ESSEX
SAFE STREETS 4 ALL

Essex County Safe Streets For All Action Plan

October 2025

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APPENDICES

EXECUTIVE SUMMARY

Essex County has recorded 382 transportation-related fatalities since 2018, an average of almost 50 deaths each year. In particular, the county's vulnerable road users – including pedestrians, bicyclists, people with disabilities, transit riders, and older adults – experience severely disproportionate impacts among fatal and serious injury crashes.

Recognizing the severity of this condition, Essex County, in collaboration with the City of East Orange, has developed the Essex Safe Streets for All (SS4A) Action Plan to improve roadway safety and eliminate roadway fatalities.

The Action Plan is a data-driven, community-led effort that combines in-depth assessment of crash data, traffic safety, and local context with extensive community engagement and stakeholder outreach initiatives. Together, the merging of community-led and data-driven methodologies enabled Essex County to rethink its safety needs and priorities.

The purpose of the Action Plan is to:

- **Reduce the number of roadway fatalities and serious injuries in Essex County.**
- **Enhance safety, mobility, and quality of life for all road users.**
- **Develop a comprehensive Implementation Plan to achieve these ends.**

The Essex County Implementation Plan includes 34 priority projects on county-owned roadways and a comprehensive program of actions to guide and support implementation and work towards achieving the Action Plan goals:

- **Select safety countermeasures applicable to local context and conditions and supported by community engagement and stakeholder outreach.**
- **Assemble priority projects using targeted and cost-effective safety treatments and Federal Highway Administration's (FHWA) proven safety countermeasures. These priority projects are conceptual in nature, governed by county design procedures and criteria, and intended to advance to feasibility assessment and design by project sponsor(s).**
- **Adopt policy instruments and operational strategies that support and enhance project implementation and achieve consensus safety goals.**
- **Track and report on implementation status and goal attainment using consensus performance measures.**

Implementation begins with organizing and supporting a Road Safety Advisory Committee with representatives from County, municipal, and community partners to champion the implementation of Essex SS4A Action Plan goals and strategies.


NJTRANSIT
EAST ORANGE STATION
13-3
KEEP
RIGHT

SAFE STREETS 4 ALL

Essex County, in collaboration with the City of East Orange, has developed the Essex Safe Streets for All (SS4A) Action Plan to improve roadway safety. The Essex SS4A Action Plan is a joint undertaking of Essex County and the City of East Orange and is supported by the conclusions of the Essex 2045 Transportation Plan (2023) that noted acute transportation crash occurrence, crash severity, and fatality rates, particularly among the County's vulnerable road users – including pedestrians, bicyclists, people with disabilities, transit riders, and older adults – who experience disproportionate impacts from fatal and serious injury crashes.

Development of the Action Plan is supported by a grant from the United States Department of Transportation's SS4A program, which supports regional, local, and tribal initiatives to develop safety action plans and implement projects aimed at eliminating roadway fatalities.

In contrast to the comprehensive nature of Essex 2045, the Essex SS4A Action Plan is focused solely on transportation safety and addressing and mitigating traffic fatalities and serious injury crashes. Additional transportation needs, including traffic congestion, transit, pavement, and bridge maintenance, and related concerns, are equally vital to Essex County but are addressed through other planning efforts, grant programs, and project funding sources.

The purpose of the Action Plan is to

Reduce the number of roadway fatalities and serious injuries in Essex County.

Enhance safety, mobility, and quality of life for all road users – pedestrians, bicyclists, motorists, transit users, and people of all ages and abilities.

Develop a comprehensive Implementation Plan, including policies, operational strategies, priority projects, and performance metrics designed to achieve these ends.

ESSEX 2045 TRANSPORTATION PLAN

The Essex SS4A Action Plan is a follow-up to Essex 2045, the Essex County Transportation Plan. Completed in 2023, Essex 2045 provides a comprehensive assessment of transportation safety, access, and mobility needs and recommends a comprehensive program of multimodal intersection, corridor, and bridge projects, supported by implementation strategies, policies, and additional planning studies.

Essex County lies at the crossroads of commerce, travel, and activity for New Jersey and the Northeast Corridor. Its makeup – densely populated, a regional employment center, and a hub for freight and goods movement – creates substantial demand for people and goods movement.

Much of the region's critical infrastructure – rail service, bus lines, Newark International Airport, the Port of Newark and Port Newark Container Terminal, toll roads, and numerous interstate, state, county, and municipal roadways – call Essex County home. Freight and goods movement are a critical economic engine for the region, and its success is essential for continued prosperity and competitiveness in the global economy.

Essex County launched the Essex 2045 Transportation Plan in 2023 to ensure that the transportation network continues to meet these critical needs. Essex 2045 established a strategic vision for safe, effective access to affordable, efficient travel options and a commitment to a culture of safety. This commitment provides the framework for the Action Plan.

Essex 2045 proposed 43 candidate intersection, corridor, and bridge projects designed to address safety, access, pavement and bridge maintenance, traffic congestion, mobility, roadway geometrics, and operational improvements. These include projects on a variety of county- and municipal-owned roads and bridges.

Supporting these projects is a wide variety of policies, strategies, and planning studies, including Complete Streets policies, improved design standards and guidance, safety plans and corridor studies, traffic congestion and roadway safety studies, and the implementation of Roadway Safety Audits and School Travel Plans.

Some project findings and recommendations from Essex 2045 have already been completed or are underway, including several significant roadway projects; these are documented in the Implementation Plan chapter.

PLANNING FRAMEWORK

The purpose of the Action Plan is to identify and prioritize locations in Essex County (roadway segments and intersections) that experience the most severe safety risk.

These roadways present the greatest potential for reduced crash occurrence and severity, and the greatest potential to benefit from a program of proven, targeted, and cost-effective safety treatments and countermeasures.

Guidance from FHWA for the Local Road Safety Plan (LRSP) states that "Data is the foundation of the LRSP. It is used to identify problem areas, determine appropriate solutions, … monitor progress towards the plan's goals … [and] allow for implementation to be targeted at locations that will be the most effective at reducing fatalities and serious injuries."[i]

The Action Plan is a data-driven, community-led effort that combines in-depth assessment of crash data, traffic safety, and local context with extensive community engagement and stakeholder outreach. These outreach efforts included a multi-pronged approach to facilitate participation from public officials, residents, advocacy organizations, and other stakeholders through both traditional and non-traditional methods.

Together, the merging of community-led and data-driven methodologies enabled Essex County to rethink its safety needs and priorities, and to develop safety-focused projects for county roadways and intersections with the most critical safety and vulnerable roadway user needs, while making extensive efforts to listen to and be responsive to community comments, observations, and concerns.

Development of the Action Plan includes the following steps

- **Community and Stakeholder Engagement Approach**
- **Crash and Safety Assessment**
- **Network Screening and High-Injury Network (HIN)**
- **High-Risk Network (HRN)**
- **Project Prioritization**
- **Implementation Plan**

COMMUNITY AND STAKEHOLDER ENGAGEMENT APPROACH

The Public Engagement Plan guided extensive community outreach throughout the project and included a multi-pronged approach to facilitate participation from public officials, residents, advocacy organizations, and other stakeholders through both traditional and non-traditional methods. A mix of qualitative and quantitative community input was combined to develop the Essex SS4A Action Plan to reduce roadway fatalities and serious injuries while enhancing safety, mobility, and quality of life for all users, including vulnerable road users – including pedestrians, bicyclists, people with disabilities, transit riders, and older adults – who experience severely disproportionate impacts among fatal and serious injury crashes.

The City of East Orange is a sub-recipient of the USDOT grant funding for this initiative. Targeted outreach efforts were also conducted to engage East Orange residents and stakeholders. Outreach results specific to the City are included in an Appendix of the Supplemental East Orange SS4A Action Plan.

Figure 1. Engagement Timeline

Gathering Feedback

Ultimately, more than 2,600 stakeholders provided feedback to help shape the Action Plan, contributing input through an online survey and interactive map, stakeholder focus groups and community meetings, and a demonstration project and pop-up events held in East Orange. These efforts brought together people from diverse backgrounds who shared their concerns and ideas to improve street safety throughout the County.

Making Outreach Accessible

The Public Engagement Plan deployed a range of outreach methods to provide multiple opportunities for engagement. These included a project website, an online survey and interactive mapping tool, a social media campaign, and strategic partnerships with stakeholders invested in improving transportation safety decisions.

Special efforts were made to reach all community members, including:

1. Translation of public outreach materials into Spanish, Portuguese, and Haitian Creole to ensure inclusivity.
2. Distribution of multilingual flyers, social media sharekits and other outreach materials through strategic partners across the County.
3. Distribution of a "Meeting-in-a-Box" toolkit for advocates in Essex County, enabling them to engage communities through already established trust and networks.
4. Hosting multiple stakeholders and community meetings at different times to accommodate a wide range of participants.
5. Essex County shared outreach results data with any interested municipalities for use in their own local Safety Action Plans.

Figure 2. Public Engagement Numbers

What We Heard

The feedback and input collected through the various community engagement methods informed the development of the priority project locations, project design solutions and safety countermeasures, policies, and operational strategies to improve safety. The summary and outreach highlights presented in this document are drawn from the comprehensive analysis of public outreach results, as detailed in Appendix B: Outreach Summary.

The feedback was organized into four overarching categories:

Street Design and Mobility Infrastructure

This theme focuses on street design elements that prioritize safety, including sidewalk and pedestrian infrastructure, roadway design, bicycle infrastructure needs, and transit amenities and access, making streets safer, more comfortable, and welcoming for all users.

Although a connection between behavior and design exists, calling out design-related input will directly aid in shaping the Action Plan.

Enforcement and User Behavior

This theme pertains to the behavior of various street users and their impact on road safety, and includes issues such as vehicles speeding, running red lights, and failing to yield to pedestrians and cyclists, all of which heighten the risk of crashes. These behaviors contribute to a widespread perception of unsafe road conditions and a lack of effective enforcement across the County.

Education and Awareness

This theme focuses on making streets safer for all users by promoting driver awareness and encouraging safe walking, cycling, and active transportation.

Personal Safety

This theme addresses perceptions of personal safety, emphasizing the importance of individuals feeling secure from crime while traveling throughout Essex County, regardless of their transportation mode. Personal safety correlates with the design and enforcement considerations.

Most Frequently Noted Concerns

More than 2,600 stakeholders shared their safety concerns, experiences, and insights on pedestrian, bicycle, vehicle, and transit safety, as well as other challenges and opportunities. The most frequently noted concerns and ideas include:

- **Enforcement and behavior** issues include excessive speeding by vehicles, drivers not yielding to pedestrians and cyclists, and high-traffic volumes making roadways feel unsafe. These behaviors were seen as creating unsafe conditions for active transportation in the County.

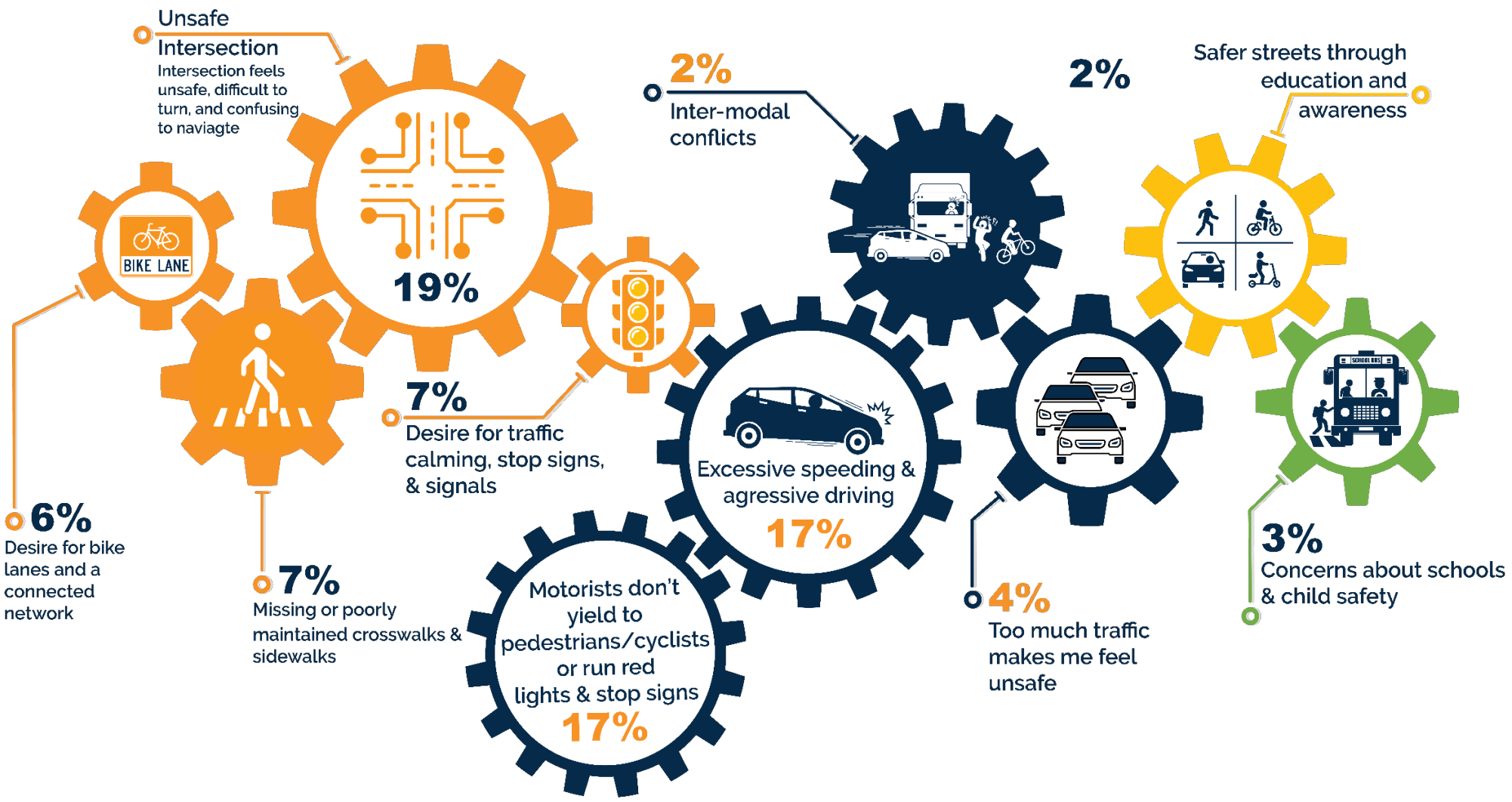


Figure 3. Most Frequently Noted Concerns

- **Street design and mobility infrastructure** concerns highlighted intersection and turning safety concerns and a desire to improve street design to make intersections safer for all modes of transportation. In particular, participants emphasized improving complicated and hard-to-navigate intersections with better signage and safer turning movement design.
- Desire to improve pedestrian infrastructure was another design concern, including maintaining sidewalks, installing pedestrian beacons, enhancing accessibility at crosswalks, and making sidewalks more ADA accessible.
- There was also a stated desire to improve roadway design and install traffic calming measures such as speed humps, rectangular rapid flashing beacons (RRFBs), flashing lights, traffic signals, and stop signs. Participants also suggested addressing traffic-related concerns through strategies such as introducing one-way streets, installing roundabouts, and optimizing signal timing.
- Participants relayed a desire for protected bike lanes, particularly within County parks, and for creating a network that connects local and regional trails to encourage alternate modes of transportation.

Other concerns include:

- Conflicts between various modes of transportation - vehicles, pedestrians, and cyclists - highlighting the need for more enforcement, **education and awareness**, and improved intersection design.
- Insufficient lighting and poor maintenance of pedestrian infrastructure, affecting individuals' perception of **personal safety** and increasing concerns about crime.
- Concerns related to **school zones and child safety** were noted, including traffic and congestion from school drop-offs and pick-ups, illegal parking, and vehicles not yielding or speeding in the school zone.
- Vehicles double-parking or parking illegally in bike lanes, causing inconvenience and posing safety hazards for vulnerable road users.

Communications

The public engagement process began with the development of branding and style guide for study materials and the launch of a bilingual webpage housed on the County's website, where stakeholders could find information about the study's purpose, project updates, resources, and ways to get involved.

The Action Plan project team created content for Essex County's social media feeds and produced a "Communications Sharekit" with pre-packaged, easy-to-share, social media and email content to help strategic project partners advertise activities through their own communications channels.

Additionally, a "Meeting-in-a-Box" toolkit was developed to help local stakeholders and community advocates gather meaningful feedback in familiar and trusted settings. The toolkit included a facilitator's guide, a participant feedback form, and a paper survey available in multiple languages. It provided step-by-step instructions and tips for hosting small-group discussions, collecting input at community gatherings, and ensuring a wide range of voices were represented in shaping the Action Plan.

Figure 4: Communications Materials

Stakeholder Engagement

Action Plan Advisory Committee

The Action Plan Advisory Committee (APAC) provided qualitative input by collaborating with the project team to develop and implement the Public Engagement Plan and to refine the project vision. They also served as a technical resource, providing necessary background documentation, insights into on-the-ground conditions and experiences, and feedback on the draft priority corridors and projects and policy recommendations.

The APAC met three times throughout the planning process. The first meeting was held in-person and the other two were held virtually, providing the project team with invaluable information and feedback. The APAC included key stakeholders from state, regional, county, and municipal governments, as well as advocacy organizations with transportation and safety expertise.

APAC MEMBERS

County and City Organizations

- Essex County Department of Public Works
- Essex County Division of Engineering
- Essex County Division of Planning
- East Orange Department of Public Works
- East Orange Department of Policy, Planning, and Development

Agencies

- Port Authority of New York & New Jersey (PANYNJ)
  NJ TRANSIT
- North Jersey Transportation Planning Authority (NJTPA)

Municipalities

- Belleville
- Bloomfield
- East Orange
- Essex Fells
- Glen Ridge
- Irvington
- Livingston
- Maplewood
- Montclair
- Newark
- Nutley
- Roseland
- South Orange

Advocacy Groups

- Avenues in Motion (TMA)
- Bike & Walk Montclair
- EZ RIDE (TMA)
- East Coast Greenway Alliance
- NJ Bike and Walk Coalition
- South Orange Walk Bike Ride
- thirdspace pARTners
- Tri-State Transportation Campaign

Virtual Municipal Meetings

The Essex SS4A Action Plan project team facilitated four (4) virtual municipal meetings to gather feedback on the priority corridors and projects, and recommended countermeasures. To streamline discussions, municipalities with similar characteristics or regional proximity were grouped together. As a grant subrecipient a dedicated meeting was held with City of East Orange staff.

Central & Northern Suburban municipalities: Glen Ridge, Maplewood, Montclair, Nutley, South Orange, West Orange

Urban & Eastern municipalities: Belleville, Bloomfield, Irvington, Newark, Orange

Western Suburban municipalities: Caldwell, Cedar Grove, Essex Fells, Fairfield, Livingston, Millburn, North Caldwell, Roseland, Verona, West Caldwell

Virtual Stakeholder Meetings

The Essex SS4A Action Plan project team held two (2) stakeholder meetings with strategic partners and advocates who are actively involved in or have a vested interest in transportation safety within Essex County. The meetings aimed to better understand the needs of all transportation system users, including pedestrians, bicyclists, motorists, and transit riders, so that the Action Plan could effectively address emerging issues related to mobility, access, and safety.

Feedback from these meetings was used to refine the draft recommendations to improve street safety throughout Essex County and East Orange.

Participants represented a diverse range of organizations, including Transportation Management Associations (TMAs), Business Improvement Districts (BIDs), social service agencies, libraries, and advocacy groups, ensuring that perspectives from across the County were included.

After the municipal and stakeholder meetings, participants were provided with a list detailing all countywide and/or citywide projects, as well as a separate table with the policy recommendations. Participants were invited to share comments and submit them to the project team. These comments have been compiled in the Outreach Appendix, along with responses.

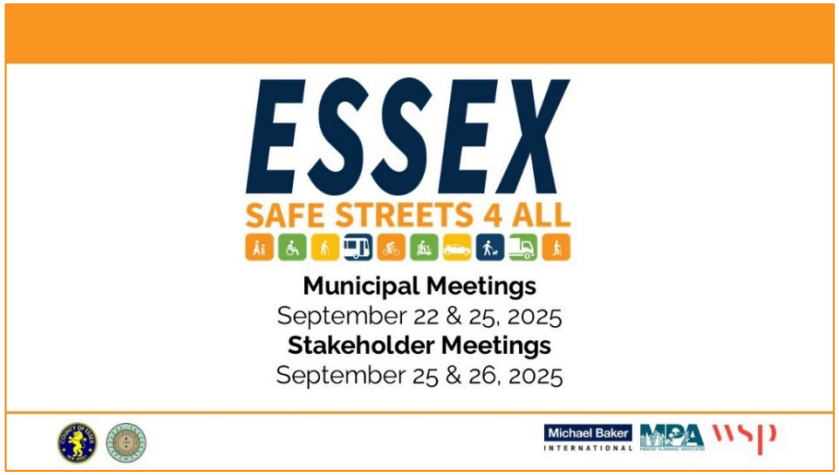


Figure 5. Municipal & Stakeholder Meeting Materials

Community Engagement

Survey & Map

The community feedback process featured an online survey with an interactive mapping component to gather insight into current and future transportation demand, desired street and/or safety improvements, and anticipated transportation priorities in Essex County. The survey collected information on participants' current travel habits by mode, preferred future travel modes, and perceptions of safety while using various travel modes. The interactive mapping component enabled participants to pinpoint location-specific concerns and opportunities.

The survey included optional demographics questions and was available in four (4) languages: English, Spanish, Portuguese, and Haitian Creole.

Ultimately, the online survey and map yielded 2,363 validated responses. Participants placed a total of 5,800 map pins to highlight areas of concern or opportunity within the County.

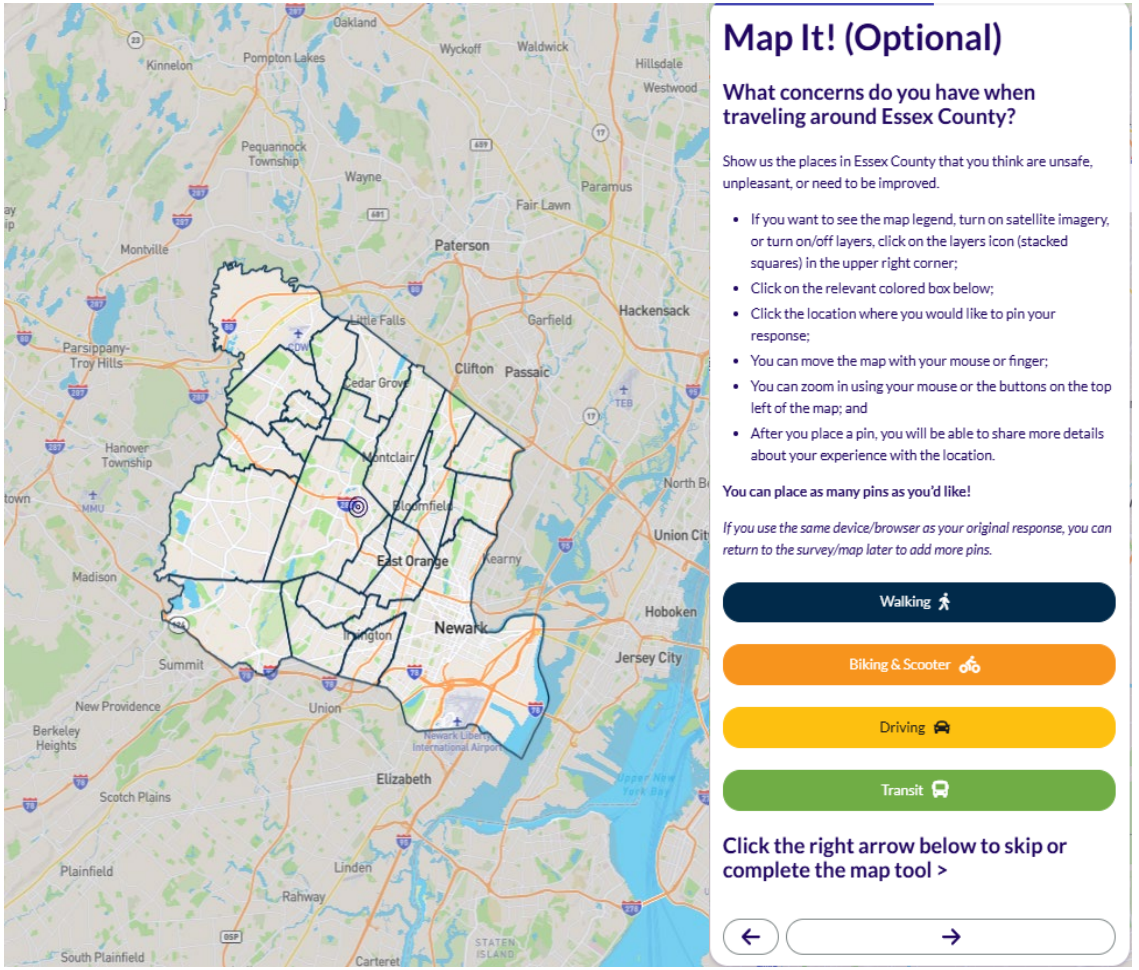


Figure 6. Screenshot of Survey and Map Tool

Survey & Map Results

Perception of Safety Across Various Travel Modes in Essex County

Respondents were asked to gauge their perception of safety across various travel modes in Essex County.

