local communities that are often highly separated. Different cultural activities such as live music, dance performances, and cultural parades are also set up along the route, allowing New Brunswick's unique identity to remain at the center of the event.

## Tactical Urbanism Case Studies

The following section provides details on three TU projects implemented in New Jersey. Walking through the details of the TU development and implementation process provides both inspiration and essential information for any municipal official or local leader exploring TU opportunities.

### Trenton

#### Project Location

For this project, two intersections were selected along Brunswick Avenue near the Martin Luther King Jr. Elementary School in the City of Trenton. The TU project was guided by the Trenton Health Team,



**Figure 10.** Volunteers laying tape in preparation for the crosswalk and mural painting the next day.



a non-profit self-described as a “community health collaborative” that works to improve public health through a variety of means. Creating Complete Streets in the city is one of its many broad ranging goals.

The first intersection, Southard Street and Brunswick Avenue, sees a great deal of pedestrian traffic throughout the year. During the project implementation, young campers and counselors passed through the intersection on their way to the pool at Martin Luther King Park. The crosswalks at the Southard Street intersection were faded and more than 50 feet long. The wide roadway allowed traffic to turn at high speeds, creating a dangerous situation for pedestrians in the crosswalk.

The second location is the three-way intersection of North Montgomery Street and Brunswick Avenue. It is approximately one third of a mile southwest of the Southard Street intersection. Just beyond North Montgomery Street, Brunswick Avenue becomes a one-way street running northward. A sidewalk extension is in place to direct southbound traffic onto North Montgomery Street. However, the wide width of the road does not make it clear that the roadway is one-way and cars are often seen traveling in the wrong direction down the corridor. Additionally, North Montgomery Street intersects Brunswick Avenue at a wide angle that motorists often take advantage of by not stopping at the stop sign and speeding through the intersection.

Both of the selected intersections have been deemed hazardous by local residents and are known for speeding, high volumes of traffic, and disregard for posted one-way and stop signs. Through the TU project, the city hoped to create a temporary new design for the intersections that would promote compliance with signage and increased safety for pedestrians, bicyclists, and other non-motorist roadway users.

## Planning and Design

Stakeholders were invited to participate in a TU workshop hosted by the Trenton Health Team. Through the workshop, local community members and leaders learned about pedestrian and roadway safety and the ways in which it could be enhanced through roadway design and TU projects. The presentation included examples of TU projects from around the country to help spur conversations and get participants thinking. After the presentation, participants gathered in groups. On each table, a large map was printed out of one of the two intersections and participants were invited to brainstorm ways in which safety at the intersection could be improved. Participants were then able to draw their ideas on the enlarged maps (Figure 12). After discussions with the larger group, consultants took the maps back to their office



**Figure 11.** A workshop with community members to identify and brainstorm solutions on safety concerns.



to synthesize the improvements into a concrete plan.

From the workshop feedback, it was determined that the intersection improvements would be designed to slow traffic and increase crosswalk visibility for pedestrian safety. A local artist who participated in the workshops was enlisted to design the intersection artwork. The design, named Unity, symbolized the unity of the residents in the local community. It was designed so that it would be easy to follow, but still detailed enough to provide a striking visual that spoke to the local culture.

Curb extensions were created at both intersections to shorten the crosswalk distance and slow turning traffic. At the North Montgomery intersection, the curb extensions also helped to straighten out the intersection and move the stop line closer to the intersection. These roadway design changes were meant to ensure greater compliance with the stop sign and discourage speeding through the intersection.

Volunteers of all ages were invited to come paint the streets (Figure 13). Announcements inviting volunteers to the painting day event were posted around the city and on social media. Various local organizations' also helped spread the word through their regular community outreach methods. It was a unique opportunity for residents to help beautify their neighborhood and several dozen volunteers came out to help.