Almost two-thirds (65 percent) of respondents perceived biking as unsafe, followed by walking as the second most unsafe travel mode. In contrast, respondents considered public transit and cars the safest modes of travel, with almost 63 percent identifying trains, light rail, and PATH as the safest mode.

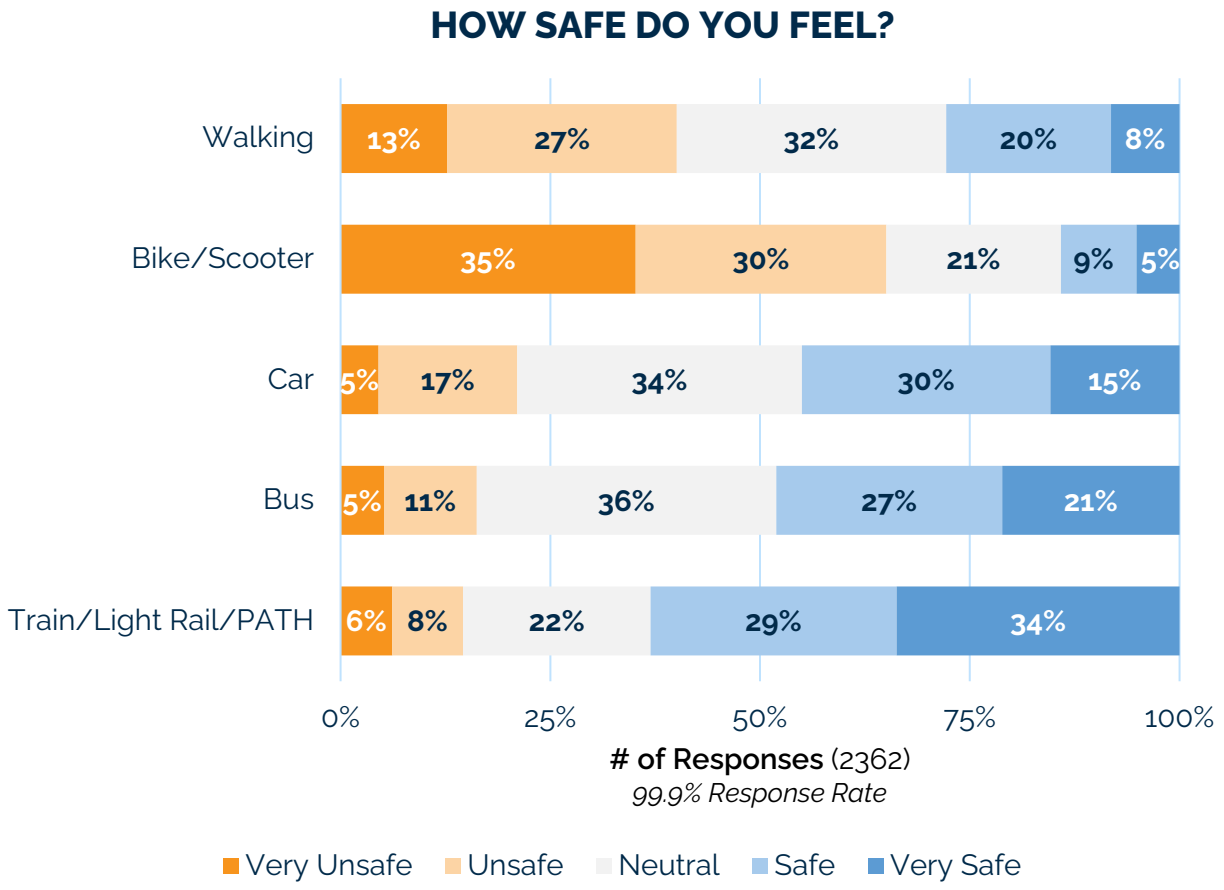


Figure 7. Perception of Safety Survey Results

Through the survey's mapping component, participants placed 5,800 map pins identifying location-specific concerns related to various transportation modes within the County.

The majority of these pins were concentrated along Essex County roads, including South Orange Avenue (CR 510, South Orange), Bloomfield Avenue (CR 506, Newark, Montclair, and Verona), Gregory Avenue (CR 673, West Orange), Grove Street (CR 611, Montclair), Valley Road (CR 621, Montclair), Pleasant Valley Way (CR 636, West Orange), and Valley Street (CR 638, Maplewood and South Orange).

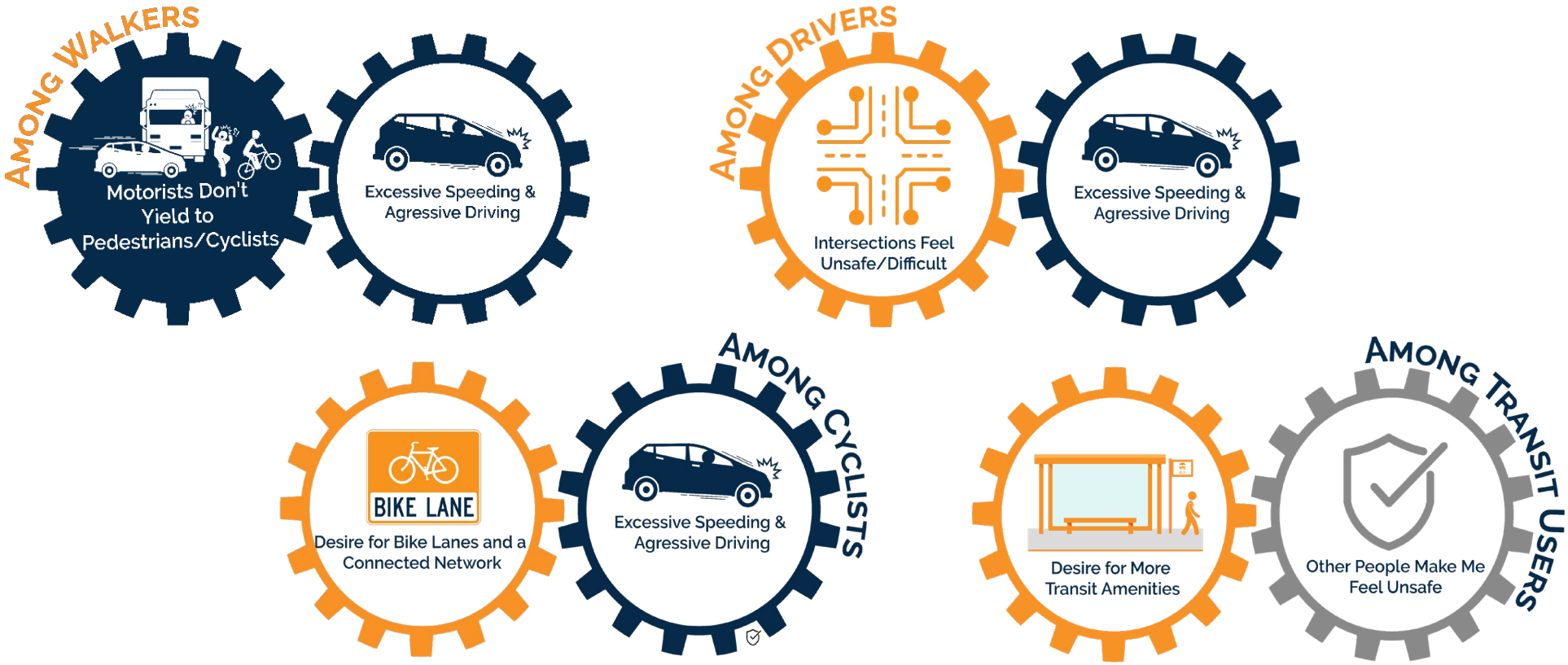


Figure 8: Concerns by Travel Mode Map Results

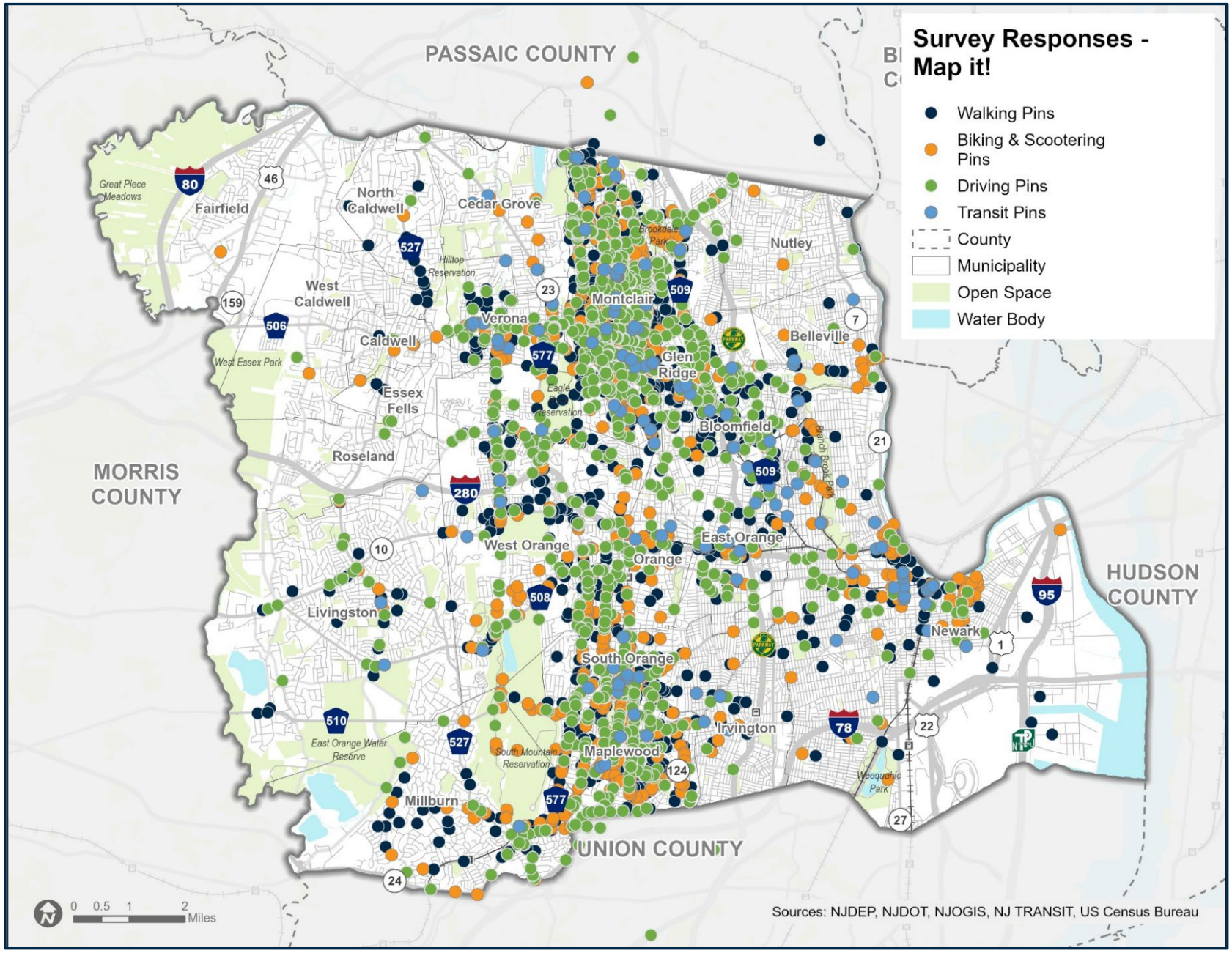
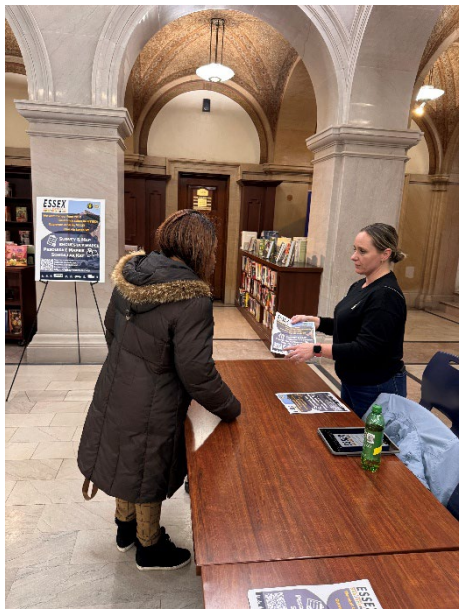


Figure 9: Map Result Pins by Travel Mode

Pop-up Engagement

The community engagement process included two pop-up events in Newark, supported by the North Jersey Transportation Planning Authority (NJTPA) through their Local Safety Action Plan initiative. At each event, two project team representatives welcomed attendees, explained the purpose and intended outcomes of the Action Plan, and discussed the overall importance of traffic safety. Flyers with links to the survey and an interactive map were also distributed.

Approximately 75 community members participated across both pop-up events.



Newark Public Library
Main Branch
Tuesday, April 8, 2025
2:00 – 6:30 PM

Weequahic Branch
Wednesday, April 9, 2025
2:00 – 5:00 PM

Figure 10: Newark Pop-up Engagement

Demonstration Project

On September 30, 2025, the Essex SS4A Action Plan team installed a temporary safety demonstration at the intersection of Elmwood and Shepard Avenue in East Orange, located directly adjacent to the Pride Academy Charter school and near Elmwood Park. The demonstration aimed to improve safety and accessibility for students and other active transportation users by testing quick-build measures, including curb extensions, high-visibility crosswalks, stop bars, and a "SCHOOL" pavement stencil.

The installation used low-cost, reusable materials from the NJTPA Lending Library, including temporary paints, delineators, cones, and signage, to illustrate how tactical interventions can enhance pedestrian safety and calm traffic.

More than 100 people, including students, teachers, parents, crossing guards, and residents, participated in the event, providing valuable feedback on the demonstration and broader traffic safety priorities in the community.

In Progress...

Engagement Activity

Figure 11: East Orange Demonstration Project

The event also included two interactive displays, presenting project-related information and asking questions about roadway safety. Participants were invited to share their perceptions of safety across various travel modes, vote on the top safety countermeasures for Essex County streets, and participate in a mapping exercise using an East Orange map to mark location-specific concerns and improvement ideas.

Figure 12: Demonstration Project Engagement Activities

Community members strongly supported the demonstration project and the plan. Nearly half of the participants reported feeling unsafe on trains, followed closely by biking and scooter travel. In contrast, almost two-thirds felt safe driving, and more than half felt safe walking.

Figure 14: Demonstration Project Perception of Safety Results Graphic

When asked to select the top safety recommendations, participants most often chose Rectangular Rapid Flash Beacons (RRFBs) and improvements to sidewalks and ADA ramps, followed by curb extensions, high-visibility crosswalks, modernized traffic signals, and intersection daylighting.

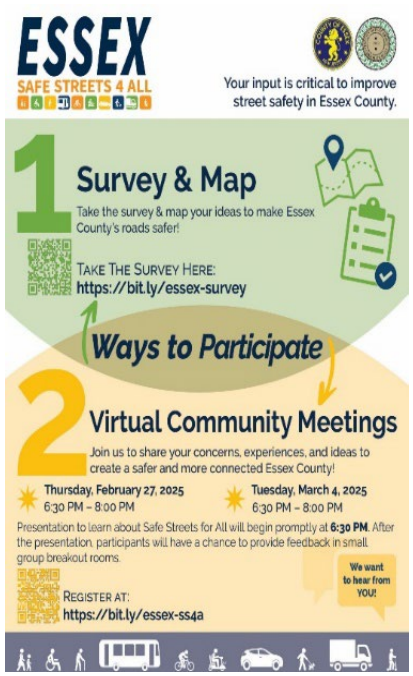
Figure 13. Demonstration Project Safety Recommendations Results Graphic

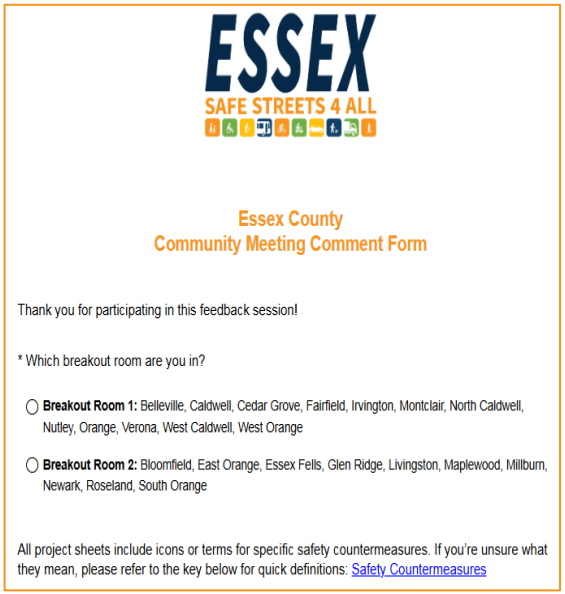
Virtual Community Meetings

The Essex SS4A Action Plan project team held four (4) community meetings, two at the beginning of the planning process to help shape the vision and set priorities, and two near the conclusion, to engage residents and stakeholders on the draft HIN, priority projects, and policy recommendations.

The first two virtual meetings, held on February 27 and March 3, 2025, drew 35 participants, including residents from across the county and staff from local organizations and government. Meetings began with a presentation introducing the SS4A study, its purpose, and key findings, including crash data and demographic analysis. Participants joined breakout sessions organized by home or work location, including one focused specifically on East Orange, to discuss current experiences, potential improvements, and their vision for safe streets.

The final two meetings, held on October 14 (Countywide) and October 15 (East Orange), 2025, focused on presenting and gathering feedback on the priority projects and policy framework. For the Countywide meeting, participants joined breakout rooms organized by municipality to discuss specific projects, with a separate room dedicated to the policy framework. There were no breakout rooms for the East Orange meeting, rather, all participants remained in the main room to discuss East Orange roadway projects on both the local and County priority lists. In both cases, participants could provide additional input through an online survey to project list and safety recommendations and provide feedback.




ESSEX
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Essex County
Community Meeting Comment Form

Thank you for participating in this feedback session!

* Which breakout room are you in?

○ **Breakout Room 1:** Belleville, Caldwell, Cedar Grove, Fairfield, Irvington, Montclair, North Caldwell, Nutley, Orange, Verona, West Caldwell, West Orange

○ **Breakout Room 2:** Bloomfield, East Orange, Essex Fells, Glen Ridge, Livingston, Maplewood, Millburn, Newark, Roseland, South Orange

All project sheets include icons or terms for specific safety countermeasures. If you're unsure what they mean, please refer to the key below for quick definitions: Safety Countermeasures

Figure 15. Community Meeting Materials

CRASH AND SAFETY ASSESSMENT

Comprehensive crash data resources were gathered using the New Jersey Department of Transportation's Safety Voyager platform for the most recent five years for which data were available (2018 – 2022). A five-year period is recommended to assess long-term safety trends, including crash occurrence, severity, contributing actions, circumstances, and conditions.[ii]

Although additional summary-level fatal crash data totals are available for more recent years, the comprehensive crash data resources required for the safety action plan methodologies were limited to the 2018-2022 time period.

To properly acknowledge all fatal crashes in Essex County, additional data were obtained from the only available source for this period – the New Jersey Department of Law & Public Safety. These additional data, however, are limited to the number of fatalities only, and lack the comprehensive details of the New Jersey Department of Transportation (NJDOT) crash reports.

Crash Data Overview

Essex County experienced a total of 133,981 transportation crashes in the 2018-2022 period. Approximately 77.8% of crashes that occurred in Essex County during this period resulted in no personal injuries. Fatal and suspected serious injuries (FSI) totaled 1,832, accounting for 1.4 percent of the five-year Essex County total. A summary of the number of crashes by severity rating is provided in Table 1

Table 1: Crash Severity by Type, Essex County (2018 - 2022)

Injury Severity	Total Crashes	Percent of Total
No Apparent Injury	104,200	77.8%
Possible Injury	19,575	14.6%
Suspected Minor Injury	8,374	6.3%
Suspected Serious Injury	**1,596**	1.2%
Fatal Injury	**236**	0.2%
Total	**133,981**	

The summary-level crash data displayed by year in Table 2 indicate an average of about 30,800 crashes per year in Essex County for 2018 and 2019, followed by a significant decrease during the COVID-19 pandemic, with a one-year decline of about 34 percent from 2019 to 2020. After 2020, the data show that the number of crashes per year increased significantly in 2021 and 2022, but remained well below the totals for 2018 and 2019.

Table 2: Crash Data Summary by Year, Essex County (2018 - 2025)

Year	Total Crashes	Fatalities	Serious Injuries	Total FSI Crashes
2018	30,586	46	**92**	138
2019	31,003	34	379	413
2020	**20,572**	38	358	396
2021	25,147	61	396	457
2022	26,673	57	371	428
Yearly Average	**26,796**	**48**	**319**	**367**
Avg Excl 2018 SI		**-**	**376**	**424**
2023*	**-**	53	**-**	**-**
2024*	**-**	55	**-**	**-**
2025 (Through Oct 31 only)*	-	**38**	**-**	**-**

Fatal crash data source: https://www.njoag.gov/trafficfatalities/
Year 2025 Fatalities data through October 31, 2025

The summary data also indicate a significant surge in FSI crashes between 2018 and 2019, a trend not unique to Essex County but observed across New Jersey. Statewide, the number of suspected serious injuries increased from 1,110 in 2018 to 2,643 in 2019. The primary reason for this increase in reported serious injuries is that New Jersey updated its crash reporting form to reflect changes to federally required injury classifications.

FSI Crash Hotspots

Over the 5-year period, Essex County recorded 1,832 FSI crashes. The principal FSI hotspots include much of Bloomfield Avenue (CR 506), many of the region's principal arterial roadways connecting to and from Newark, such as South Orange Avenue (CR 510) and Springfield Avenue (CR 603), and several roadways adjacent to Freeway Drive and crossing over I-280 in East Orange.

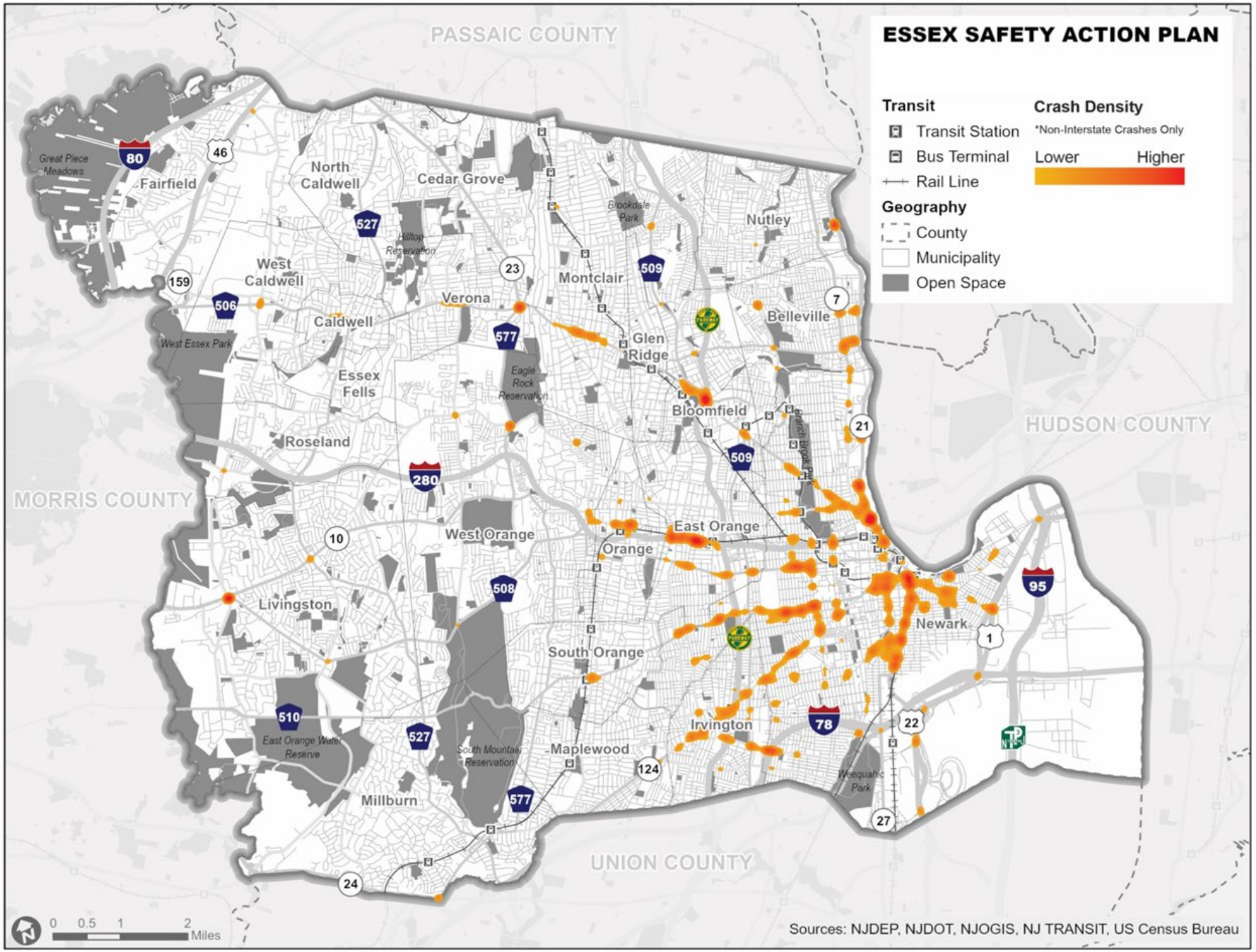


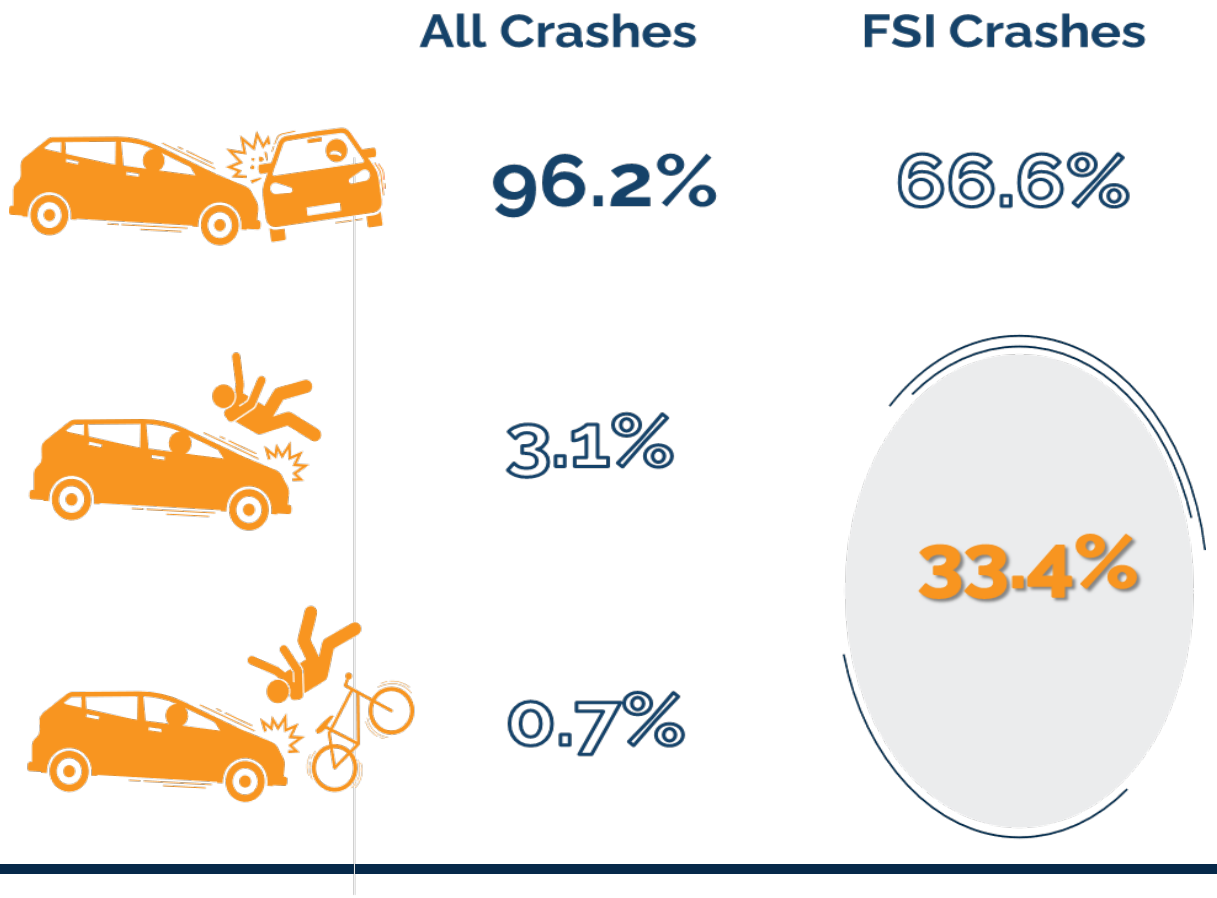
Figure 16: FSI Crash Hotspots, Essex County

Disproportionate Safety Impacts

The data indicate that Essex County pedestrians and cyclists experience significant and disproportionate safety impacts, especially among FSI crashes, accounting for 33.4 percent of all Essex FSI crashes, compared to just 3.8 percent of all crashes in the county, a factor of almost ninefold. In total, Essex County has approximately 1,688 miles of roadways of various types. Essex owns and is responsible for 213 miles, or 12.6 percent of the county total.

However, these county-owned roadways experienced 25.8 percent of all crashes in the county, 30.7 percent of FSI crashes, 35.5 percent of pedestrian and bicycle crashes, and 35.9 percent of pedestrian and bicycle FSI crashes.

All are significantly higher than their 12.6 percent share of total roadway mileage.



Contributing Factors

Extensive analysis of comprehensive crash data resources indicates that a variety of factors contribute to crash risk and severity in Essex County, including driver and pedestrian actions, roadway lighting conditions, local context, development patterns, and proximity to bus and rail transit.

The primary contributing factors among Essex County FSI crashes caused by driver or pedestrian action include:

Driver inattention was a factor in 24.4% of FSI crashes

Failure to Yield by Drivers and Pedestrians: 10%

Unsafe Vehicle Speed: 10%

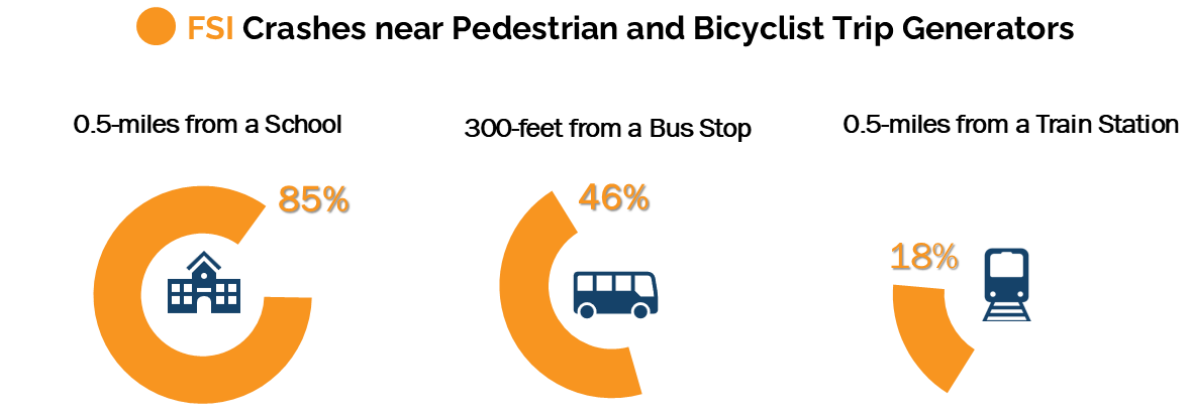
Proximity to Trip Generators

Local community context, development patterns, and proximity to bus and rail transit are also identified as significant contributing factors among crash occurrence and crash severity in Essex County. Among Essex County FSI crashes 2018-2022:

- **85 percent occurred within ½ mile from a school**
- **46 percent occurred within 300 feet from a bus stop**
- **18 percent occurred within ½ mile from a train station**

It is critical to note that this finding does not indicate that schools or transit service pose inherent safety risks, but rather that they are significant generators of travel, whether by vehicle, rideshare, bus or rail transit, foot, or bicycle.

Contributing Factors: Proximity



Street Lighting and Crash Severity

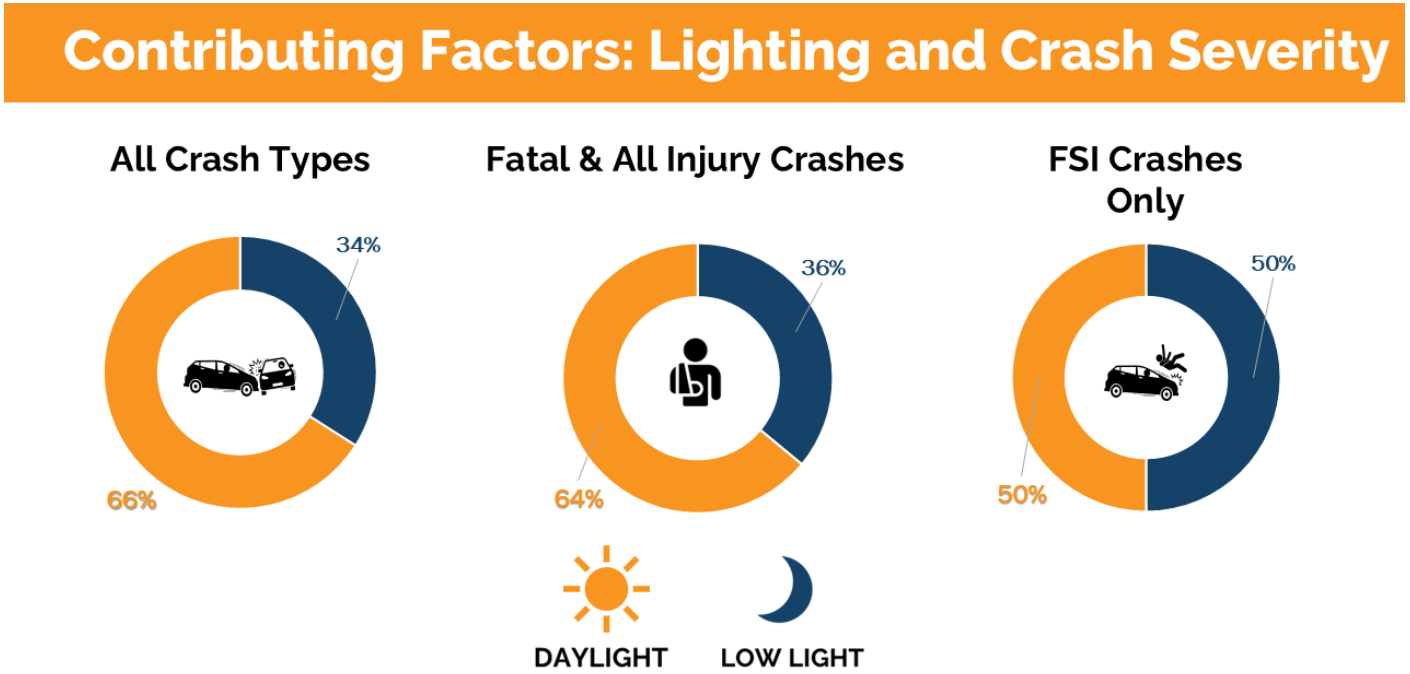
A recent NJDOT study of FSI crashes found that lighting plays a crucial role in enhancing pedestrian safety. Over the five-year study period, almost 60% of the fatal and serious injury pedestrian and bicycle crashes that were reviewed in the project occurred in low-light conditions (lighting conditions other than "daylight"). Given that approximately 67% of trips (pedestrian and vehicle) occurred during daylight hours (7 AM – 6 PM) in New Jersey in 2023, the frequency of pedestrian and cyclist crashes occurring in the dark indicates that nighttime crashes are significantly overrepresented..iii

In a similar FHWA study, approximately 76% of all pedestrian fatalities occurred in low-light conditions in 2019.[iv]

Given the scale of this safety problem, it is critical that comprehensive lighting evaluations and upgrades be implemented on all NJDOT roadway projects. Consideration of lighting design should be part of all projects, based on local context, and emphasized in areas with pedestrian-generating land uses and in areas with vulnerable road users.

Lighting is a fundamental aspect of roadway design. FHWA's Lighting Handbook suggests that lighting designs for urban streets, rural roads, expressways, urban freeways, suburban freeways, and rural freeways be based on local context, crash history, and the presence of vulnerable road users.

Pedestrian-scale lighting, especially, is an established pedestrian safety countermeasure commonly used at intersections and corridors to mitigate nighttime crashes.



Network Screening

The Action Plan has been undertaken to identify the roadway segments that present the most severe safety risk and prioritize those with the greatest potential for reduced crash occurrence and severity. A countywide roadway network screening analysis was performed to establish where crashes were occurring most frequently and with the greatest severity, to identify locations expected to benefit the most from a program of proven, targeted, and cost-effective safety treatments and countermeasures.

The roadway network was screened to calculate a risk score for each roadway segment based on the type and number of crashes, derived from comprehensive crash data resources for Essex County. Each individual crash is assigned a crash severity score, recognizing the significant personal and societal impact of loss of life compared to the much less severe impact of damage to personal or public property, such as a vehicle or infrastructure.

High Injury Network (HIN)

The High Injury Network (HIN) process then screens the roadway network to county-owned roadways only and identifies unique one-mile-long roadway segments with the highest risk scores to create the HIN. The initial Essex County HIN includes the 62 highest-risk score segments owned and maintained by Essex County, ranked in order of their cumulative risk score.

The Essex County HIN roadway segments are depicted in orange in Figure 17. A majority of the HIN segments are located in the urbanized eastern and southeastern towns and cities of Essex County.

The initial screening of the Essex County HIN determined that about one-quarter of county roadways (60.3 miles) accounted for more than two-thirds (68.2 percent) of total FSI crashes, meeting the goal of a targeted approach that delivers the greatest potential for reduced crash occurrence and severity.

Supplemental High Injury Network

Despite its countywide scope, the initial HIN did not include any segments in five of the county's 22 municipalities, all located in suburban and low-density western communities. This is due to their relatively low risk score and crash severity. To ensure municipal and regional balance, Essex Falls, Fairfield, Millburn, North Caldwell, and Roseland were each analyzed a second time to determine the highest-ranking one-mile segment within their municipal boundaries.

These five additional one-mile segments are known as the Essex County Supplemental HIN and depicted in blue in Figure 17. Note that these supplemental entries were determined to have a much lower overall risk score and, therefore, are much less likely to be eligible for grant funding under the SS4A program.

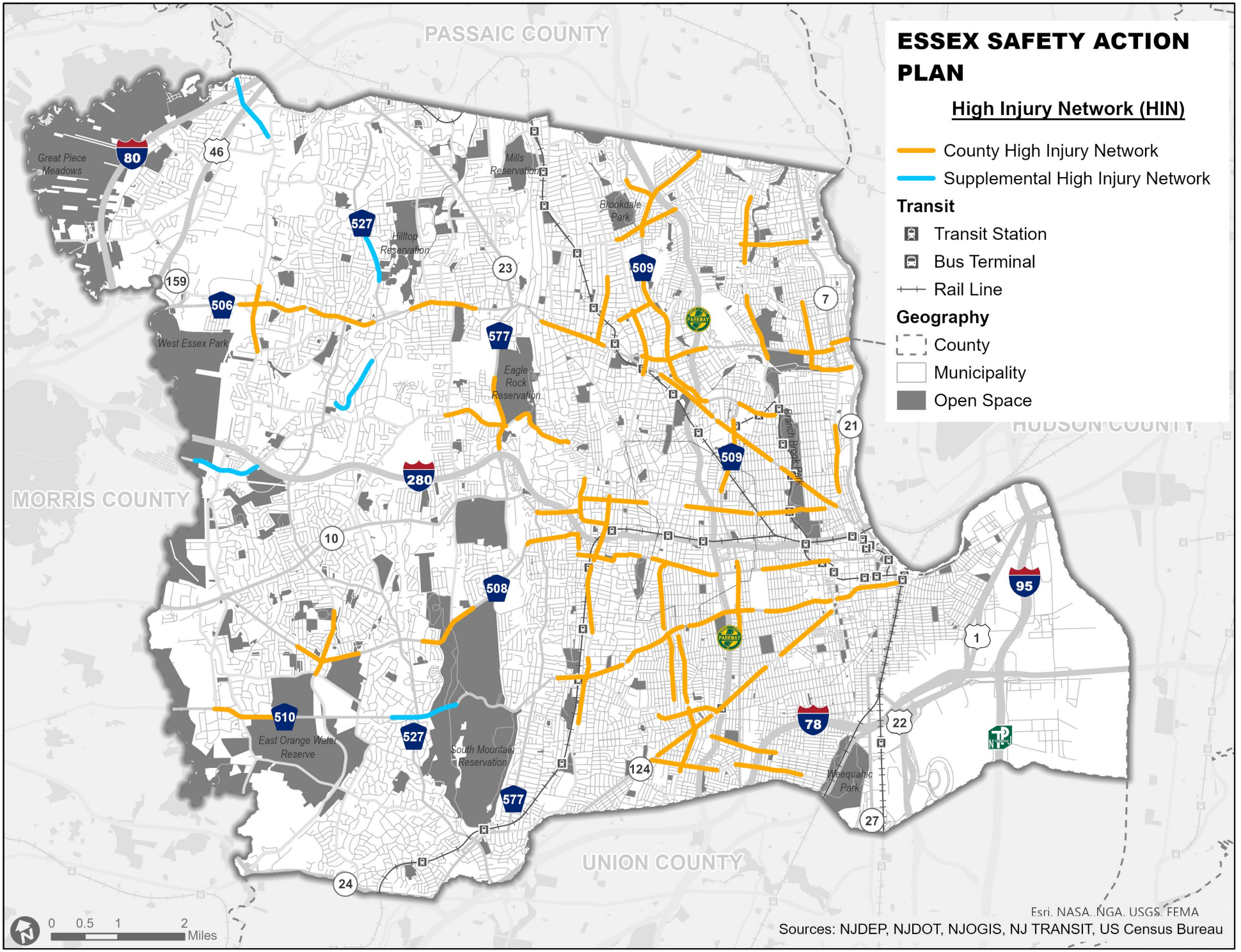


Figure 17: Essex County High Injury Network (HIN) with Supplemental HIN Segments

High-Risk Network

The High-Risk Network (HRN) analyzes the countywide network to identify those roadway features most commonly associated with an increased crash risk. The HRN methodology augments the HIN assessment and enables locations that may not have a significant crash history but do have roadway features demonstrated to be consistent with increased crash risk to be considered for Action Plan prioritization. This approach provides a more robust and comprehensive assessment of both crash history and the factors contributing to crash occurrence.

The HRN methodology combines crash data analysis, GIS analytics, and risk assessment techniques and is based on Systemic Pedestrian Safety Analysis as defined in NCHRP Research Report 893.[v]

The purpose of the systemic approach, as opposed to the hot-spot (HIN) methodology, is to proactively identify and prioritize locations where risk is high but may not have a significant crash history, thereby creating a more balanced assessment of overall safety needs.[vi]

Application of the systemic method to the Essex County geography and roadway network determined that the following roadway features are associated with significantly increased crash risk in Essex County:

- Functional Classification = Freeway and Expressway, Principal Arterial, Minor Arterial, Minor Collector
- Number of Travel Lanes = 3 or more
- Pavement Width = 40 feet or more
- Divided Roadway = features a center median barrier
- Posted Speed Limit = 30 mph or greater
- Roadway Volume = greater than 10.000 AADT
- Roadway is a Designated Freight Route
- Intersection Factors (within any 1/10-mile segment) =
    - 1 or more signalized intersections
    - 3 or more unsignalized intersections
- Schools within 0.25 Miles = 3 or more
- Schools within 50 feet = 1 or more

Using a methodology similar to that employed to develop the Essex County HIN, the highest-ranked one-mile high-risk segments were identified. These high-risk segments were further refined to filter out all non-county-owned owned maintained roads and depicted in red in Figure 17**Error! Reference source not found.**

Compared to the HIN, the HRN provides much greater municipal and regional coverage and a more balanced distribution across Essex County. Although much overlap is evident, the HRN is more comprehensive and diverse, and introduces significant suburban and western coverage that is not present in the HIN.

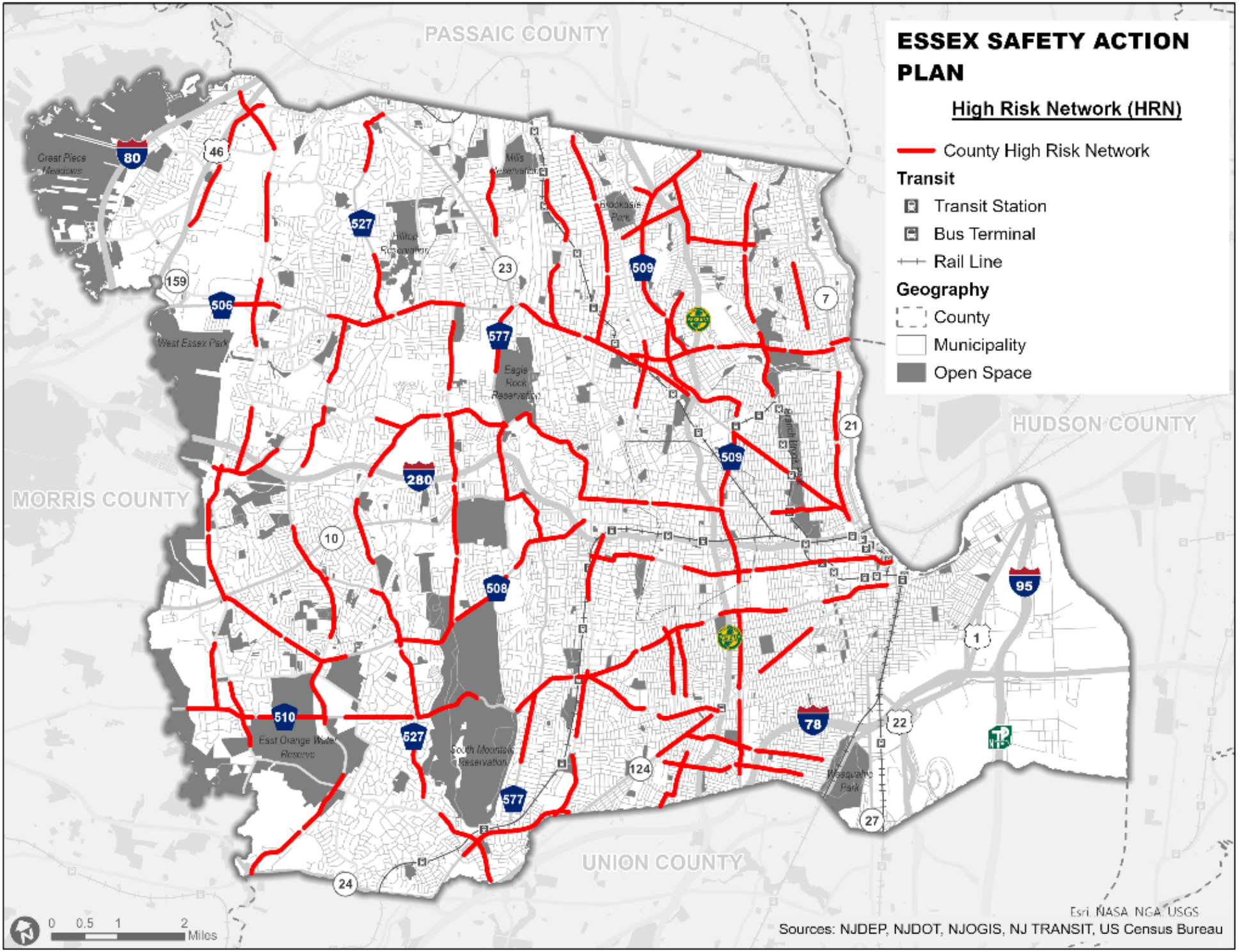


Figure 18: Essex County High Risk Network (HRN)

Corridor Prioritization

The final step identified Essex County roadways with the most significant crash risk and severity to prioritize locations with the greatest potential for reduced crash occurrence and severity. Prioritization brings together the data-driven and community-led elements to achieve a balance between technical assessment and community priorities.

Crash History - HIN

The crash history (HIN) component is allocated 45% in the prioritization system. Crash history prioritizes roadway segments with the most severe safety risk and focuses specifically on those segments where crashes have occurred most frequently and with the greatest severity.

FSI Crash History

Because the ultimate vision of the Action Plan is to mitigate FSI crashes rather than focusing solely on crash hot spots, FSI crash history is allocated 10% of the weighted score. The FSI score emphasizes crash-severity by prioritizing the highest FSI crash segments over others that experience greater proportions of less severe and property-damage-only crashes, but fewer of the more severe FSI crashes.

Presence of High-Risk Roadway Features - HRN

The presence of high-risk roadway features identified in the systemic analysis (HRN) comprises 30% of the weighted score. This proactive factor prioritizes locations with high crash risk features that may not have a significant crash history, creating a more balanced and comprehensive assessment of overall safety risk and need.

Public Input Score

Public input comprises the final 15% of the weighted score. The 15% weight is applied to any roadway segment with at least one pin entry in the interactive map, and 0% to segments with no map pin entries.

Current and Ongoing Projects

The following current and ongoing Essex County projects are listed in the NJTPA Online Transportation Information System (NOTIS)[vii]. These projects represent additional efforts in Essex County to address crash history and severity, and include intersection improvements, trails, pedestrian and bicycle facilities, traffic calming, streetscaping and lighting.

Project funding sources include TAP[viii], HSIP[ix], and NJTPA-LSP (Local Safety Programs)[x]. Additional project details are provided in the Appendix.

East Orange Trail Project: Trail renovation between Brighton Avenue and Glenwood Avenue, including installation of trash and recycling receptacles at entrances, ADA ramps, bollards, and bike racks.

Glenridge Avenue Cycle Track: New 2-way cycle track along the south side of Glenridge Avenue between Forest Street and the western edge of the former Lackawanna Plaza shopping center.

Main Street Corridor Streetscape, Orange and West Orange. The goal is to improve safety and mobility for all users, including pedestrians, bicyclists, transit riders, and motorists. The project area runs along Main Street from Scotland Road to Park Avenue.