**Figure 12.** Volunteers painting the intersection.

## Survey Findings

After the TU project was finished, residents were given a few weeks to experience the changes. Then, a team of Ambassadors in Motion from the Alan M. Voorhees Transportation Center visited both intersections and conducted intercept surveys. The surveys were used to gather input on the project



**Figure 13.** Volunteers painting the mural at the intersection of Southard Street and Brunswick Avenue.



from the road users who have experience with the intersections both before and after the updates. The survey included questions such as how often they visit the intersection, how they reach the intersection, and whether the changes made crossing the intersection feel safer.

At the Southard Street intersection, most respondents were familiar with the intersection and reported visiting it several times per week (85%). Most respondents experienced the intersection as pedestrians (65%) or as a motorist (38%). Many respondents agreed that the changes made the intersection more attractive (85%). None of the respondents stated that the changes made the intersection less attractive. Nearly three in four respondents stated the changes made them want to use the intersection more often (73%) and felt that the changes made the intersection safer (73%). Most respondents stated they would like to see similar improvements at other locations (77%).

When asked to elaborate on what they liked or disliked the most about the changes made to Southard Street and Brunswick Avenue, many respondents pointed out that the colors made the block look brighter. Respondents praised the changes, leaving notes such as “It’s a good vibe for the city,” “I love the colors,” and “Awesome!!” Another respondent also mentioned that the changes affect “peoples’ mood, which ultimately changes behavior.”

The surveys completed at North Montgomery Street were also completed mostly by respondents very familiar with the intersection and who reported visiting it several times per week (86% of respondents). Most respondents experienced the intersection as either a pedestrian (91%) or driver (50%). More than three in four respondents believe the changes made the intersection more attractive (77%). A majority of respondents stated the changes made them want to walk through the area more often (68%) and made them feel safer using the intersections (77%). More than half of respondents noticed cars stopping more often (55%) and approximately one in three respondents noticed cars speeding less (36%). When asked to provide any additional feedback, respondents expressed gratitude for the updates and asked for similar treatments at additional intersections, such as Holland Avenue and Montgomery Street. One respondent expressed concern that cars are still speeding through the intersection while another respondent requested a traffic light at the intersection.

## Red Bank

### Project Location

Red Bank has an extensive mix of businesses including entertainment, retail, medical, hospitality, educational, administrative, and dining. The compact nature of the community, at just 2.16 square miles, makes the town easily walkable for its residents and supports bicycling. Given the popularity of active transportation in the community, borough leadership wanted to find ways to make walking and bicycling safer.

Two locations were also selected in Red Bank for temporary improvements under the NJTPA Complete Streets Technical Assistance program. Here, we will discuss just one of the projects, the upgrades installed at the intersection of Drs. James Parker Boulevard and South Bridge Avenue.



**Figure 14.** Municipal employees installing the project.



**Figure 15.** The offset design of the intersection makes it challenging for vehicles to navigate even without the presence of pedestrians. This photo was taken after the mural was painted, but before the cones were set in to limit the width of the travel lanes.

The intersection of Drs. James Parker Boulevard and South Bridge Avenue was identified by local police and crash statistics as a problem area known for high traffic counts, dangerous driving, and speeding. Three marked crosswalks were located at the intersection, two crossing South Bridge Avenue and one crossing the eastern side of Drs. James Parker Boulevard (Figure 13). The crosswalk over Drs. James Parker Boulevard at the eastern end and western end of the intersection was not marked. Sightlines are an issue for cars turning into pedestrian crossings at the intersection, particularly because of the offset layout of the intersection.

The surrounding area is predominantly home to low-income and minority residents and is part of Red Bank's Safe Routes Network, a plan that emphasizes the expansion of bicycle lanes and high-visibility crosswalks. Two community organizations are located near the intersection, the Boys & Girls Club of Monmouth County and a food pantry, bringing a significant amount of pedestrian and bicycle traffic through the area. A corner grocery store also attracts bicycle and pedestrian traffic to the intersection. Drivers are known to idle in the bicycle lanes on South Bridge Avenue and in the no-parking zones around the intersection, blocking the sightlines for roadway users. Additionally, the wide roadway allows cars to pass turning cars on the right, creating dangerous situations.