Scotland Road Gateway Beautification, City of Orange: Pedestrian safety and accessibility improvements near Highland Ave Transit Station, including sidewalk and curb reconstruction, and landscaping.

Washington Street Corridor Improvements, West Orange: Proposed improvements include widened sidewalks and curbs, ADA upgrades, flashing speed limit and pedestrian crossing signs, enhanced lighting, and landscaping along 0.14 miles on Washington Street from Liberty Street to Meade Street.

Grove Street, Newark and Irvington: Improvements at 8 intersections.

North and South Grove Street (CR 509), East Orange: Safety and operational improvements at 10 intersections.

Irvington Avenue & Clinton Avenue, Various Municipalities: Traffic signal and roadway improvements at 11 intersections.

Bloomfield Avenue and Ridgewood Avenue, Bloomfield and Glen Ridge: Improvements at 10 intersections.

Essex County Intersection Improvements, Various Municipalities: Traffic signal and roadway improvements at 12 intersections.

The following additional adjustments were made among the candidate priority projects:

- Springfield Avenue (CR 603), MP 0.00 to MP 3.43, in Newark and Irvington**,** was removed from the priority project list. This location began concept development prior to the Essex SS4A Action Plan**,** and is anticipated to seek funding from alternative funding sources.
- Bloomfield Avenue (CR 506S), MP 0.48 to MP 3.77, in Newark, Bloomfield, and Glen Ridge, was removed from the priority project list; a comprehensive safety project was completed for this location in 2024
- Projects at Watchung Avenue, East Northfield Road, Centre Street, Valley Street/Scotland Road, and Grove Street/South Grove Street were removed from the priority project list due to receiving very low prioritization scores, based on low combined scoring for crash history and high-risk roadway features.

The final prioritized list includes 34 unique stand-alone corridor segments covering a total of 54 miles of county-owned roadways eligible for the application of safety improvements and countermeasures.

ESSEX SS4A IMPLEMENTATION PLAN

The Implementation Plan is focused on Essex County's most significant crash risk and severity impacts on county-owned roadways and prioritizes locations with the greatest potential to mitigate crash occurrence and severity.

The Implementation Plan includes the following actions to guide and support implementation and work towards achieving the Action Plan goals:

- **Project development begins with the FHWA's Proven Safety Countermeasures applicable to local context and conditions, and supported by community engagement and stakeholder outreach.**
    - The Essex County priority projects were assembled using targeted and cost-effective safety treatments, including the proven safety countermeasures. These priority projects are conceptual in nature, governed by county design procedures and criteria, and intended to advance to feasibility assessment and design by project sponsor(s).
    - Bicycle facilities must come from an approved bicycle plan developed in consultation with Essex County in order to be recommended on county-owned roadways. Only the City of Newark has an approved bicycle plan – BIKENewark – that currently meets this requirement.
- **Adopt policy instruments and operational strategies that support and enhance project implementation and achieve consensus safety goals.**
    - This includes tracking of project implementation status, and reporting on progress towards goal attainment and performance measures.
    - Implementation begins with organizing and supporting a Road Safety Advisory Committee with representatives from County, municipal, and community partners to champion the implementation of Essex SS4A Action Plan goals and strategies.

PROVEN SAFETY COUNTERMEASURES

The FHWA's Proven Safety Countermeasures are a comprehensive set of 28 individual strategies aimed at significantly reducing roadway fatalities and serious injuries across the United States. These countermeasures are designed to be effective for all road users and applicable to a wide range of road types—from rural two-lane roads and municipal main streets to urban freeways.

Each strategy targets key safety focus areas such as speed management, intersections, roadway departures, and pedestrian/bicyclist safety, with some measures addressing multiple areas simultaneously. For example, speed safety cameras and variable speed limits help regulate traffic speeds, reducing crash severity. Intersection improvements like roundabouts and dedicated turn lanes minimize conflict points and improve traffic flow. Pedestrian-focused measures such as hybrid beacons, refuge islands, and enhanced crosswalk visibility increase safety for vulnerable road users. Roadway departure solutions like rumble strips and improved curve delineation help prevent vehicles from leaving the roadway. Additionally, crosscutting strategies like lighting upgrades and road safety audits contribute to a safer overall transportation system.

The Proven Safety Countermeasures comprise the core of recommendations for the Implementation Plan Priority Projects

Countermeasures identified for each corridor are based on initial assessment. Specific configuration and details will be addressed during project design and engineering phase.

Recommended Safety Countermeasure Toolkit For Priority Projects

These evidence-based strategies aim at reducing roadway fatalities and serious injuries. They address speed management, pedestrian and bicyclist safety, roadway departure prevention, intersection safety, and crosscutting measures like lighting and safety plans. Their effectiveness spans urban, rural, and local roads, and they adapt well to varied user needs.

Recommended Countermeasures

1. Upgrade Traffic Signals

2. Leading Pedestrian Interval (LPI)

3. Yellow Change Interval

4. Intersection Daylighting & Curb Extension

5. Improved Street Lighting

6. High-Visibility Crosswalks

7. Sidewalks & ADA Ramps

8. Rectangular Rapid Flashing Beacon (RRFB)

9. Pedestrian Hybrid Beacon

10. Pedestrian Refuge Island

11. Reduce Speed Limits

12. Road Diet

13. Reconfigure Intersection

14. Reconfigure Intersection Turn Lanes

15. Right Turn In/Out Only

16. Prohibit Left Turns

17. Hardened Centerlines

18. High Friction Surface Treatment

19. Horizontal Curve Warning

20. Reconfigure Roadway

21. Bike Lanes

1. Upgrade Traffic Signals

Modernized traffic signals provide a contrasting background and reflective backplate. The improved visibility of a signal head with a backplate is made even more conspicuous by framing it with a 1- to 3-inch yellow retroreflective border. Traffic signal heads that have backplates equipped with retroreflective borders are more visible and conspicuous in both daytime and nighttime conditions.
Helps reduce crashes up to 16%

2. Leading Pedestrian Interval

Leading Pedestrian Intervals (LPI) change traffic signal timing and phasing plans to provide pedestrians a head start at intersection crossings by activating the WALK signal in advance of the GREEN signal. LPI designs create enhanced separation between pedestrians and turning traffic, and are often paired with no-right-turn-on-red to further enforce this separation.
Helps reduce pedestrian crashes up to 19%

3. Yellow Change Interval

The change interval is the time a traffic signal displays a steady YELLOW light before turning RED. Longer change internal times provides a safety buffer by allowing more time for moving traffic to pass through the intersection and helping to mitigate occurrence of side-angle and rear-end crashes. Improves safety by giving drivers enough time pass through the intersection or stop safely at the stop bar, thereby reducing the potential for conflicts.
Helps reduce crashes up to 18%

4. Intersection Daylighting & Curb Extension

Vehicles parked too close to intersections impede visibility among vehicular traffic, pedestrians, and cyclists. These countermeasures paint, planters, or curb extensions that improve visibility and extend the sidewalk, preventing vehicles from parking too close to intersections and shortening pedestrian crossing distances.
Helps improve visibility for drivers and pedestrians, slow-turning vehicles, and makes crosswalks safer

5. Improved Street Lighting

Research indicates a strong correlation among low-light conditions and fatal and serious injury crashes, especially among vulnerable road users. Improved street lighting is a cost-effective means of improving safety through enhanced visibility of pedestrians on streets, sidewalks, and at intersections.
Helps reduce nighttime pedestrian crashes at intersections up to 42%.

6. High-Visibility Crosswalks

High-visibility crosswalks use reflective paint along with bold patterns and signs to enhance pedestrian visibility, improve safety and mobility, and reduce vehicle pedestrian crash occurrence and severity. High-visibility crosswalks are applicable at both intersections and at mid-block crossings. High-visibility designs are a low-cost means to improve pedestrian visibility and crossing safety.
Helps reduce pedestrian crashes up to 40%

7. Sidewalks & ADA Ramps

Gaps in sidewalks and lack of ADA-compliant curb ramps, even when minor, can severely limit mobility for vulnerable road users. Sidewalks provide dedicated spaces for walking or wheelchair use only, and are fully separated from traffic and parked vehicles. ADA-compliant curb ramps enhance safety for all road users and significantly improve accessibility, mobility, and safety for wheelchair users, seniors, and travelers with mobility limitations

Helps reduce pedestrian crashes up to 40%

8. Rectangular Rapid Flashing Beacon (RRFB)

Visibility of pedestrians crossing or wishing to cross at unsignalized locations can be limited. RRFBs are flashing amber lights actuated by pedestrian push-buttons at unsignalized crosswalks and midblock crossings. RRFBs enhance pedestrian visibility and increase driver awareness of pedestrians at crosswalks. RRFBs can also accompany school or trail crossing warning signs.

Helps reduce pedestrian crashes up to 47%

9. Pedestrian Hybrid Beacon

Visibility of pedestrians crossing or wishing to cross at unsignalized locations, even with high pedestrian volumes, can be limited. A Pedestrian Hybrid Beacon (PHB) is a traffic control device for crosswalks without traffic signals. PHBs are actuated by pedestrians, which initiates a yellow to red lighting sequence to direct motorists to slow and come to a stop.

Helps reduce pedestrian crashes up to 46%

10. Pedestrian Refuge Island

Pedestrian refuge islands provide a protected area in the middle of the roadway, where pedestrians can wait safely and free from moving traffic. Refuge designs reduce crossing distances and may include protective elements such as raised islands and medians to provide enhance protection. Many vulnerable road users may be unable to cross wide roadways in a single WALK phase, and refuge islands enable at-risk travelers to safely cross busy roadways.

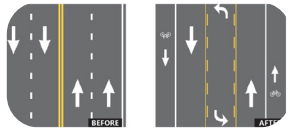
Helps reduce pedestrian crashes up to 32%

11. Reduce Speed Limits

Research indicates a significant correlation among higher travel speeds and fatal injury crashes; even a small speed reduction can greatly reduce fatal crashes and improve overall safety. Posted speed limits should be consistent with local context and development. School zones and residential areas in particular warrant close attention to appropriate travel speed regulation and speed limits.

Helps to reduce all injury and fatal crashes up to 14%

12. Road Diet



Road diets are implemented to improve safety and match street design to local context and character. A typical road diet would convert a four-lane road into three-lanes, with two traffic lanes and a center lane for left turns. The reallocated roadway space may be used to add new features and amenities such as wider sidewalks, curb extension, dedicated bicycle lanes, on-street parking, and improved crosswalks,

Helps reduce pedestrian crashes up to 47%

13. Reconfigure Intersection

Intersection reconfiguration involves modifying the layout, geometry, or signal placement and timing (where applicable) to improve visibility and reduce conflict points and crashes. Reconfiguration measures can include removing slip lanes, installing new turn lanes, or traffic calming measures such as curb extensions, pedestrian crossing islands, or a roundabout treatment, etc., to improve traffic operations and safety. Improves traffic flow and safety by reducing conflicts.

14. Reconfigure Intersection Turn Lanes

Turn lane reconfiguration involves modifying the number, type, alignment, or radius of turn lanes at an intersection, often separating turning traffic from through movements to improve visibility and reduce conflict points and crashes. Reconfiguration measures can vary to address repeated occurrence of specific crash types, address safety concerns, or improve traffic operations.

15. Right Turn In/Out Only

Right turn in/right turn out designs restrict vehicle movements to allow right turns only at a driveway or intersection. These countermeasures prevent conflicts with oncoming traffic when making left turns across busy and wide roadways where visibility may be limited and traffic flow provides insufficient gaps to make safe left turn movements.
Helps reduce crashes up to 45%

16. Prohibit Left Turns

Left turn prohibitions restrict vehicles from making left turns at a specific intersection or roadway segment, such as wide, multi-lane, and heavily traveled arterial roadways. With the prohibition, drivers must proceed straight ahead or turn right and instead and use opportunities to turn left where a dedicated left-turn lane and signal phase are provided. This countermeasure can improve safety by eliminating cross-traffic turning maneuvers, and improve efficiency of traffic flow.

17. Hardened Centerlines

Hardened centerlines are modular speed humps placed at intersections to extend the centerline. These design are warranted at intersections with high crash rates or where left turn prohibitions are frequently ignored, Hardened centerlines prevent vehicles from cutting across lanes and making aggressive corner-cutting turns, making illegal left turns, and can also reduce pedestrian exposure to left-turning vehicles.
Helps to reduce conflicts between pedestrians and left-turning vehicles up to 70%

18. High Friction Surface Treatment

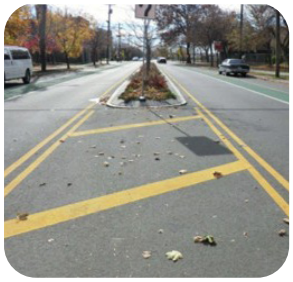
High Friction Surface Treatment (HFST) is a special skid resistant material applied to road surfaces consisting of durable, anti-abrasion, and polish-resistant aggregate over a resin binder that locks the aggregate in place to restore or enhance friction and skid resistance. HFST is applicable to locations with increased friction demand, such as horizontal curves, interchange ramps, high-speed intersection or crosswalk approaches.
Helps reduce total crashes at intersections up to 67%

19. Horizontal Curve Warning

Horizontal curve warnings alert drivers to an upcoming curve and its degree of sharpness. Treatments can utilize curve warning and chevron alignment signs, retroreflective pavement markings, edge line striping, delineators, rumble strips, or dynamic curve warning systems to alert drivers of significant curvature ahead. Curve warnings improve visibility, help drivers adjust their speed in advance, and reduces run-off-road and loss-of-control crashes.

Helps reduce crashes up to 38%

20. Reconfigure Roadway



Roadway Reconfiguration involves modifying the layout or geometry alignment of a roadway lanes, centerlines, and shoulders, to reduce or eliminate conflict vehicle points, calm speeding traffic and aggressive driving behaviors, and mitigate crashes and crash severity. Design features may include reducing horizontal and vertical curves, clearing sightlines, narrowing or removal of travel lanes, removing on-street parking, etc. Essex County requires a minimum lane width of 11 feet on county-owned roadways.

Improves traffic flow and safety, reduces aggressive driving and passing maneuvers

21. Bike Lanes

Bicycle lanes are designated roadway areas defined with appropriate striping, signage, and markings for bicycle use only. Many bike riders demonstrate a strong preference for dedicated bicycle facilities, separated and free from traffic. Bicycle facility design and placement are dictated by local design standards and guidance and should be consistent with local context, adjacent land use and driveways, and roadway conditions. Bicycle facilities include sharrows, traditional bike lanes, buffered bike lanes, protected bike lanes, sidepaths, or fully off-road trails. Bicycle facilities must come from an approved bicycle plan developed in consultation with Essex County in order to be recommended on county-owned roadways.

Helps reduce crashes up to 49%

PRIORITY PROJECTS

The project team assembled a program of conceptual improvements for each of the Action Plan priority projects, drawing on FHWA's proven safety countermeasures and tailored to local conditions, safety risks, and deficiencies. Each countermeasure responds to a specific, identified need; many are most effective when paired and combined with complementary and mutually supportive design elements.

The recommended countermeasures were selected based on assessment of crash history, severity, and disproportionate impacts, especially on vulnerable road users; the presence of high-risk roadway features identified in the systemic analysis; assessment of local context; and comments and observations from engagement and outreach.

Roadway and intersection design are guided by specific procedures and criteria at the jurisdictional level – municipal, county, and state. Essex County, for example, has specific guidance and criteria that are reflected among the priority projects, including, for example:

- **Bicycle facilities must come from an approved bicycle plan developed in consultation with Essex County in order to be recommended on county-owned roadways. Only the City of Newark has an approved bicycle plan – BIKENewark – that currently meets this requirement.**
- **Essex County requires a minimum lane width of 11 feet.**

Examples of countermeasure recommendations include:

- **Where excessive speeds and crash severity are indicated, traffic calming measures, traffic signal improvements, or reduced speed limits may be warranted.**
- **For long crossings and wide roadways, intersection daylighting, curb extensions, improved crosswalks and pedestrian refuge islands, and Leading Pedestrian Intervals way be beneficial.**
- **Road Diets have also proven beneficial for wide, multi-lane roadways, and where travel speeds and aggressive driving behaviors are observed.**
- **Where vulnerable road users are at risk, pedestrian refuge islands, midblock crossings, improved lighting, and high-visibility crosswalks may be recommended in addition to various traffic calming countermeasures.**
- **Frequent crashes involving struck parked vehicles can be mitigated through the application of intersection daylighting and curb extensions.**
- **Recommendations applicable to roadway striping, including placement of center lines, edge lines, and delineation of parking areas, will be determined during the design phase.**

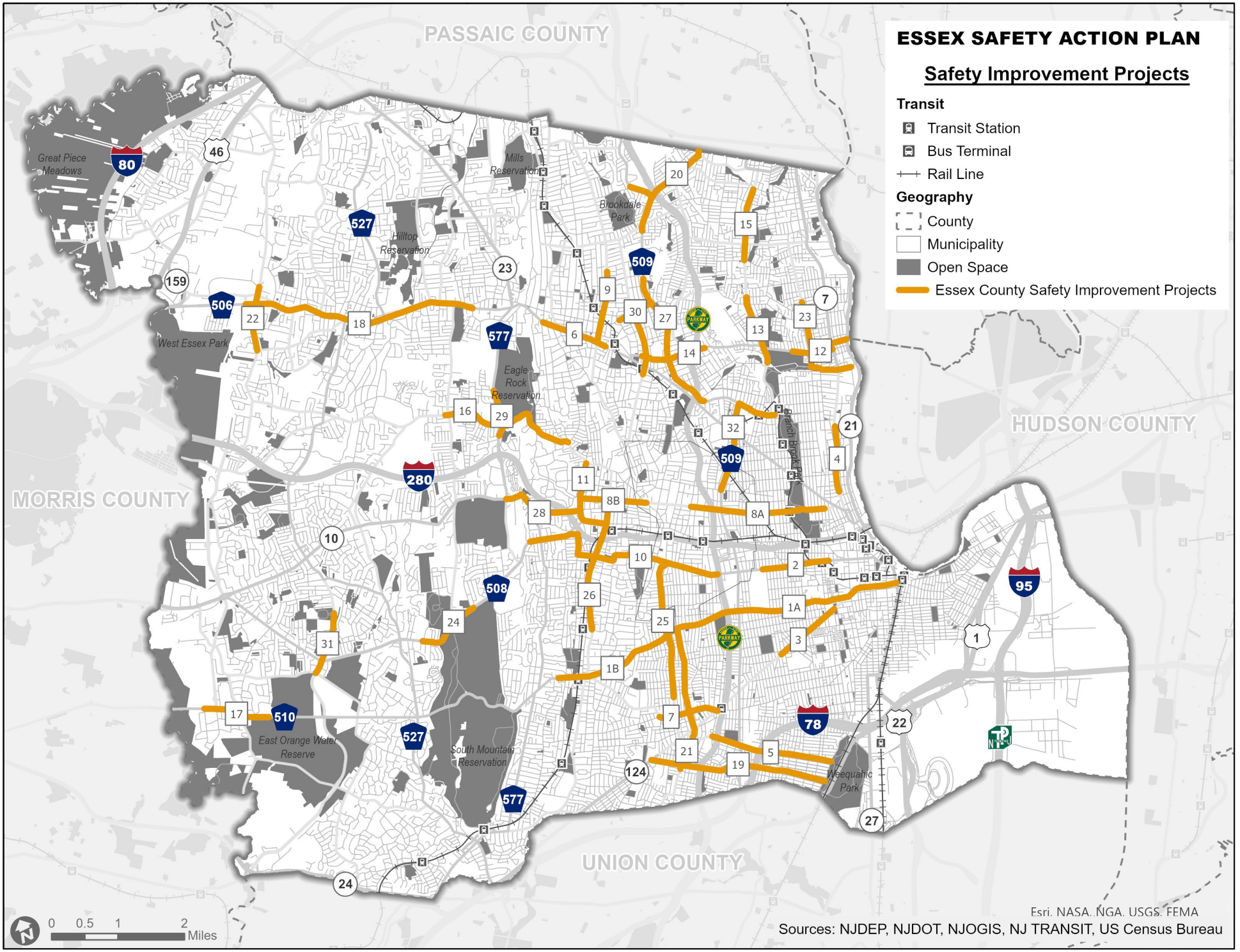


Figure 19: Essex SS4A Action Plan – Priority Projects

Table 3: Essex SS4A Action Plan - Priority Projects

Rank	Route Number	Road Name	From/To Street	Length	Municipality	Safety Countermeasures
1A	510	South Orange Avenue/ Springfield Avenue/Market Street	Boylan Street to Route 21	3.23	East Orange/Newark	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 16, 21
1B	510	South Orange Avenue	Conway Court to Boylan Street	2.19	East Orange/Newark/ South Orange	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 18, 21
2	508	Central Avenue	South 13th Street to Dey Street	0.99	Newark	1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 14, 17, 21
3	603	Springfield Avenue	South 11th Street to Prince Street	1.05	Newark	1, 2, 3, 4, 5, 6, 7, 8, 12, 14, 15, 21
4	667	Broadway	Kearny Street to Romaine Place	1.00	Newark	1, 2, 3, 4, 5, 6, 7, 11, 12, 13, 21
5	602	Lyons Avenue	Union Avenue to Elizabeth Avenue	1.83	Irvington/Newark	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 21
6	506	Bloomfield Avenue	Mountain Avenue to Hartley Street	0.99	Montclair	1, 2, 3, 4, 5, 6, 7, 12, 13, 17
7	665	Clinton Avenue	Parker Avenue to Springfield Avenue	0.91	Maplewood/Irvington	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 19
8A	658	Park Avenue	North Clinton Avenue to Garside Street	2.04	East Orange/Newark	1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 13, 17, 21
8B	658	Park Avenue	Main Street to Washington Street	1.00	East Orange	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 17, 18
9	623	Grove Street	Bloomfield Avenue to Stanford Place	1.02	Montclair	1, 2, 3, 4, 5, 6, 7, 8, 11, 18, 19
10	508	Northfield Avenue/ Whittingham Place/ Kingsley Street/Valley Road/Central Avenue	Highwood Road to Whittlesey Avenue	3.25	East Orange/Orange/ West Orange	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13
11	659	Main Street	Scotland Road to Washington Street	1.23	Orange/ West Orange	1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 14, 18

Table 3: Essex SS4A Action Plan - Priority Projects

Rank	Route Number	Road Name	From/To Street	Length	Municipality	# Safety Countermeasures
12	506	Belleville Avenue; Rutgers Street	Parkview Avenue to Washington Avenue; Washington Avenue to NJ 21	0.87	Belleville	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 19
13	645	Franklin Avenue	Mill Street to Liberty Avenue	1.03	Belleville	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13
14	506	Belleville Avenue	Herman Street to Forest Drive	0.99	Bloomfield/Glen Ridge	1, 2, 3, 4, 5, 6, 7, 8, 11, 14, 19
15	645	Franklin Avenue	Harrison Street to High Street	1.07	Nutley	1, 2, 3, 4, 5, 6, 7, 8
16	611	Eagle Rock Avenue	Harrison Avenue to Haller Road	2.22	West Orange	1, 2, 3, 4, 5, 6, 7, 11, 13, 18, 19, 20
17	510	South Orange Avenue	Peach Tree Hill Road to Latham Court	0.98	Livingston	1, 2, 3, 4, 5, 6, 7, 11, 12, 13, 17
18	509	Bloomfield Avenue	Kirkpatrick Lane to Park Avenue	3.57	Essex Fells/Caldwell/ North Caldwell/ Verona	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 17, 18, 19
19	601	Chancellor Avenue	Springfield Avenue to Elizabeth Avenue	2.65	Irvington/Maple-wood/Newark	1, 2, 3, 4, 5, 6, 7, 8, 11, 13, 14, 18
20	509/622	Broad Street; West Passaic Avenue/Darling Avenue	Eaton Place to Bellevue Avenue; Broad Street to Sylvan Road	1.92	Bloomfield	1, 2, 3, 4, 5, 6, 7, 8, 11, 13, 21
21	619	Stuyvesant Avenue	Leslie Place to South Orange Avenue	2.18	Irvington/Newark	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13
22	613	Passaic Avenue	Westville Avenue to Henderson Drive	0.99	West Caldwell	1, 2, 3, 4, 5, 6, 7, 15
23	672/647	Mill Street; Union Avenue	Main Street to Union Avenue; Mill Street to Malone Avenue	1.61	Belleville	1, 2, 3, 4, 5, 6, 7, 8, 11, 13
24	508	Northfield Avenue	Vizcaya Boulevard to Saint Cloud Avenue	0.97	West Orange	1, 2, 3, 4, 5, 6, 7, 10, 11, 13, 17, 19
25	605	Sanford Avenue/Sanford Street	Sanford Place to Central Avenue	2.11	Irvington/East Orange/Newark	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 21

Table 3: Essex SS4A Action Plan - Priority Projects

Rank	Route Number	Road Name	From/To Street	Length	Municipality	Safety Countermeasures
26	638	Scotland Road/High Street	Montrose Avenue to Park Avenue	2.00	Orange/South Orange	1, 2, 3, 4, 5, 6, 7, 8, 13, 14, 18
27	509	Franklin Street/Broad Street	Hill Street to Glen Ridge Parkway	2.21	Bloomfield	1, 2, 3, 4, 5, 6, 7, 8, 11, 13, 19
28	577/660	Mount Pleasant Avenue	Prospect Street to Gregory Avenue/Gregory Avenue to Main Street	1.01	West Orange	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 18, 19, 20
29	577	Prospect Avenue	Boland Drive to Woodland Avenue	0.71	West Orange	1, 2, 3, 4, 5, 6, 7, 13, 16, 18
30	654/653	Bay Avenue/Ridgewood Avenue	Highland Avenue to Broad Street; Snowden Place to Bay Avenue	1.51	Bloomfield/Glen Ridge/Montclair	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 17, 19
31	649	South Livingston Avenue	West Hobart Gap Road to Civic Center Road (North)	0.96	Livingston	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13
32	509/670	Grove Street/North Grove Street/Watsessing Avenue/Franklin Street	Springdale Avenue to Franklin Street; Watsessing Avenue to Franklin Avenue	1.95	Belleville/Bloomfield/East Orange/Newark	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 13

Priority Projects Key

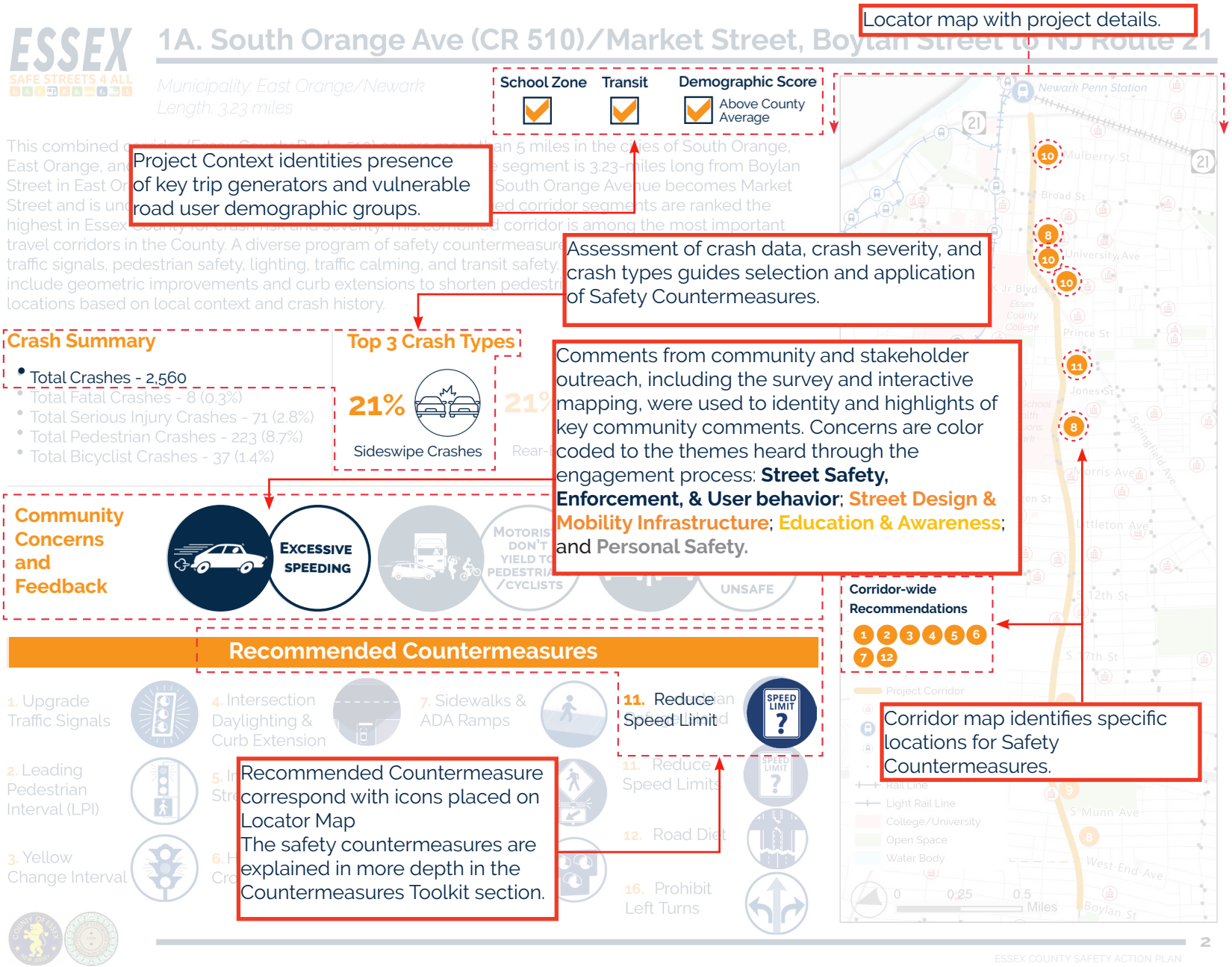
Project Location

Project Context

Crash Profile

Community Feedback

Recommended Countermeasures



1A. South Orange Ave (CR 510)/Market Street, Boylan Street to NJ Route 21

Municipality: ***East Orange/Newark***
Length: ***3.23 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

This combined corridor (Essex County Route 510) covers more than 5 miles in the cities of South Orange, East Orange, and Newark. Two segments are recommended. The segment is 3.23-miles long from Boylan Street in East Orange to NJ Route 21 in Newark. At MilePost 29.0, South Orange Avenue becomes Market Street and is under jurisdiction of the City of Newark. The combined corridor segments are ranked the highest in Essex County for crash risk and severity. This combined corridor is among the most important travel corridors in the County. A diverse program of safety countermeasures is proposed, including new traffic signals, pedestrian safety, lighting, traffic calming, and transit safety. Additional countermeasures include geometric improvements and curb extensions to shorten pedestrian crossing distances at targeted locations based on local context and crash history.

Crash Summary

- Total Crashes - 2,560
- Total Fatal Crashes - 8 (0.3%)
- Total Serious Injury Crashes - 71 (2.8%)
- Total Pedestrian Crashes - 223 (8.7%)
- Total Bicyclist Crashes - 37 (1.4%)

Top 3 Crash Types

21% Sideswipe Crashes

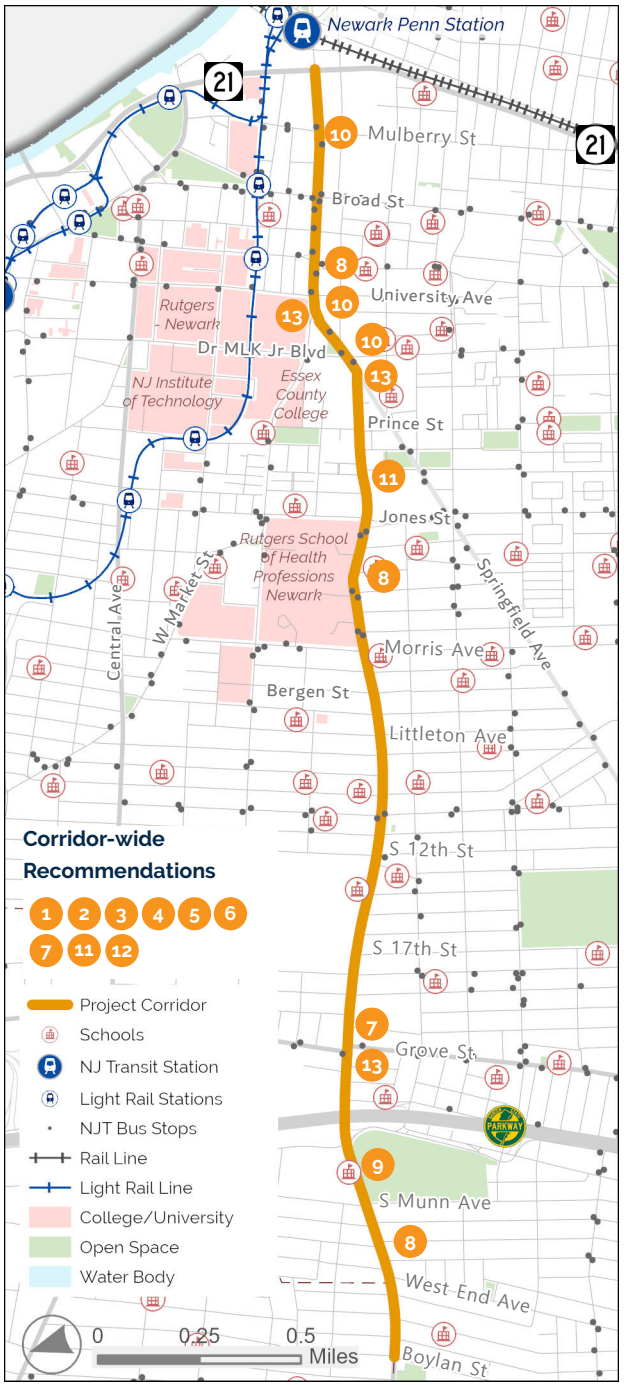
21% Rear-End Crashes

18% Right Angle Crashes

Community Concerns and Feedback

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
9. Pedestrian Hybrid Beacon
10. Pedestrian Refuge Island
11. Reduce Speed Limits
12. Road Diet
13. Reconfigure Intersection



1B. South Orange Avenue (CR 510), Conway Court to Boylan Street

Municipality: ***E. Orange/Newark/S. Orange***
Length: ***2.19 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

This combined corridor (Essex County Route 510) covers more than 5 miles in the cities of South Orange, East Orange, and Newark. Two segments are recommended. This segment is 2.19-miles long from Conway Court in South Orange to Boylan Street in East Orange. The combined corridor segments are ranked the highest in Essex County for crash risk and severity. This combined corridor is among the most important travel corridors in the County. A diverse program of safety countermeasures is proposed, including new traffic signals, pedestrian safety, lighting, traffic calming, and transit safety. A diverse program of safety countermeasures is proposed, including new traffic signals, pedestrian safety, lighting, traffic calming, and transit safety. Additional countermeasures include geometric improvements and curb extensions to shorten pedestrian crossing distances at targeted locations based on local context and crash history. Evaluate segment from Sanford Avenue to Munn Avenue for left-turn alignments and possible prohibitions.

Crash Summary

- Total Crashes - 861
- Total Fatal Crashes - 4 (0.5%)
- Total Serious Injury Crashes - 14 (1.6%)
- Total Pedestrian Crashes - 67 (7.8%)
- Total Bicyclist Crashes - 6 (0.7%)

Top 3 Crash Types

25% Rear-End Crashes

21% Sideswipe Crashes

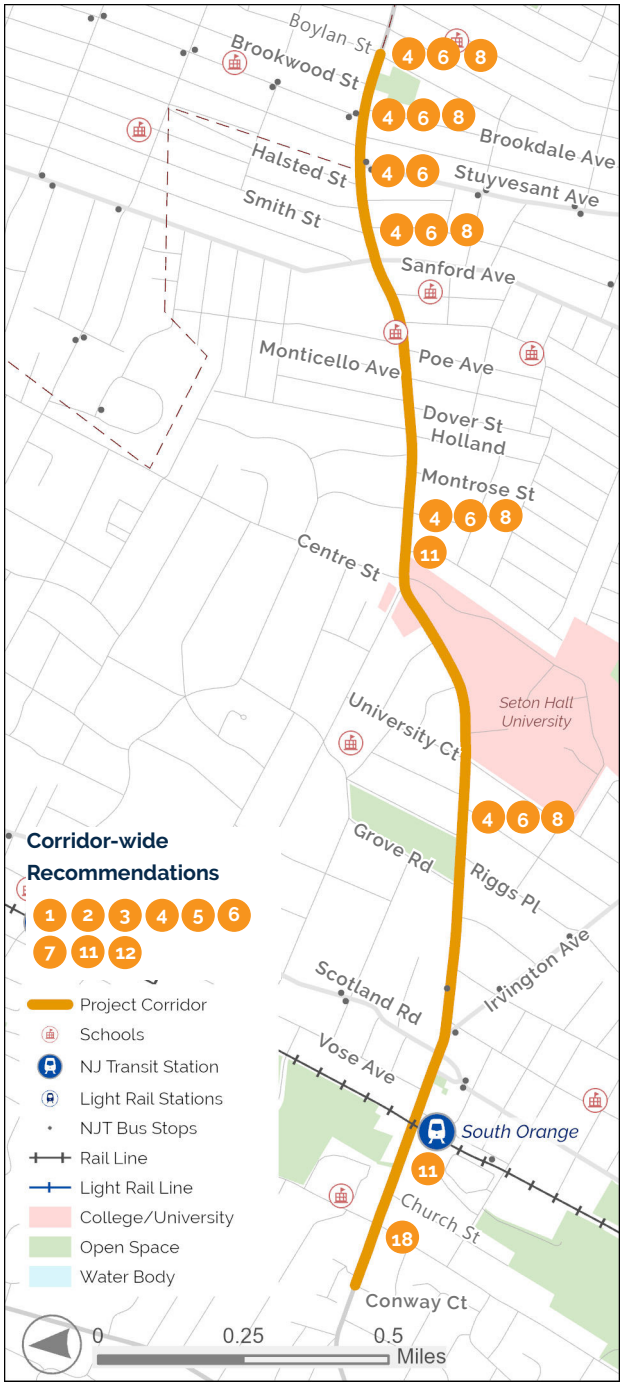
17% Struck Parked Vehicle

Community Concerns and Feedback

- Excessive Speeding
- Intersection Feels Unsafe
- Motorists Don't Yield to Pedestrians/Cyclists

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
11. Reduce Speed Limits
12. Road Diet
18. High Friction Surface Treatment



2. Central Avenue (CR 508), South 13th Street to Dey Street

Municipality: ***Newark***
Length: ***0.99 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

Central Avenue (Essex County Route 508) is located in the city of Newark, Essex County's most populous municipality. This 0.99-mile long urban corridor, between South 13th Street and Dey Street, is ranked 2nd highest in Essex County for crash risk and severity. Located south of and parallel to I-280, the Central Avenue corridor is a primary east-west urban arterial roadway, with access to the NJIT campus, and among Newark's busiest streets. It is primarily 2-lanes east of West Market Street and 4-lanes to the west. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements.

BIKENewark recommended a 4-to-3 lane road diet from South 16th Street (Newark Boundary) to MLK Boulevard to accommodate two-way protected bike lanes on the eastbound side.

Crash Summary

- Total Crashes - 692
- Total Fatal Crashes - 3 (0.4%)
- Total Serious Injury Crashes - 16 (2.3%)
- Total Pedestrian Crashes - 37 (5.3%)
- Total Bicyclist Crashes - 17 (2.5%)

Top 3 Crash Types

30% Right Angle Crashes

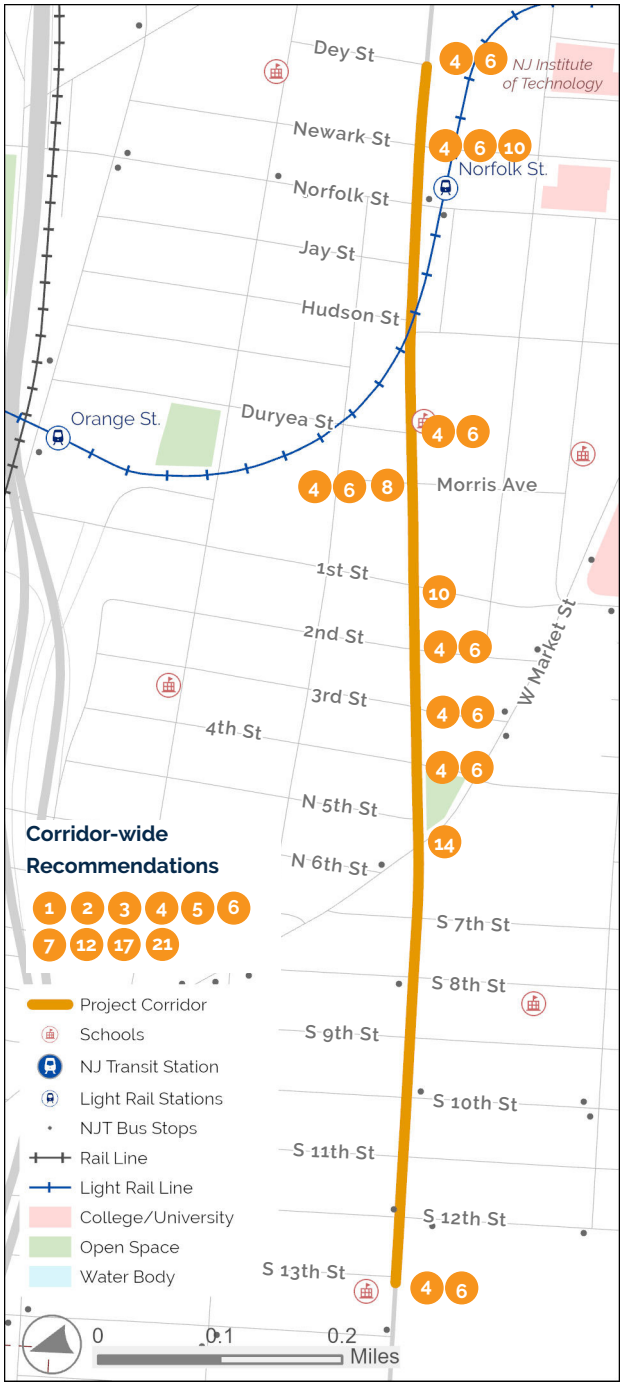
17% Rear-End Crashes

17% Sideswipe Crashes

Community Concerns and Feedback

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
10. Pedestrian Refuge Island
12. Road Diet
14. Reconfigure Intersection Turn Lane
17. Hardened Centerlines
21. Bike Lanes



3. Springfield Avenue (CR 603), South 11th Street to Prince Street

Municipality: ***Newark***
Length: ***1.05 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

Springfield Avenue is located in the city of Newark, Essex County's most populous municipality. This 1.05-mile long urban corridor, between South 11th Street and Prince Street, is ranked 3rd highest in the County for crash risk and severity. This corridor connects downtown Newark with the Garden State Parkway and Irvington. The corridor as primarily 2-lanes wide with frequent traffic signals, dedicated turning turn lanes, on-street parking, and many bus stops. Springfield Avenue's diagonal alignment creates frequently-skewed road geometrics and complex intersections with the City's street grid. Proposed safety countermeasures include new traffic signals, improved signal timing, lighting, and pedestrian improvements. Additional countermeasures include geometric improvements and curb extensions to shorten pedestrian crossing distances at targeted locations based on local context and crash history.

Crash Summary

- Total Crashes - 742
- Total Fatal Crashes - 1 (0.1%)
- Total Serious Injury Crashes - 20 (2.7%)
- Total Pedestrian Crashes - 51 (6.9%)
- Total Bicyclist Crashes - 8 (1.1%)

Top 3 Crash Types

21% Rear-End Crashes

19% Right Angle Crashes

17% Sideswipe Crashes

Community Concerns and Feedback

ILLEGAL PARKING/ VEHICLES DOUBLE PARK

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
12. Road Diet
14. Reconfigure Intersection Turn Lanes
15. Right Turn In/Out Only

4. Broadway (CR 667), Kearny Street to Romaine Place

Municipality: ***Newark***
Length: ***1.00 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

Broadway (Essex County Route 667) is located in the city of Newark, Essex County's most populous municipality. This 1.0-mile long urban corridor, between Kearney Street and Romaine Place, is ranked 4th highest in Essex County for crash risk and severity. Located north of I-280, Broadway is a primary north south urban arterial roadway and among Newark's busiest streets. Broadway is primarily 2-lanes with frequent traffic signals and left turn lanes, on-street parking, and many bus stops. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements.

BIKENewark recommended protected two-way bike lanes one either side of the street from Taylor Street to The Greenway (North End Terrace; Newark Boundary) as the current lanes are 20+ ft wide.

Crash Summary

- Total Crashes - 398
- Total Fatal Crashes - 0 (0.0%)
- Total Serious Injury Crashes - 13 (3.3%)
- Total Pedestrian Crashes - 36 (9.0%)
- Total Bicyclist Crashes - 5 (1.3%)

Top 3 Crash Types

24% Struck Parked Vehicle

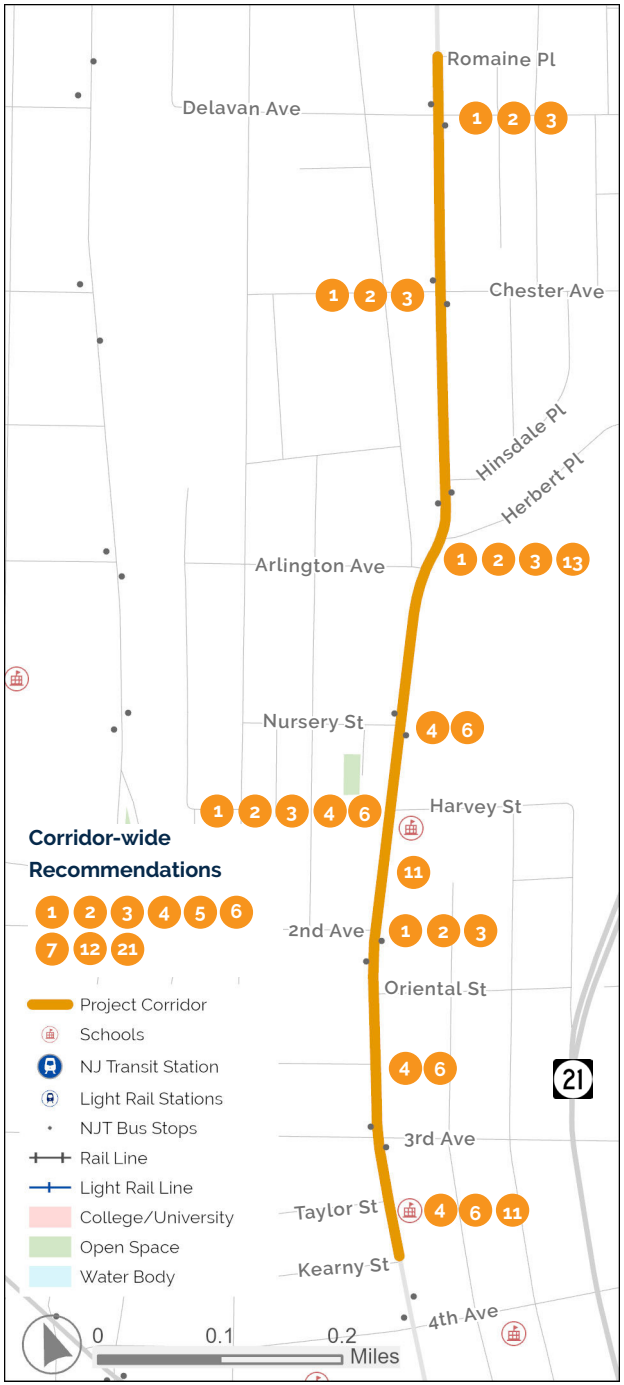
21% Sideswipe Crashes

15% Rear-End Crashes

Community Concerns and Feedback

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
11. Reduce Speed Limits
12. Road Diet
13. Reconfigure Intersection
21. Bike Lanes



5. Lyons Avenue (CR 602), Union Avenue to Elizabeth Avenue

Municipality: ***Newark/Irvington***
Length: ***1.83 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

Lyons Avenue (Essex County Route 602) is located in densely populated Irvington and Newark. This 1.83-mile long urban corridor, between Union Ave to Elizabeth Avenue, is ranked 5th highest in Essex County for crash risk and severity. Lyons Avenue is among the County's principal east-west corridors, connecting Irvington and Newark, and crossing the Garden State Parkway and I-78. Broadway features frequent traffic signals and left turn lanes, with on-street parking, and many bus stops. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements.

BIKENewark recommended protected two-way bike lanes on one side of the street from Fabyan Place/ Schley Street (East of I-78) to Elizabeth Avenue; requires removing one parking lane.