Further danger comes from traffic passing by at high speeds to avoid traffic on other nearby roads. Municipal officials noted it is common to see drivers speeding in order to make it to a train or make it through the lighted intersection at Shrewsbury Avenue. Some drivers use South Bridge Avenue to avoid traffic on Shrewsbury Avenue. The intersection's high volume of vehicular traffic and speeding issues, coupled with its offset design create a potentially dangerous situation for pedestrians as vehicles crossing Drs. James Parker Boulevard quickly maneuver through the intersection without stopping for pedestrians. This behavior was repeatedly observed during surveying efforts. Figure 13 highlights some of the safety issues that can occur at the intersection, with a dark blue pickup truck attempting to make a left-hand turn onto Drs. James Park Boulevard while a white delivery truck slows for the pedestrian in the crosswalk.

Since 2014, there have been two recorded crashes involving bicyclists and pedestrians at the Drs. James Parker Blvd and South Bridge Avenue intersection in Red Bank. The first incident occurred on November



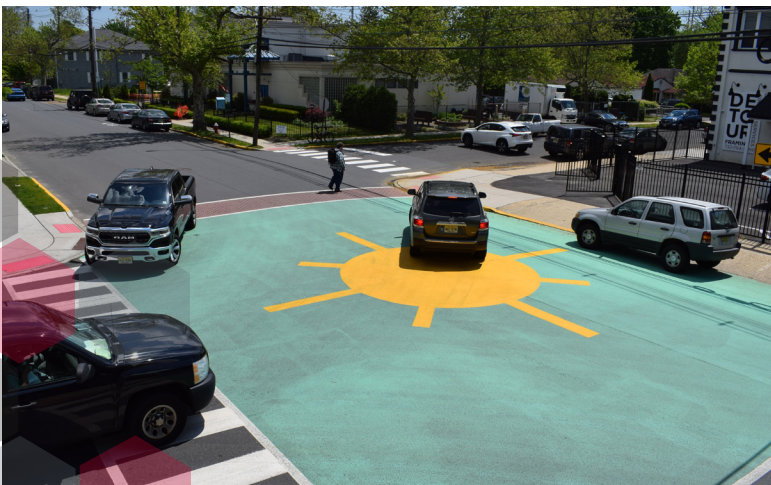
1, 2015 involving a car and a bicyclist. The crash occurred in the late hours of night when it was dark, street lights were on continuously, and the roads were wet. The car was making a right turn on South Bridge Avenue and the bicycle was traveling straight on Drs. James Blvd. A 65-year-old male cyclist suffered minor injuries. The second crash occurred on November 15, 2016 involving a pedestrian and a car. This accident also occurred at night when it was dark and street lights were on continuously. The 61-year-old female pedestrian sustained injuries while crossing at a marked crosswalk.

## Planning and Design

Designs were developed for low-cost, simple improvements to increase pedestrian safety at the intersection by slowing traffic and increasing crosswalk visibility. A mural painted in the intersection represented the centerpiece of the project. The design of the mural was left up to the municipality. The municipality selected the sun design because it was easy to pilot and displayed an eye-catching color choice, though future murals could be designed in collaboration with Red Bank's large artistic community. The sun design served to slow drivers down, direct attention to pedestrians, and provided a potential location for community art.

The design recommended the use of soft-hit plastic bollards to prevent illegal parking near the intersection. These bollards were on order and had not yet been installed at the time of the photos (Figure 15), but traffic cones were used to achieve the same affect. The bollards increased crosswalk visibility so that drivers would see pedestrians before they entered the crosswalk. Closing off this portion of the road to vehicular traffic also helped to slow turning traffic and eliminated the opportunity for drivers making a right-hand turn onto Drs. James Parker Boulevard to pull up alongside drivers crossing through the intersection (as the blue car was pictured doing in Figure 16). The new space creates an excellent opportunity to provide bicycle parking. During the surveying efforts, bicyclists were witnessed locking their bicycle to the stop sign as the southeastern corner of the intersection on South Bridge Avenue.