Crash Summary

- Total Crashes - 1,155
- Total Fatal Crashes - 3 (0.3%)
- Total Serious Injury Crashes - 28 (2.4%)
- Total Pedestrian Crashes - 66 (5.7%)
- Total Bicyclist Crashes - 3 (0.3%)

Top 3 Crash Types

23% Rear-End Crashes

18% Right Angle Crashes

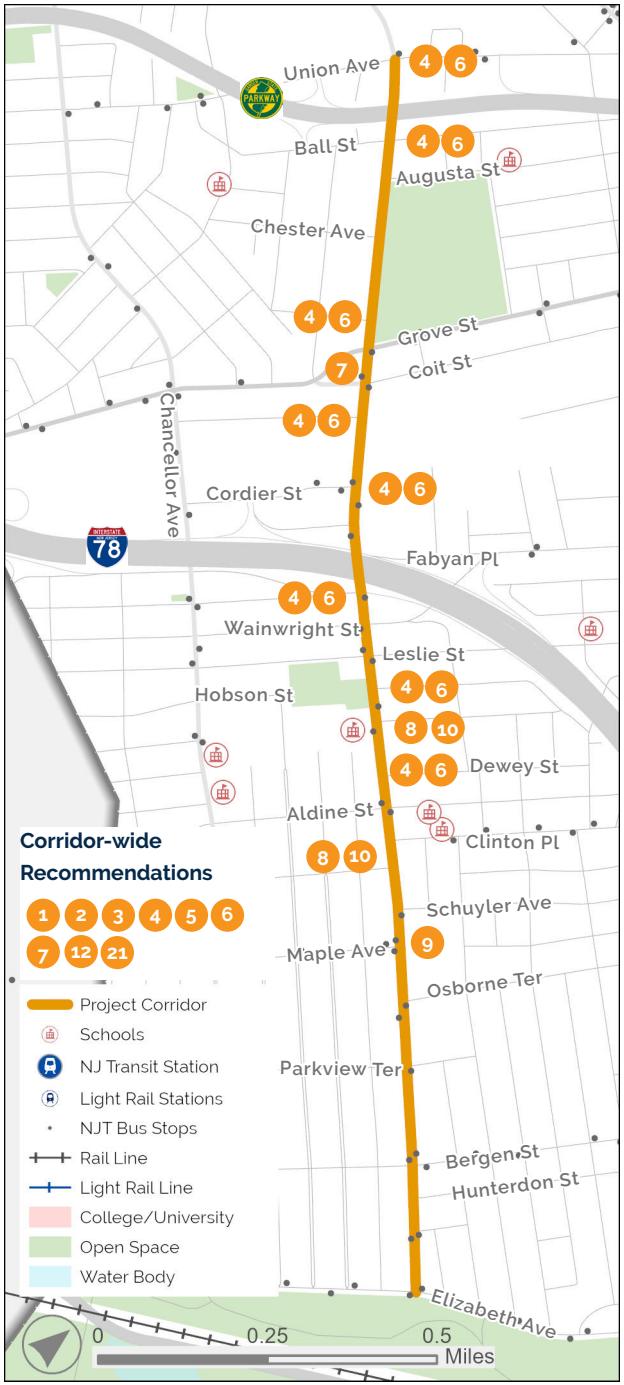
18% Sideswipe Crashes

Community Concerns and Feedback

- Intersection Feels Unsafe
- Excessive Speeding
- Poor or Missing Sidewalks

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
9. Pedestrian Hybrid Beacon
10. Pedestrian Refuge Island
12. Road Diet
21. Bike Lanes



6. Bloomfield Avenue (CR 506), Mountain Avenue to Hartley Street

Municipality: ***Montclair Township***
Length: ***0.99 miles***

School Zone	Transit	Demographic Score
☑	☑	☐ Above County Average

Bloomfield Avenue (Essex County Route 506) is located in Montclair Township, a densely populated community in northeastern Essex County, adjacent to the County's urban core communities. This 0.99-mile long urban corridor, between North/South Mountain Avenue and Hartley Street, is ranked 6th highest in Essex County for crash risk and severity. Located west of the NJ TRANSIT Montclair-Boonton Line, Bloomfield Avenue is a primary east-west urban arterial roadway, with significant commercial development and access to local recreation and amenities. The corridor is primarily 4-lanes wide, with frequent traffic signals and some left turn lanes, on-street parking, and many bus stops. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements. Additional countermeasures are recommended at targeted locations based on local context and crash history.

Crash Summary

- Total Crashes - 765
- Total Fatal Crashes - 1 (0.1%)
- Total Serious Injury Crashes - 4 (0.5%)
- Total Pedestrian Crashes - 43 (5.6%)
- Total Bicyclist Crashes - 6 (0.8%)

Top 3 Crash Types

27% Sideswipe Crashes

24% Struck Parked Vehicle

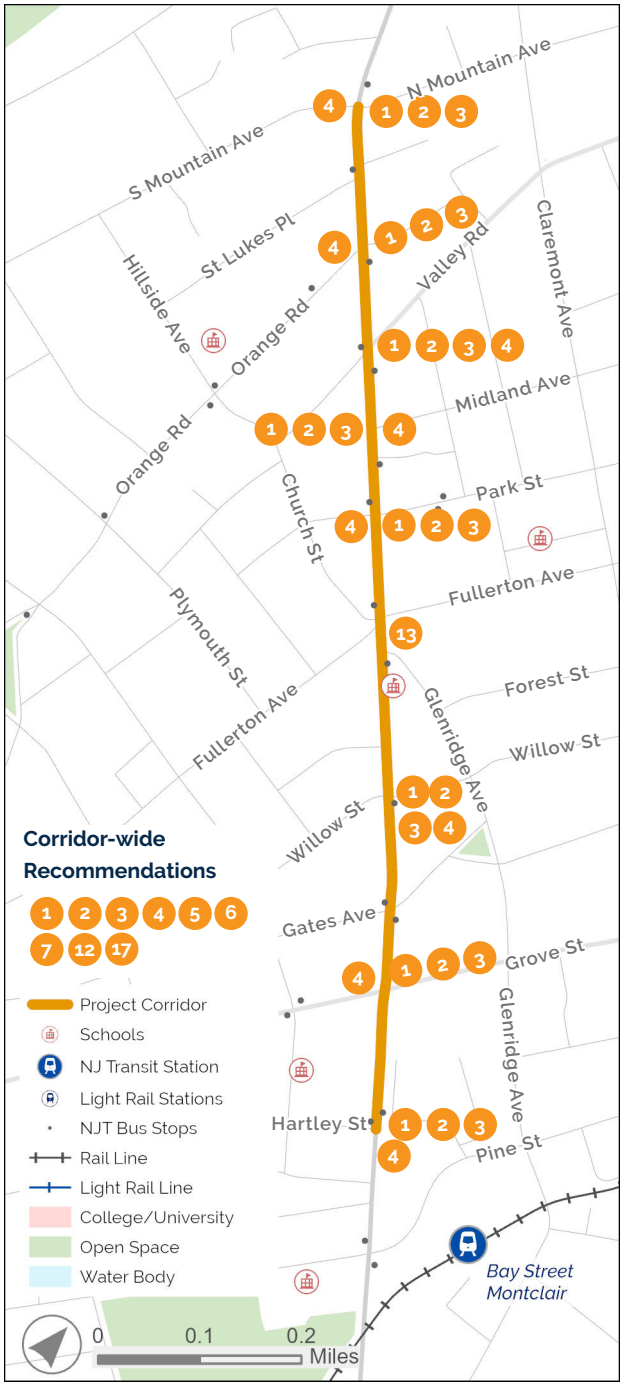
20% Rear-End Crashes

Community Concerns and Feedback

- Excessive Speeding
- Motorists don't yield to pedestrians /cyclists
- Illegal parking/ vehicles double park

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
12. Road Diet
13. Reconfigure Intersection
17. Hardened Centerlines



7. Clinton Avenue (CR 665), Parker Avenue to Springfield Avenue

Municipality: ***Maplewood/Irvington***
Length: ***0.91 miles***

School Zone	Transit	Demographic Score
☑	☑	☐ Above County Average

Clinton Avenue (Essex County Route 665) is located in densely populated Irvington and Maplewood. This 0.91-mile long urban corridor, between Parker Avenue and Springfield Avenue, is ranked 7th highest in Essex County for crash risk and severity. Clinton Avenue is among the County's principal east-west corridors, connecting Maplewood and Irvington, and connecting with Springfield Avenue. Clinton Avenue features frequent traffic signals and left turn lanes, with on-street parking, and many bus stops. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements. Additional countermeasures are recommended at targeted locations based on the local context and crash history.

Crash Summary

- Total Crashes - 344
- Total Fatal Crashes - 2 (0.6%)
- Total Serious Injury Crashes - 5 (1.5%)
- Total Pedestrian Crashes - 27 (7.8%)
- Total Bicyclist Crashes - 2 (0.6%)

Top 3 Crash Types

20% Sideswipe Crashes

20% Rear-End Crashes

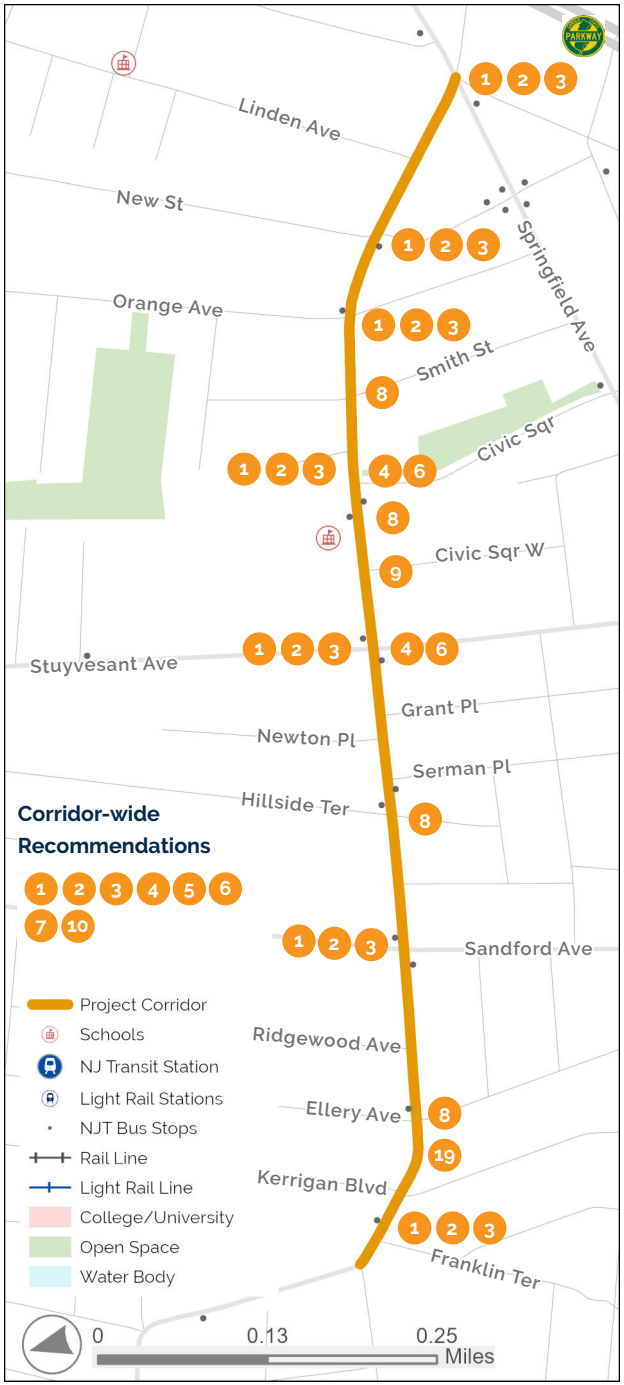
17% Struck Parked Vehicle

Community Concerns and Feedback

- Excessive Speeding
- Upkeep & Cleanlines
- Other People Make Me Feel Unsafe

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
9. Pedestrian Hybrid Beacon
11. Reduce Speed Limits
19. Horizontal Curve Warning



8A. Park Avenue (CR 658), North Clinton Street to Garside Street

Municipality: ***East Orange/Newark***
Length: ***2.04 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

Park Avenue is located in densely populated East Orange and Newark. Two segments are recommended. The first is 2.04-miles long from North Clinton Avenue to Garside Street, connecting Newark and East Orange. The second segment is 1.0-mile long from Main Street to Washington Street, and entirely in East Orange. The Park Avenue corridors are ranked 8th highest in Essex County for crash risk and severity. Park Avenue is a principal east-west corridor in the County.

BIKENewark recommended three sections: road diet to accommodate protected bike lanes from N 13th Street to 4th Street; bicycle boulevard from 4th Street to Lake Street; convert on-street parking to 12-ft wide Parking + Bike Lane from Lake Street to Stone Street. Additionally, striping 10' travel lanes from the centerline, with 5' buffers and extend 5' bike lanes across Park Avenue from N 12th Street to N 15th Street.

Crash Summary

- Total Crashes - 1,084
- Total Fatal Crashes - 1 (0.1%)
- Total Serious Injury Crashes - 18 (1.7%)
- Total Pedestrian Crashes - 52 (4.8%)
- Total Bicyclist Crashes - 16 (1.5%)

Top 3 Crash Types

23% Right Angle Crashes

20% Rear-End Crashes

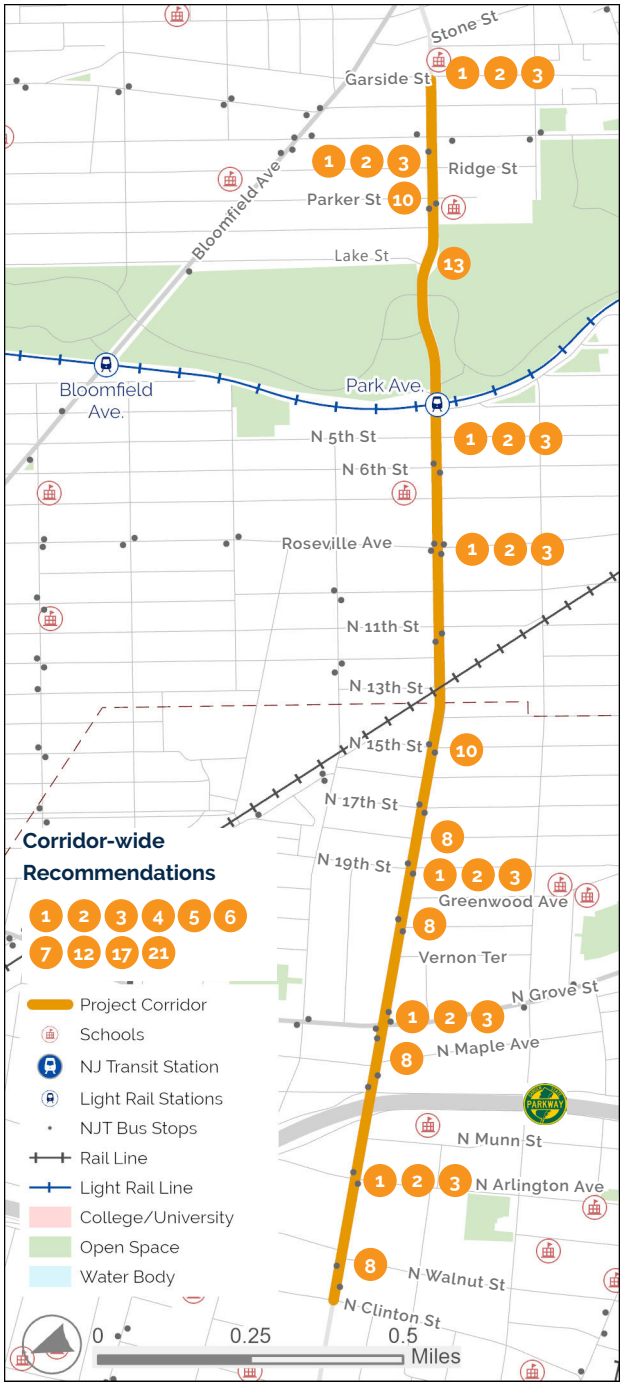
20% Struck Parked Vehicle

Community Concerns and Feedback

- **Excessive Speeding**
- **Need Bike Lanes**
- **Other People Make Me Feel Unsafe**

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
10. Pedestrian Refuge Island
12. Road Diet
13. Reconfigure Intersection
17. Hardened Centerlines
21. Bike Lanes



8B. Park Avenue (CR 658), Main Street to Washington Street

Municipality: ***East Orange***
Length: ***1.00 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

Park Avenue is located in densely populated East Orange and Newark. Two segments are recommended. The first is 2.04-miles long from North Clinton Avenue to Garside Street, connecting Newark and East Orange. The second segment is 1.0-mile long from Main Street to Washington Street, and entirely in East Orange. The Park Avenue corridors are ranked 8th highest in Essex County for crash risk and severity. Park Avenue is a principal east-west corridor in the County with frequent traffic signals and left turn lanes, with on-street parking, and many bus stops. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements. Additional countermeasures are recommended at targeted locations based on local context and crash history. Improved transit access and safety improvements are also recommended.

Crash Summary

- Total Crashes - 393
- Total Fatal Crashes - 2 (0.5%)
- Total Serious Injury Crashes - 6 (1.5%)
- Total Pedestrian Crashes - 13 (3.3%)
- Total Bicyclist Crashes - 3 (0.8%)

Top 3 Crash Types

27% Right Angle Crashes

17% Rear-End Crashes

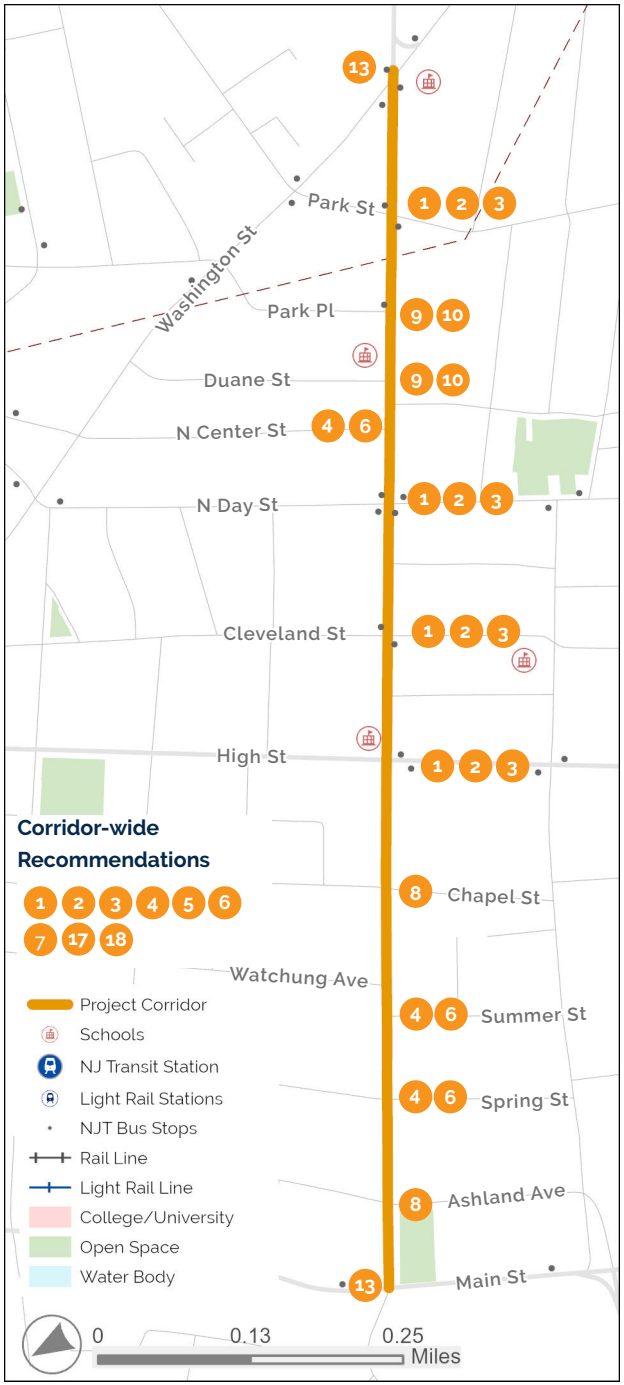
16% Struck Parked Vehicle

Community Concerns and Feedback

- Excessive Speeding
- Motorists Don't Yield to Pedestrians /Cyclists
- Intersection Feels Unsafe

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
9. Pedestrian Hybrid Beacon
10. Pedestrian Refuge Island
13. Reconfigure Intersection
17. Hardened Centerlines
18. High Friction Surface Treatment



9. Grove Street (CR 623), Bloomfield Avenue to Stanford Place

Municipality: ***Montclair Township***
Length: ***1.02 miles***

School Zone	Transit	Demographic Score
☑	☑	☐ Above County Average

This 1.02 mile long corridor between Bloomfield Avenue (CR 506) and Stanford Place in Montclair Township is ranked 9th highest in Essex County for crash risk and severity, and connects Montclair's commercial and residential areas. Grove Street is primarily 2-lanes wide, with a posted speed limit of 25 mph, and on-street parking permitted on both sides. NJ TRANSIT's Montclair-Boonton line crosses Grove Street at-grade near Willard Street. Proposed safety countermeasures include improvements at both signalized and stop-controlled intersections, new street lighting, traffic calming, and school safety zones.

Crash Summary

- Total Crashes - 281
- Total Fatal Crashes - 0 (0.0%)
- Total Serious Injury Crashes - 5 (1.8%)
- Total Pedestrian Crashes - 15 (5.3%)
- Total Bicyclist Crashes - 6 (2.1%)

Top 3 Crash Types

31% Rear-End Crashes

21% Right Angle Crashes

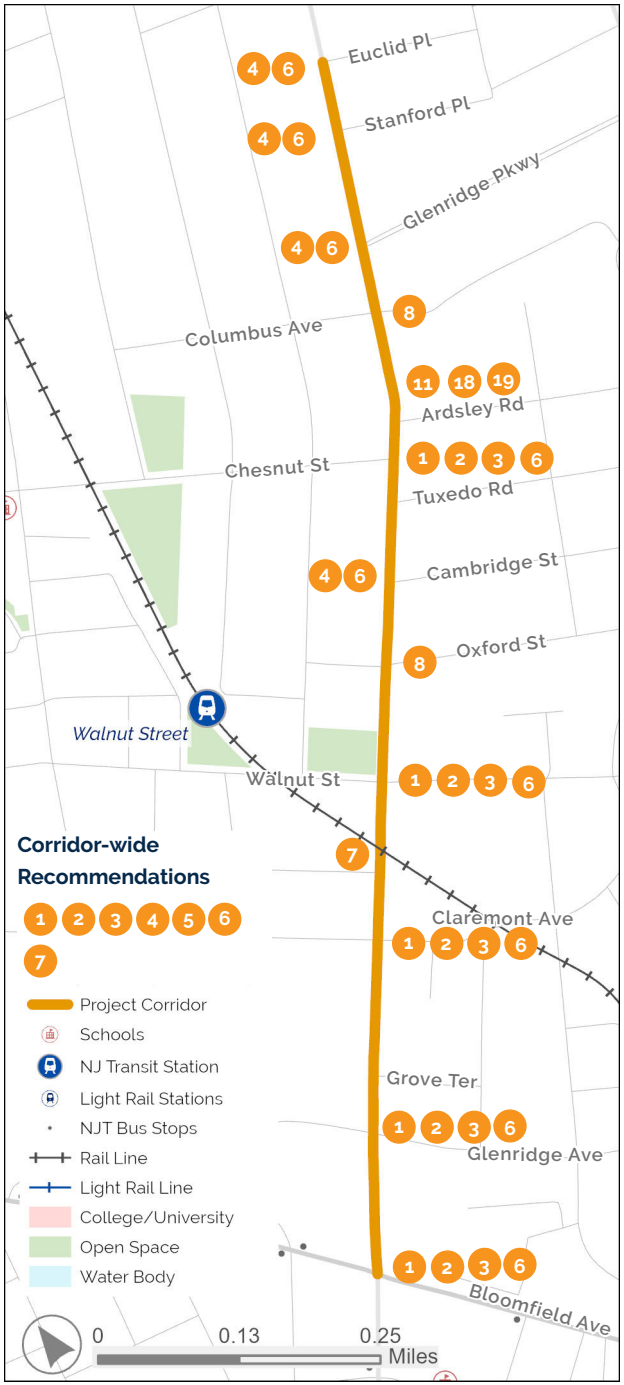
16% Sideswipe Crashes

Community Concerns and Feedback

- Excessive Speeding
- Motorists Don't Yield to Pedestrians /Cyclists
- Intersection Feels Unsafe

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
11. Reduce Speed Limits
18. High Friction Surface Treatment
19. Horizontal Curve Warning



10. Central Avenue (CR 508), Highwood Road to Whittlesey Avenue

Municipality: ***East/West Orange/Orange***
Length: ***3.25 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

This combined corridor (Essex County Route 508) covers more than 3.25 miles in the municipalities of East Orange, Orange, and West Orange, between Highwood Avenue in West Orange and Whittlesey Avenue Road in East Orange; the combined corridor segments are ranked 10th highest in Essex County for crash risk and severity. The Northfield Avenue/Whittingham Place/Kingsley Street/Valley Road/Central Avenue corridor is a significant east-west corridor and located south of and parallel to I-280 and provides access to the Garden State Parkway in East Orange. A diverse program of safety countermeasures is proposed, including new traffic signals, pedestrian safety, lighting, traffic calming, and transit safety. Additional countermeasures include geometric improvements and curb extensions to shorten pedestrian crossing distances at targeted locations based on local context and crash history.

Crash Summary

- Total Crashes - 1,322
- Total Fatal Crashes - 9 (0.7%)
- Total Serious Injury Crashes - 19 (1.4%)
- Total Pedestrian Crashes - 79 (6.0%)
- Total Bicyclist Crashes - 9 (0.7%)

Top 3 Crash Types

22% Rear-End Crashes

20% Sideswipe Crashes

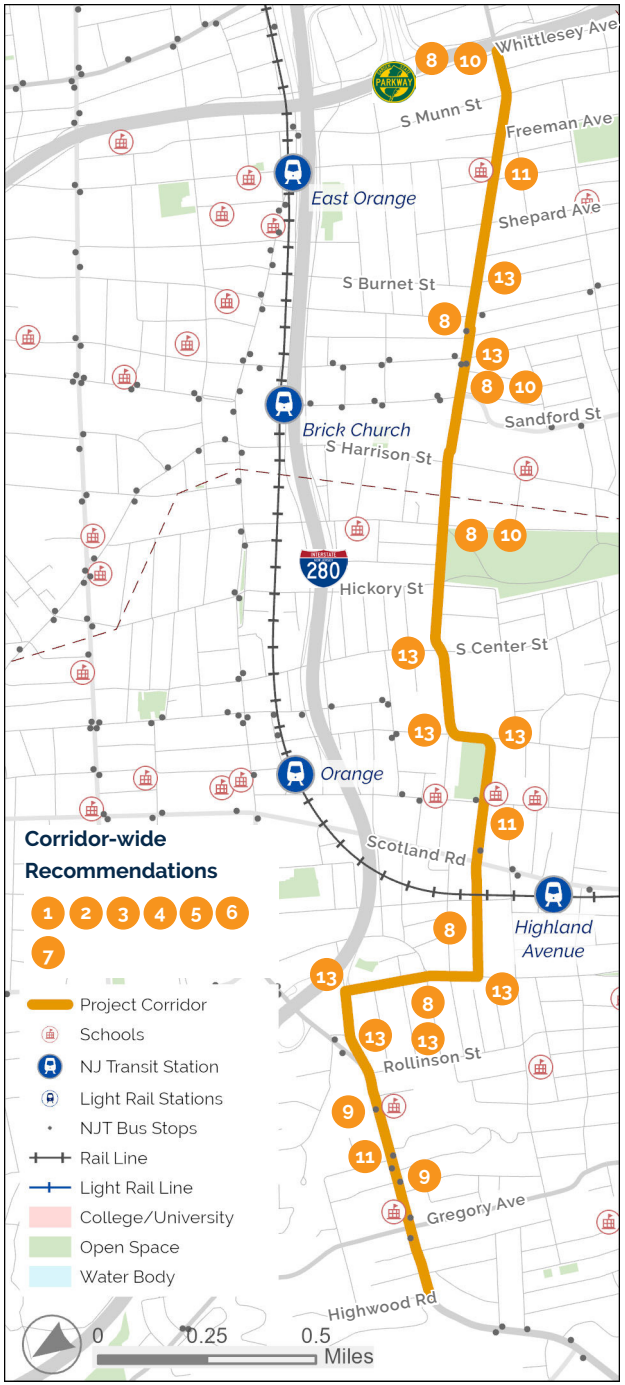
14% Struck Parked Vehicle

Community Concerns and Feedback

- **EXCESSIVE SPEEDING**
- **INTERSECTION FEELS UNSAFE**
- **MOTORISTS DON'T YIELD TO PEDESTRIANS /CYCLISTS**

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
9. Pedestrian Hybrid Beacon
10. Pedestrian Refuge Island
11. Reduce Speed Limits
13. Reconfigure Intersection



11. Main Street (CR 659), Scotland Road to Washington Street

Municipality: ***Orange/West Orange***
Length: ***1.23 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

Main Street (Essex County Route 659) is located in West Orange Township and City of Orange, a moderately dense suburban community in Essex County adjacent to the County's urban core communities. This 1.85-miles long suburban corridor, between Scotland Road and Washington Street, is ranked 11th highest in Essex County for crash risk and severity. Located north of I-280 and east of Llewellyn Park, this corridor is mostly commercial south of Park Avenue and transitions to residential north of it. Main Street is primarily 4-lanes wide, with traffic signals, some left turn lanes, on-street parking, and multiple bus stops. Proposed countermeasures include new traffic signals, pedestrian safety, lighting, traffic calming, and transit safety. Additional countermeasures include geometric improvements and curb extensions, road diets, specific intersection upgrades and other recommendations based on local context and crash history.

Crash Summary

- Total Crashes - 683
- Total Fatal Crashes - 1 (0.1%)
- Total Serious Injury Crashes - 4 (0.6%)
- Total Pedestrian Crashes - 24 (3.5%)
- Total Bicyclist Crashes - 4 (0.6%)

Top 3 Crash Types

22% Sideswipe Crashes

20% Rear-End Crashes

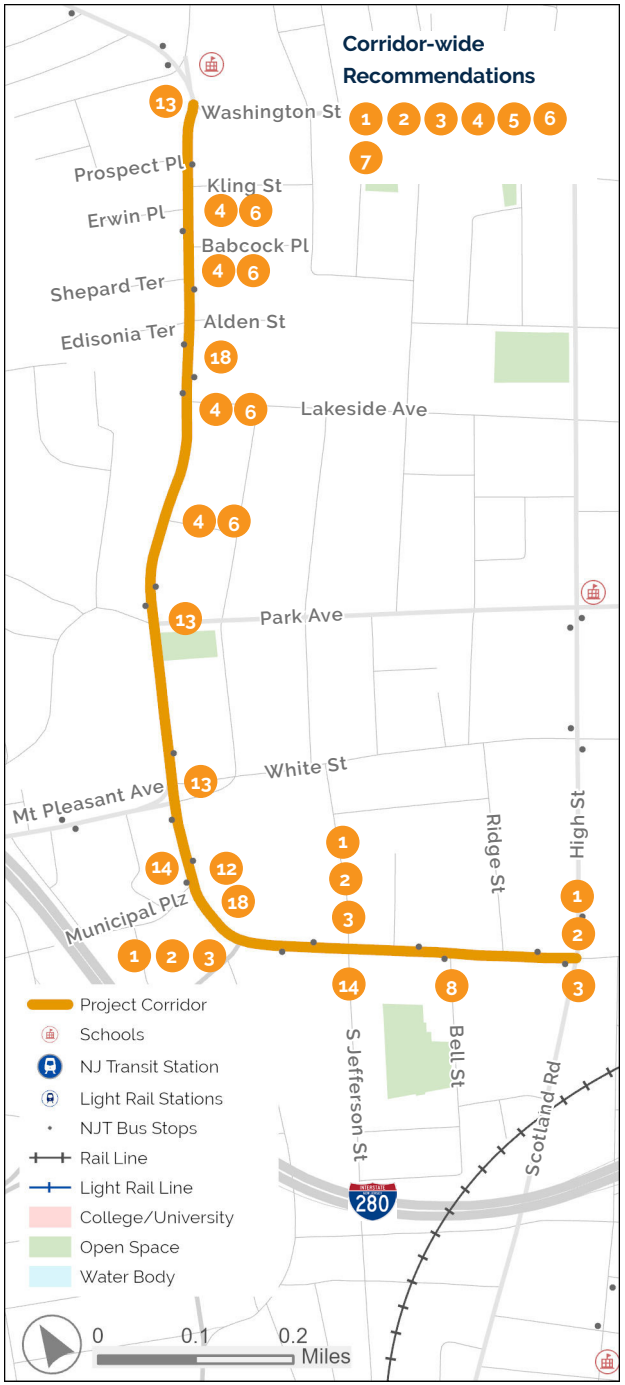
18% Struck Parked Vehicle

Community Concerns and Feedback

- Intersection Feels Unsafe
- Need Bike Lanes
- Excessive Speeding

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
12. Road Diet
13. Reconfigure Intersection
14. Reconfigure Intersection Turn Lanes
18. High Friction Surface Treatment



12. Belleville Ave/Rutgers Street (CR 506), Parkview Avenue to NJ Route 21

Municipality: ***Belleville Township***
Length: ***0.87 miles***

School Zone	Transit	Demographic Score
☑	☐	☐ Above County Average

Belleville Avenue/Rutgers Street (Essex County Route (506) is located in Belleville Township, a densely populated community in northeastern Essex County adjacent to the County's urban core communities. This 0.87-mile long urban corridor, between Parkview Avenue and NJ Route 21, is ranked 12th highest in Essex County for crash risk and severity. The Belleville-Rutgers Avenue corridor is a primary north-south urban arterial roadway in a dense urban area and primarily 2-lanes wide, with frequent traffic signals and left turn lanes, on-street parking, and many bus stops. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements. Additional countermeasure are recommended at targeted locations based on local context and crash history.

Crash Summary

- Total Crashes - 458
- Total Fatal Crashes - 0 (0.0%)
- Total Serious Injury Crashes - 5 (1.1%)
- Total Pedestrian Crashes - 11 (2.4%)
- Total Bicyclist Crashes - 7 (1.5%)

Top 3 Crash Types

29% Rear-End Crashes

28% Right Angle Crashes

15% Sideswipe Crashes

Community Concerns and Feedback

- Motorists don't yield to pedestrians/cyclists
- Excessive speeding
- Intersection feels unsafe

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
11. Reduce Speed Limits
12. Road Diet
13. Reconfigure Intersection
19. Horizontal Curve Warning

13. Franklin Avenue (CR 645), Mill Street to Liberty Avenue

Municipality: ***Belleville Township***
Length: ***1.03 miles***

School Zone	Transit	Demographic Score
☑	☑	☐ Above County Average

Franklin Avenue (Essex County Route (645) is located in Belleville Township, a densely populated community in northeastern Essex County, adjacent to the County's urban core communities. This 1.03-mile long urban corridor, between Mill Street and Liberty Avenue, is ranked 13th highest in Essex County for crash risk and severity. Located east of the Garden State Parkway, Franklin Avenue is a primary north-south urban arterial roadway, with significant commercial development and access to local recreation and amenities. The corridor is primarily 2-lanes wide, with frequent traffic signals and left turn lanes, on-street parking, and many bus stops. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements. Additional countermeasures are recommended at targeted locations based on local context and crash history.

Crash Summary

- Total Crashes - 332
- Total Fatal Crashes - 1 (0.3%)
- Total Serious Injury Crashes - 4 (1.2%)
- Total Pedestrian Crashes - 9 (2.7%)
- Total Bicyclist Crashes - 5 (1.5%)

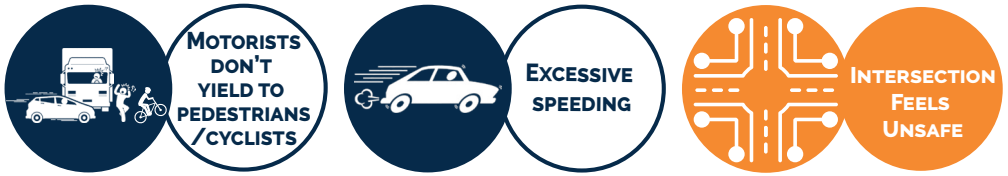
Top 3 Crash Types

26% Rear-End Crashes

22% Right Angle Crashes

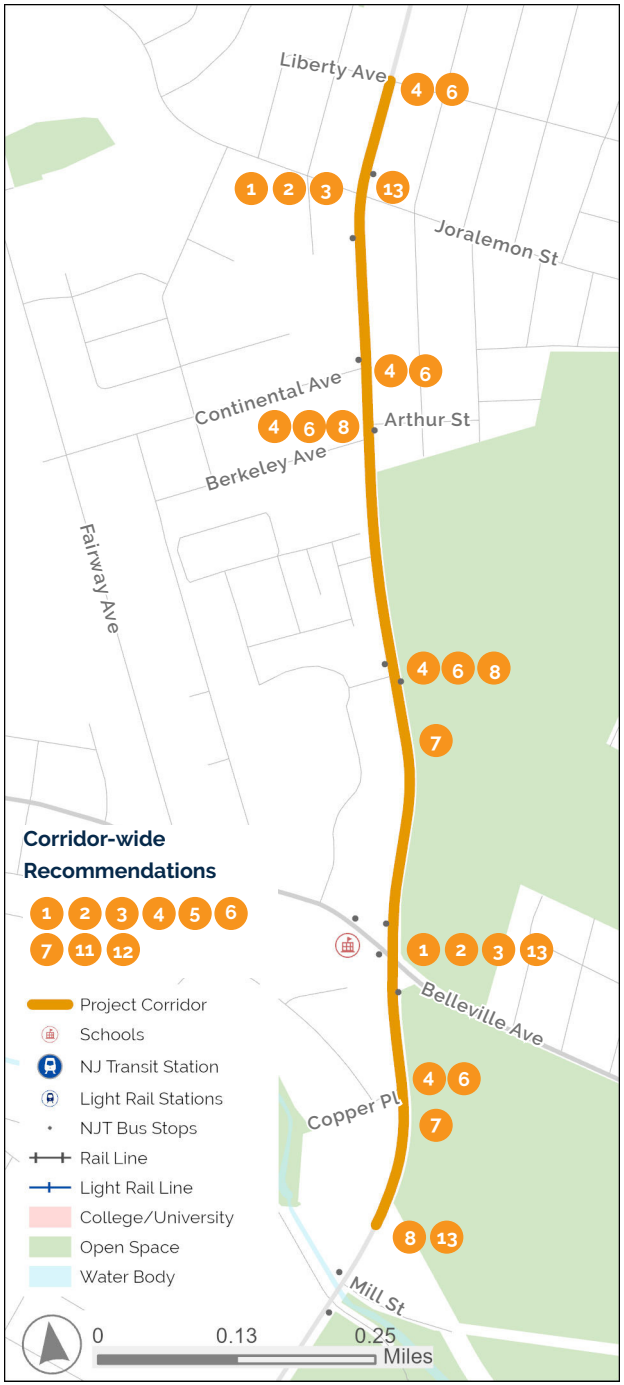
18% Sideswipe Crashes

Community Concerns and Feedback



Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
11. Reduce Speed Limits
12. Road Diet
13. Reconfigure Intersection



14. Belleville Avenue (CR 506), Herman Street to Forest Drive

Municipality: ***Bloomfield/Glen Ridge***
Length: ***0.99 miles***

School Zone	Transit	Demographic Score
☑	☑	☐ Above County Average

Belleville Avenue (Essex County Route (506) is located in Bloomfield Township and Glen Ridge Township; both are densely suburban populated communities in north-central Essex County adjacent to the County's urban core communities. This 0.99-mile long urban corridor, between Herman Street and Forest Drive Avenue, is ranked 14th highest in Essex County for crash risk and severity. Belleville Avenue is an east-west urban arterial roadway that crosses the Garden State Parkway, and primarily 2-lanes wide, with traffic signals, some left turn lanes and on-street parking, and bus stops. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements. Additional countermeasures are recommended at targeted locations based on local context and crash history.

Crash Summary

- Total Crashes - 291
- Total Fatal Crashes - 3 (1.0%)
- Total Serious Injury Crashes - 2 (0.7%)
- Total Pedestrian Crashes - 5 (1.7%)
- Total Bicyclist Crashes - 0 (0.0%)

Top 3 Crash Types

31% Rear-End Crashes

22% Right Angle Crashes

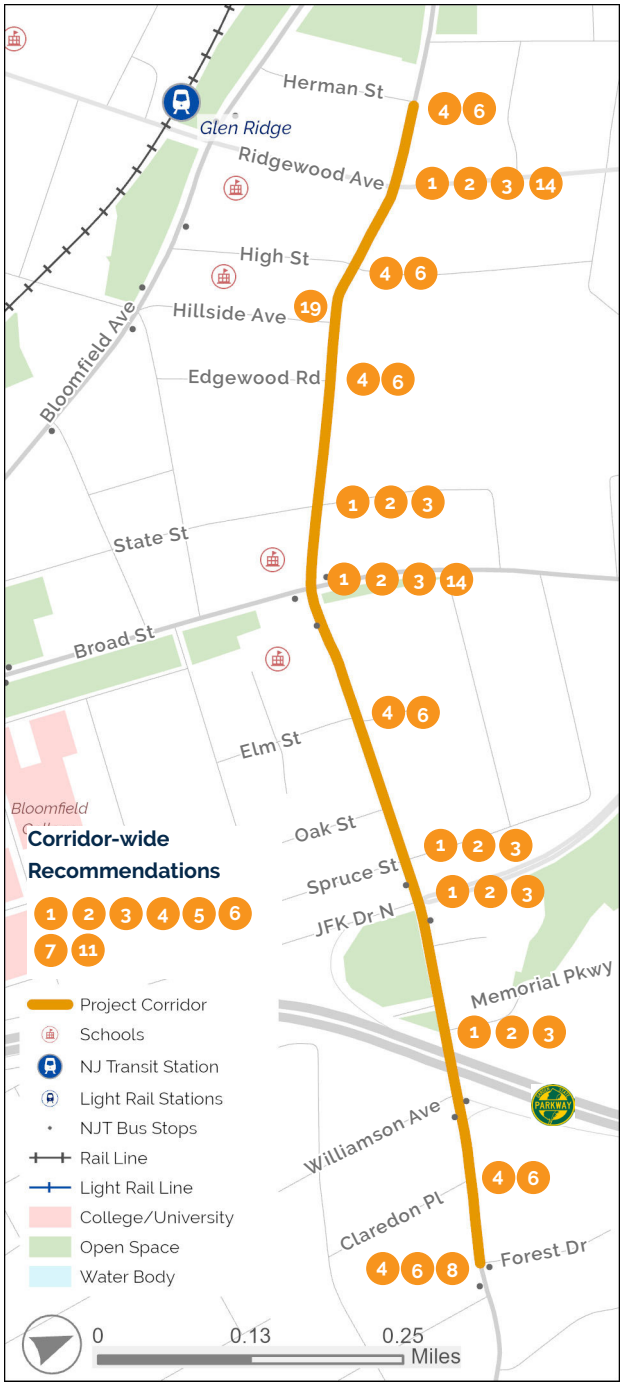
12% Sideswipe Crashes

Community Concerns and Feedback

- Motorists don't yield to pedestrians/cyclists
- Excessive speeding
- Intersection feels unsafe

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
11. Reduce Speed Limits
14. Reconfigure Intersection Turn Lanes
19. Horizontal Curve Warning



15. Franklin Avenue (CR 645), Harrison Street to High Street

Municipality: ***Nutley Township***
Length: ***1.07 miles***

School Zone	Transit	Demographic Score
☑	☑	☐ Above County Average

Franklin Avenue (Essex County Route 645) is located in Nutley Township, a densely populated community in northeastern Essex County, adjacent to the County's urban core communities. This 1.07- mile long urban corridor, between Harrison Street and High Street, is ranked 15th highest in Essex County for crash risk and severity. Located east of the Garden State Parkway, Franklin Avenue is a primary north-south urban arterial roadway, with significant commercial development and access to local recreation and amenities. The corridor is primarily 2-lanes wide, with frequent traffic signals, on-street parking, and many bus stops. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements. Additional countermeasures are recommended at targeted locations based on local context and crash history.

Crash Summary

- Total Crashes - 392
- Total Fatal Crashes - 1 (0.3%)
- Total Serious Injury Crashes - 3 (08%)
- Total Pedestrian Crashes - 27 (6.9%)
- Total Bicyclist Crashes - 7 (1.8%)

Top 3 Crash Types

24% Rear-End Crashes

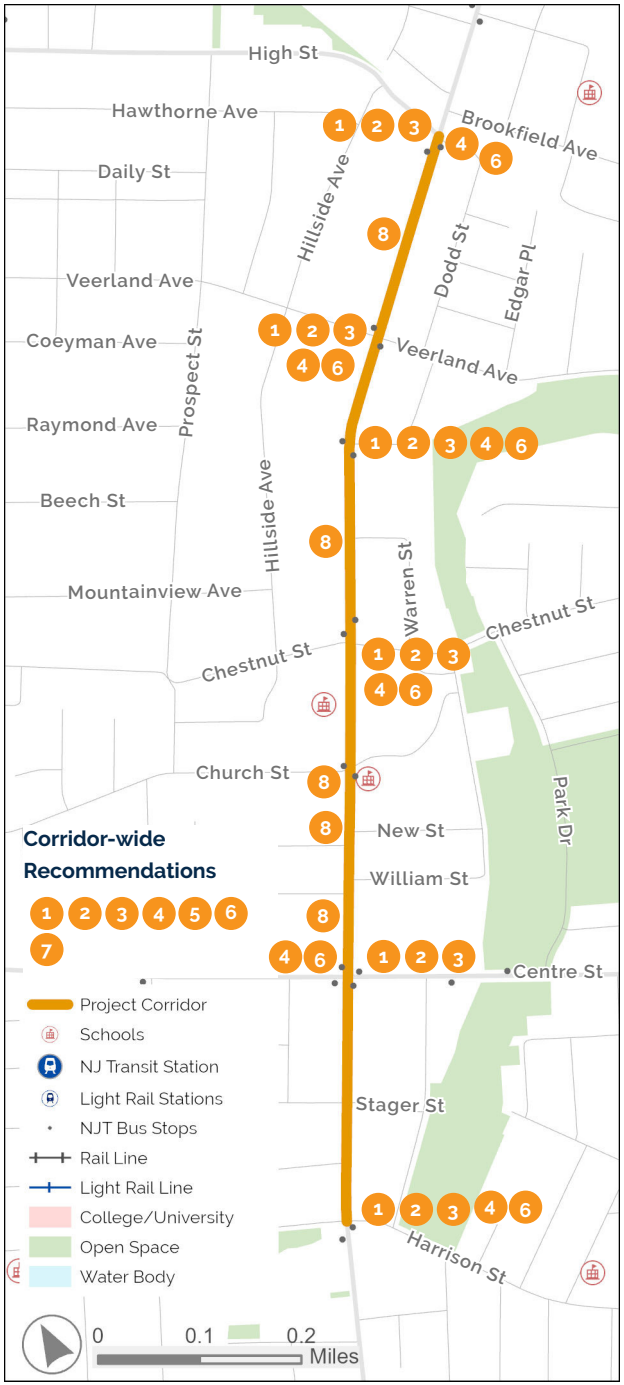
19% Sideswipe Crashes

16% Struck Parked Vehicle

Community Concerns and Feedback

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)



16. Eagle Rock Avenue (CR 611), Harrison Avenue to Haller Road

Municipality: ***West Orange***
Length: ***2.22 miles***

School Zone	Transit	Demographic Score
☑	☑	☐ Above County Average

Eagle Rock Avenue is located in West Orange Township, a moderately dense suburban community adjacent to the County's urban core communities. This 2.22 mile long suburban corridor is ranked 16th highest in Essex County for crash risk and severity. Located north of I-280, the corridor provides both regional and local connectivity along the mostly suburban residential corridor, with access to the commercial areas at Pleasant Valley Way (CR 623). Several schools are located nearby. The corridor is primarily 4-lanes wide, with minimal or no roadway shoulders along rolling terrain, with significant roadway curvature and frequent residential driveways. Proposed safety countermeasures include new traffic signals with improved signal timings and pedestrian phases at targeted locations, improvements at stop-controlled intersections, new street lighting, traffic calming, pedestrian crosswalks, sidewalk repairs and fill-in gaps.

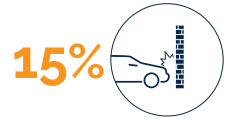
Crash Summary

- Total Crashes - 454
- Total Fatal Crashes - 1 (0.2%)
- Total Serious Injury Crashes - 4 (0.9%)
- Total Pedestrian Crashes - 2 (0.4%)
- Total Bicyclist Crashes - 1 (0.2%)

Top 3 Crash Types

Rear-End Crashes

Sideswipe Crashes

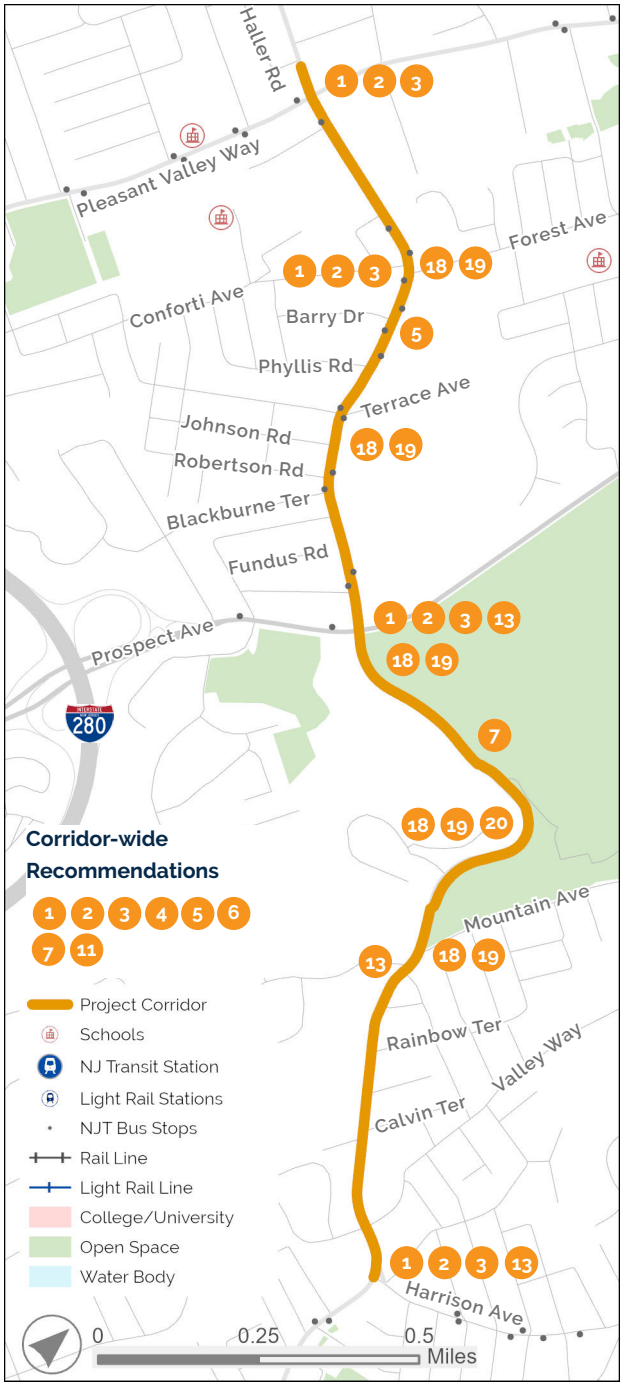


Fixed Object Crashes

Community Concerns and Feedback

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
11. Reduce Speed Limits
13. Reconfigure Intersection
18. High Friction Surface Treatment
19. Horizontal Curve Warning
20. Reconfigure Roadway



17. South Orange Avenue (CR 510), Peach Tree Hill Road to Latham Court

Municipality: ***Livingston Township***
Length: ***0.98 miles***

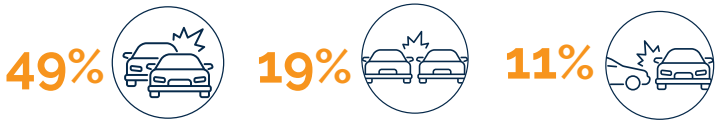
School Zone	Transit	Demographic Score
☑	☑	☐ Above County Average

South Orange Avenue (Essex County Route 510) is located in Livingston, several miles west of South Mountain Reservation. This 0.98-mile long corridor extends from Latham Court to Peach Tree Hill Road, and includes several schools, the Livingston Mall, and a mix of residential development. The South Orange Avenue corridor is ranked 17th highest in Essex County for crash risk and severity. South Orange Avenue is a principal east-west corridor in Essex County with minimal pedestrian accommodations and no transit service. Proposed safety countermeasures include new traffic signals with improved signal timings, lighting, and pedestrian improvements, and potential for reduced speed limits at the intersection with Eisenhower Avenue. Additional countermeasures include advance warning signage/signals to address sight distance limitations and traffic backups caused by roadway curvature and upstream intersections.