Future improvements could consider on-street signs to remind drivers to yield for pedestrians in the crosswalk. As the design of the intersection makes it difficult to install a sign in the center of the road, the signs could be aligned with the bollards for a similar effect. Red Bank has a thriving young artist community as well as several community groups in the area that could help develop and paint a mural that promotes Red Bank's rich and diverse history. Community workshops and outreach could help to advance such plans. Future TU projects should incorporate the community more actively through workshops, community meetings, and educational opportunities.



**Figure 16.** Intersection installation prior to placement of traffic cones.

**Figure 17.** Traffic cones will be replaced with bollards.

## Survey Findings

An intercept survey was used to gather input on the project from the road users at the intersection. Surveys were distributed by VTC Ambassadors in Motion and included questions such as how often respondents visit the intersection, how they reach the intersection, and whether the changes made crossing the intersection feel safer. Due to time constraints, the survey was conducted after the mural was painted but before the bollards were installed.

The majority of the respondents were residents of Red Bank. Around 82 percent reached the intersection by walking, 46 percent by driving and 28 percent by biking. The majority of the respondents provided positive feedback and stated that the project made the area more attractive. 53 percent said that the changes made them feel safer. The respondents also stated that the addition of bicycle parking would have a positive outcome on biking. 43 percent stated that they would like to bike in the intersection and 24 percent stated that they would consider biking after the addition of biking facilities.

When asked about their personal opinions, the respondents stated that the use of bright colors created a lively environment. They also mentioned feeling an increase in pedestrian safety. However, one respondent commented that a traffic signal would be more productive in this intersection. Several respondents suggested recruiting local artists or school children to connect the mural with the local community. Feedbacks provided directly to the Borough was also positive. Residents suggested to install the curb extensions permanently and focus on other problem areas in the community. The project team also observed large shifts in driver behavior after the cones were placed, which created a safer environment for all roadway users.

## Milltown

### Project Location

Two high volume intersections on North Main Street, at Ford Avenue and Church Street, were selected for a study conducted by the North Jersey Transportation Planning Authority (NJTPA)'s Complete Streets Technical Assistance Program. The goal was to address the long crosswalk distances, parked cars obstructing the view of crosswalks, and vehicles not stopping for people in the crosswalks. This report discuss only the changes made at the North Main Street and Ford Avenue intersection, but the full NJTPA report on Milltown can be found on <http://njbikeped.org/portfolio-page/other-reports/>.

Main Street is a two-lane road, which hosts a mix of residential and commercial uses and bisects the center of town. Main Street is an important connector which links Milltown to US Route 1 and Ryders Lane and is



**Figure 18.** A photo taken after project implementation at the intersection.



**Figure 19.** Plastic bollards and paint reinforce no parking near the intersection.



often used by motorists to avoid traffic along Route 1 and Route 18. Cars also speed down Main Street to avoid truck traffic on Ford Avenue, where several warehouses are located.

The intersection is located near Joyce Kilmer Elementary School and hosts a great deal of young pedestrian traffic intermittently throughout the day, including mid-day when kindergarten is released. In addition to the student traffic, the intersection also experiences a continuous flow of pedestrian and vehicular traffic. The speed on North Main Street is 30 mph and a crossing guard is present on school days.

## Planning and Design

The primary objective for the intersection upgrade was to improve the visibility of crossing pedestrians, reduce speeds, and limit illegal parking which created a dangerous situation for pedestrians. Keeping these objectives and challenges in mind, high visibility longitudinal crosswalks were proposed along with the installation of bollards to ensure illegal parking does not occur within 25-feet of the intersection. Signage was also proposed to remind drivers that it is state law to stop for pedestrians in the crosswalk.

Aside from preventing illegal parking, the plastic bollards also help make the road appear narrower which in turn helps to decrease traffic speeds. Their placement also discourages wide and fast right-hand turns and their soft-hit nature means they can be driven over by emergency vehicles. The bollards also helped to minimally decrease the long pedestrian crossing distance over Ford Avenue.

Several recommendations were made to the municipality through a report completed by the NJTPA Complete Streets Technical Assistance Program after the project was implemented. It was suggested that Milltown make a few changes to the project, including adding pedestrian crossing signage at the center of the crosswalk as well as installing bollards to impede illegal parking within 25 feet of the crosswalks. More extensive community involvement could have also enhanced the project by helping to creatively incorporate Milltown's identity.

## Survey Findings

After Milltown installed the TU project, an intercept survey was conducted to gather input on the changes from pedestrians at the intersections. The majority of respondents either lived or worked in the area and were very familiar with the differences before and after implementation. Around 40 percent of respondents reached the intersection by walking and 35 percent of them also reported commonly driving through the intersection.

Overall, respondents provided positive feedback regarding the changes and asserted that the project improved the attractiveness of the intersection. However, around 30 percent of respondents stated that they did not notice the changes and did not agree that the changes made the intersection attractive.



**Figure 20.** High visibility ladder crosswalks.

The positive reviews mentioned that the changes have provided a safer environment for pedestrian crossings. Additionally, the respondents confirmed that because of the changes, they would like to walk more often through the intersection. However, the respondents who did not see any positive changes also noted that they did not see any improvements for pedestrian safety.

When asked to provide any additional feedback, respondents noted that the changes improved safety for students from the nearby schools by making the crosswalks more visible to drivers. Respondents also mentioned the need for additional street lighting. One respondent brought up the absence of bicycle lanes, which might be one reason bicyclists were not present during the surveying efforts. Another respondent questioned whether the bollards could cause problems for delivery trucks who wish to temporarily idle in the in the no-parking zone. Concerns were also raised regarding potential parking issues for nearby businesses, though a safer crosswalk would provide more opportunities for downtown visitors to park in the large parking area north of the Ford Avenue intersection and walk to the businesses.

## **Recommendations for Successful TU Projects**

### **Develop a Complete Streets Implementation Plan**

Adopting a complete street policy is a crucial first step towards implementation as it establishes clear goals. Additionally, it is important for municipalities to identify ways to achieve their goals, which can be achieved through an implementation plan. An implementation plan and a checklist can be developed to ensure complete streets guidelines are incorporated on roads throughout the municipality.

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/>. A new model policy guide was recently released by NJDOT (Complete and Green Streets for All: Model Complete Streets Policy and Guide), which should be used as a template. Additionally, points are available to municipalities seeking Sustainable Jersey certification for adopting and instituting a complete streets policy.

### **Involve the Community and Provide Educational Opportunities**

Education is crucial in creating safer streets for all users. Enforcement of pedestrian crosswalk laws serves as a tool to encourage drivers to watch out for pedestrians. Community events provide an excellent opportunity to spread awareness. Encouraging children to participate also serves as a good opportunity to inform them about safe street crossings.

Municipalities can also consider involving local artists and community members in the design and painting of murals at various intersections. Additionally, involving local artists and residents for creative projects helps in creating artwork that is unique to that area. These projects work best when the community is involved.

### **Consideration of Additional Locations**

If a project is successful and the feedback is generally positive, municipalities should explore opportunities to employ similar projects at other locations. Efforts should be made to identify other locations throughout the municipality that could benefit from similar projects or upgrades. The process of involving the community and creating a feedback and adjustment loop should continue at each location where a TU project is set up. Always keep in mind, though, that no two locations are identical and so TU projects cannot simply be copy and pasted onto a new location.