Crash Summary

- Total Crashes - 201
- Total Fatal Crashes - 1 (0.5%)
- Total Serious Injury Crashes - 2 (1%)
- Total Pedestrian Crashes - 1 (0.5%)
- Total Bicyclist Crashes - 0 (0.0%)

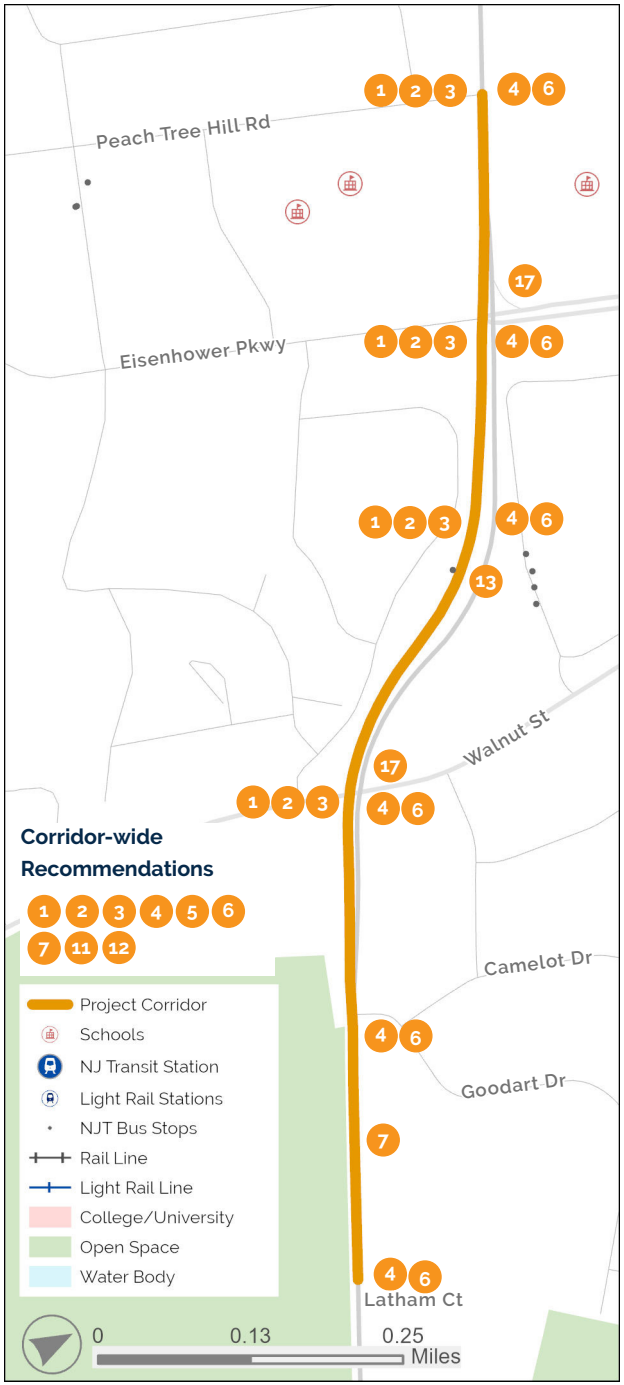
Top 3 Crash Types



Community Concerns and Feedback

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
11. Reduce Speed Limits
12. Road Diet
13. Reconfigure Intersection
17. Hardened Centerlines



19. Chancellor Avenue (CR 601), Springfield Avenue to Elizabeth Avenue

Municipality: ***Maplewood/Irvington/Newark***
Length: ***2.65 miles***

School Zone	Transit	Demographic Score
☑	☑	☑ Above County Average

Chancellor Avenue (Essex County Route 601) is located in densely populated Irvington, Maplewood, and Newark. This 2.65-mile long urban corridor, between Springfield Avenue and Elizabeth Avenue Street, is ranked 19th highest in Essex County for crash risk and severity. Chancellor Avenue connects the across the three cities, features significant residential densities, and crosses the Garden State Parkway and I-78. Chancellor Avenue is primarily two-lanes with frequent traffic signals, on-street parking, and many bus stops. Proposed safety countermeasures include new traffic signals with improved signal timings, new street lighting, traffic calming, pedestrian crosswalks, sidewalk repairs and fill in sidewalk gaps. Additional countermeasures are recommended at targeted locations based on local context and crash history.

Crash Summary

- Total Crashes - 1,032
- Total Fatal Crashes - 3 (0.3%)
- Total Serious Injury Crashes - 18 (1.7%)
- Total Pedestrian Crashes - 45 (4.4%)
- Total Bicyclist Crashes - 5 (0.5%)

Top 3 Crash Types

21% Rear-End Crashes

19% Struck Parked Vehicle

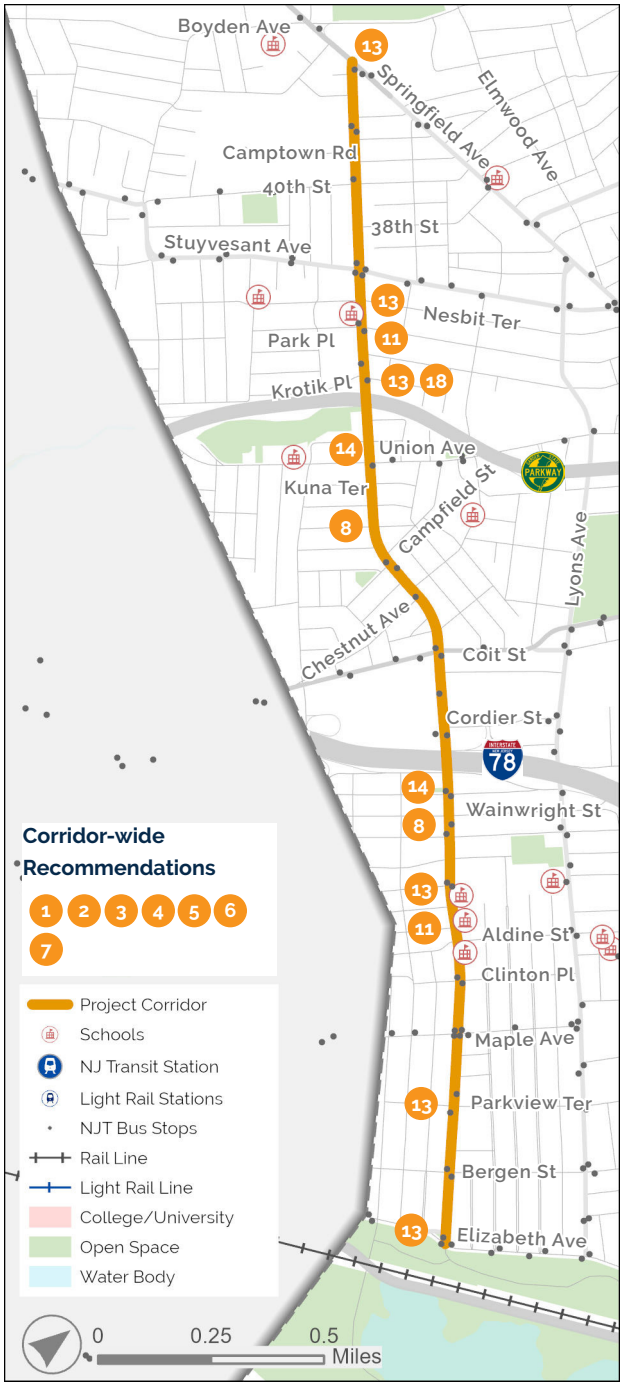
18% Right Angle Crashes

Community Concerns and Feedback

NEED BIKE LANES

Recommended Countermeasures

1. Upgrade Traffic Signals
2. Leading Pedestrian Interval (LPI)
3. Yellow Change Interval
4. Intersection Daylighting & Curb Extension
5. Improved Street Lighting
6. High Visibility Crosswalk
7. Sidewalks & ADA Ramps
8. Rectangular Rapid Flashing Beacon (RRFB)
11. Reduce Speed Limits
13. Reconfigure Intersection
14. Reconfigure Intersection Turn Lanes
18. High Friction Surface Treatment



POLICIES AND OPERATIONAL STRATEGIES

The Implementation Plan guides Essex County as it seeks to implement the Essex SS4A Action Plan to **achieve the overarching goal of eliminating fatal and serious injury crashes by 2045.**

The Action Plan focuses on three overarching themes developed from the outputs of a comprehensive assessment of safety and crash data history, and informed and refined by community and stakeholder input.

Theme 1: Promote a Culture of Safety

Essex County is committed to preventing crashes and mitigating crash severity by addressing the root causes of dangerous driving behaviors and promoting shared responsibility for safety among individuals, agencies, and organizations that design, manage, and use the transportation system. Community feedback and crash data highlight persistent safety concern hotspots, unsafe turns, poor visibility, and aggressive driving behaviors. By addressing these issues comprehensively, the County aims to reduce severe injuries, protect vulnerable road users, and foster public trust.

Theme 2: Plan, Design, and Build "Safe Streets 4 All"

Essex County is committed to designing streets that are safe for everyone, reducing severe crash risks, and providing accessible networks for people of all ages and abilities who walk, bike, roll, or use transit. Street design and infrastructure projects should aim to lower speeds and influence driver behavior, addressing a leading cause of traffic crashes. This theme has two sub-themes:

- **Theme 2A: Safe Street Design and Traffic Calming** focuses on safe street design solutions that self-regulate speeds and risky driving behaviors, reducing the need for enforcement.
- **Theme 2B: Active Transportation Options and Networks** promote safe, accessible active transportation options to encourage walking, biking, and micromobility as viable, equitable transportation choices.

Theme 3: Partner and Collaborate

Essex County recognizes that advancing safe streets requires broad collaboration across agencies, municipalities, advocacy organizations, and community partners. Building safe and accessible streets depends on shared responsibility, coordinated action, and transparent communication. By fostering partnerships, Essex can leverage resources, align goals, and deliver safety improvements more effectively. Through joint planning, technical assistance, and information-sharing, the County will empower municipalities, regional agencies, and local organizations to create safer streets together.

For the purposes of the tables below, "Short-term" means 0-2 years and "Medium-term" means 3-6 years.

Theme 1: Promote a Culture of Safety

Essex County is committed to making the streets safer for everyone by reducing traffic fatalities and serious injuries. Through data-driven policies, education and engagement, strategic enforcement, and collaboration with partners, the aim is to foster a culture of safety that protects all roadway users.

Strategy	Responsibility	Timeframe	Actions/Performance Measures
Update the Essex County Complete Streets Policy consistent with the recommendation in *Essex 2045* to make safe streets the default in all county planning initiatives and infrastructure projects	County Executive's Office, Board of County Commissioners, Department of Public Works (DPW), Division of Planning	Short-term	• Updated policy to reflect current needs, risks, and priorities, then formally adopt and communicate publicly. Include language that the design and engineering phase of major County capital projects includes community engagement. • Collaborate with municipalities to update/adopt policies with the goal of achieving 100 percent Complete Streets policy adoption across Essex County
Implement the Complete Streets Design Guide and Project Checklists consistent with the recommendation in *Essex 2045*	DPW, Division of Planning, Division of Engineering, Planning Board, Board of County Commissioners	Short-term	• Adopt and require completion of internal project review and site plan/subdivision review checklists • Include language in the County capital project checklist that major projects include community engagement • Development of a Complete Streets Implementation Committee to track projects and review and sign off on Complete Streets checklists. The committee would be comprised of Essex County DPW staff representing Planning, Engineering, and Maintenance • Submit annual report to the Planning Board and Board of Commissioners that includes accomplishments, significant

			milestones, exemptions granted, and any recommended changes
Implement targeted education and outreach programs, including school-based campaigns, social media messaging, and community partnerships	Sheriff's Office, Prosecutor's Office, Communications Office, DPW, Division of Planning, Office of Education **Potential Partners:** Municipalities, Local Boards of Education, TMAs, Advocacy Groups	Medium-term/Ongoing	• Develop a communications strategy informed by research to improve public perceptions of people walking, biking, using assistive devices, and taking transit • Coordinate education or safety campaigns annually • Track the number of schools and community groups engaged annually
Communicate "crashes" instead of "accidents" to shift culture toward safety and accountability	Communications Office, Sheriff's Office, Prosecutor's Office, DPW, Division of Planning **Potential Partners:** TMAs, Municipalities, Advocacy Groups	Medium-term	• Update County communications guide • Review and revise all public-facing reports and outreach materials to reflect new terminology
Conduct traffic safety enforcement actions at high-risk corridors and intersections to reduce serious injury and fatal crashes	Sheriff's Office, Prosecutor's Office **Potential Partners:** Municipal Police Departments/Public Safety	Short-term/Ongoing	• Initiate regular high-visibility enforcement campaigns at high-crash locations • Number of enforcement actions taken (citations, warnings, stops) • Monitor repeat violations to assess behavior change • Track crashes at enforcement sites before/after campaigns

Increase enforcement of parking infractions that impact public safety and lead to a higher risk of crashes	Sheriff's Office, Prosecutor's Office **Potential Partners:** Municipal Police Departments/Public Safety, Municipal Parking Authorities	Short-term/Ongoing	• Initiate regular parking enforcement campaigns at high-crash locations • Number of enforcement actions taken (citations, warnings, stops) • Monitor repeat violations to assess behavior change • Track crashes at enforcement sites before/after campaigns
Develop a County Safe Fleet Transition Plan to formalize a set of best-practice vehicle safety technologies for all County vehicles to prevent and mitigate crashes.	DPW, Division of Planning, County Risk Manager	Medium-term	• Develop and adopt a County Safe Fleet Transition Plan • Number of fleet vehicles retrofitted • Number of fleet vehicles replaced
Develop a policy regarding the installation of **safe passing law signage** on County Roads.	DPW, Division of Planning	Short-term	• Develop and adopt a safe passing law signage policy • Number of signs installed
Educate and support county and municipal staff on safe street practices and crash prevention principles	County Executive's Office, Sheriff's Office, Prosecutor's Office, Communications Office, DPW, Division of Planning, Office of Human Resources **Potential Partners:** Municipalities, TMAs, Advocacy Groups	Medium-term/Ongoing	• Develop standard street safety training/branding materials • Number of training sessions held, and number of staff trained • Percentage of municipalities that adopt training recommendations

Theme 2: Plan, Design, and Build "Safe Street for All"

Theme 2A: Safe Street Design and Traffic Calming

Essex County is committed to implementing street design and infrastructure projects that support traffic calming and encourage safer driving behaviors to create safer streets for all users, including pedestrians, cyclists, transit riders, and drivers.

Strategy	Responsibility	Timeframe	Actions/Performance Measures
Apply the Complete Streets Policy, Design Guide, and Project Checklists for all County roadway projects	DPW, Division of Planning, Division of Engineering	Short-term/Ongoing	• Apply checklist to County road projects • Document safety improvements incorporated in reviewed projects • Incorporate equity considerations in design decisions • Track post-construction outcomes (e.g., crashes/severity, pedestrian/bike usage)
Apply the Complete Streets Policy, Design Guide, and Project Checklists to development and redevelopment project review to ensure non-motorized users are prioritized	Division of Planning, Division of Engineering, Planning Board **Potential Partners:** Municipal Planning Boards, Developers	Short-term/Ongoing	• Apply checklist to projects under Site Plan and Subdivision review • Ensure approved projects implement recommended safety improvements • Conduct post-occupancy evaluation • Track changes in crashes/severity pedestrian/bike usage at development sites
Conduct Road Safety Audits of County HIN Priority Corridors/Projects to establish feasibility, priorities, and recommend projects for funding	DPW, Division of Planning, Division of Engineering **Potential Partners:** NJTPA, NJDOT, TMAs, Municipalities	Short-term/Ongoing	• Complete Road Safety Audits (RSAs) on roadways identified in the County HIN Priority Corridor/Project list • Document and share recommendations with municipalities • Prioritize audits in traditionally underserved communities

			• Track crashes/severity at audited locations where safety improvements have been implemented
Secure funding & install traffic calming and safety improvements on the County HIN Priority Corridors Project list	DPW, Division of Planning, Division of Engineering **Potential Partners:** Municipalities, NJTPA, NJDOT, FHWA	Medium-term/Ongoing	• Prioritize projects identified through RSAs • Number of locations where traffic calming measures are installed • Track crashes/severity at locations where safety improvements have been implemented

Theme 2B: Active Transportation Options and Networks

Essex County is committed to promoting safe, active transportation by facilitating walking, biking, and rolling to key destinations, such as schools, parks, and transit. The County prioritizes active transportation-focused infrastructure, including sidewalks and crosswalks, dedicated bike lanes, trails, and other bicycle and pedestrian safety improvements to reduce crashes and support safe, equitable mobility for all.

Action Items	Responsibility	Timeframe	Performance Measures
Conduct Countywide studies for pedestrian, bicycle, and micromobility modes to expand transportation choices	DPW, Division of Planning, **Potential Partners:** NJTPA, TMAs, Municipalities	Medium-term	• Through planning studies, develop complete active transportation networks with prioritized connectivity to schools, parks, and transit • Studies completed and adopted • Recommendations implemented
Expand and improve walking and biking infrastructure that is separated from vehicular traffic	DPW, Division of Planning, Division of Engineering **Potential Partners:** **County** Office of Education, County Department of Parks,	Medium-term/Ongoing	• Identify on the HIN Priority Corridor/Project list locations focused on safety improvements for vulnerable road users • Number of schools/parks/transit hubs connected by sidewalks, bike lanes, and trails

	Recreation, and Cultural Affairs, Municipalities, Local Boards of Education, NJTPA, NJDOT, FHWA, NJ TRANSIT, Port Authority, TMAs		• Miles of protected or off-road facilities installed per year • Miles of existing bike network gaps completed • Track crashes/severity at locations where safety improvements have been implemented
Implement the Safe Routes to School as an essential and beneficial component to achieving safety, mobility, and equity goals	DPW, Divisions of Planning & Engineering, Office of Education **Potential Partners:** Municipalities, Local Boards of Education, TMAs, NJDOT, Advocacy Groups	Short-term	• Number of schools participating • Track changes in walking/biking/personal vehicle use at school drop-off/pick-up • Track crashes/severity in school zones
Designate and enhance school zones with reduced speed limits, improved signage, traffic calming measures, and safe drop-off/pick-up areas	DPW, Division of Planning, Division of Engineering, Office of Education **Potential Partners:** Municipalities, Local Boards of Education, TMAs, NJDOT	Medium-term/Ongoing	• Number of school zones with improvements • Track crashes/severity in enhanced school zones
Designate and enhance community facility zones (e.g., parks, libraries, recreation centers, etc.) with reduced speed limits, improved signage, and safe crossings	DPW, Division of Planning, Division of Engineering, Department of Parks, Recreation, and Cultural Affairs **Potential Partners:** Municipalities	Medium-term/Ongoing	• Number of community facility zones designated • Track crashes/severity in community facility zones

Accommodate biking/riding in County parks and create connections between parks and trail systems	County Executive's Office, Board of County Commissioners, DPW, Division of Planning, Department of Parks, Recreation, and Cultural Affairs **Potential Partners** East Coast Greenway Alliance, NJ Bike and Walk Coalition, TMAs, Advocacy Groups	Short-term (policy change) Medium-term (infrastructure)/Ongoing	• Develop a plan to better accommodate biking/riding in Essex County Parks, e.g., allow bikes on trails, add new on or off-road bike facilities, etc. • Number of parks with bike accommodations and miles of connections to trails • Track users of connected facilities
Support and connect to regional or local multi-use trail projects such as the Essex-Hudson Greenway Connector, Morris Canal Greenway, and others identified in the North Jersey Trail Network Initiative	County Executive's Office, Board of County Commissioners, DPW. Division of Planning, Department of Parks, Recreation, and Cultural Affairs **Potential Partners** NJDOT, NJDEP, East Coast Greenway Alliance, NJ Bike and Walk Coalition, TMAs, Advocacy Groups	Short-term/Ongoing	• Trail mileage completed

Improve transit stop access and amenities, including sidewalks, shelters, benches, and ADA upgrades	DPW, Division of Planning, Division of Engineering **Potential Partners:** NJ TRANSIT, TMAs, Municipalities	Medium-term/Ongoing	• Number of stops with improved access/amenities • Number of stops meeting ADA standards • Rider satisfaction surveys
Coordinate with NJ TRANSIT and TMAs to improve the first/last-mile connections, including bikeshare, micromobility, and shuttles	DPW, Division of Planning, NJ TRANSIT, TMAs **Potential Partners:** Municipalities, Advocacy Groups	Medium-term/Ongoing	• Number of first/last-mile projects implemented • Transit ridership change at improved hubs

Theme 3: Partner and Collaborate

Essex County is committed to advancing road safety by partnering and collaborating across municipalities, agencies, and community organizations. The County will champion multi-jurisdictional projects, policies, and ordinances, while sharing data and best practices to strengthen safety outcomes and build a culture of continuous learning.

Action Items	Responsibility	Timeframe	Performance Measures
Organize and support a Road Safety Advisory Committee with representatives from County, municipal, and community partners to champion the implementation of Essex SS4A Action Plan goals and strategies	County Executive's Office, Board of County Commissioners, DPW, Division of Planning **Potential Partners:** County Office of Education, County Department of Parks, Recreation, and Cultural Affairs, County Environmental Commission, County Sheriff's Office, Municipalities, TMAs, Advocacy Groups	Short-term/Ongoing	• Road Safety Advisory Committee (RSAC) established and continues to meet regularly • RSAC recommendations reflected in policy implementation and project selection
Establish Countywide road safety performance measures and goals to guide policy, funding, and project decisions, ensuring alignment with Essex SS4A Action Plan goals and strategies	DPW, Division of Planning, Road Safety Advisory Committee	Short-term/Ongoing	• RSAC establishes measures used to evaluate the implementation of Essex SS4A Action Plan goals and projects • Adopt performance measures and goals, and monitor annually

Provide County-wide crash and safety data to municipalities to help identify priority projects and strengthen local decision-making capacity	DPW, Division of Planning, Sheriff's Office, Communications Office	Short-term/Ongoing (Annual)	• Crash and safety data distributed to all municipalities annually • Data used by municipalities to apply for grants or prioritize projects
Engage municipal, community, and external stakeholders early and often to co-develop solutions, conduct safety audits, and advance demonstration projects	DPW, Division of Planning, Division of Engineering, **Potential Partners:** Municipalities, Local Boards of Education, TMAs, Volunteer and Advocacy Groups	Short-term/Ongoing	• Prioritize locations on the HIN Priority Corridor/Project list with high visibility and multimodal usage • Number of completed demonstration or quick-build projects on high-risk corridors annually • Record pedestrian/bicycle counts and driver behavior before and after implementation • Document observed speed reductions, conflict points, or behavior changes
Collaborate on a countywide funding strategy to secure and manage competitive grants for multi-jurisdictional and high-priority safety projects	County Executive's Office, Board of County Commissioners, DPW, Division of Planning, **Potential Partners:** Municipalities, Local Boards of Education, TMAs, NJTPA, NJDOT	Short-term/Ongoing	• Number of joint applications submitted • Amount of external funding secured

REFERENCES

[i] https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-06/lrsp2020.pdf, accessed April 24, 2025

[ii] The Safety Voyager application, developed by NJDOT, is a platform that hosts the comprehensive crash records, including location, severity, crash type and environmental factors; Numetric, managed by the New Jersey Division of Highway Traffic Safety, provides high level analytics that combine multiple aspects of crash data—such as vehicles, drivers, occupants, and pedestrians—into an integrated summary for broader safety trends.

[iii] 2016-20 Statewide Pedestrian Fatalities and Serious Injury Crash Analysis., 2024, New Jersey Department of Transportation, Bureau of Safety, Bicycle, and Pedestrian Programs

[iv] NHTSA (2021). Traffic Safety Facts: Pedestrians [DOT-HS-813-079]. Retrieved from https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813079

[v] https://highways.dot.gov/safety/data-analysis-tools/rsdp/rsdp-tools/nchrp-report-893-systemic-pedestrian-safety-analysis. Accessed October 28, 2025

[vi] https://highways.dot.gov/safety/data-analysis-tools/rsdp/rsdp-tools/nchrp-report-893-systemic-pedestrian-safety-analysis. Accessed October 28, 2025, pages v and 4

[vii] https://www.njtpa.org/Projects-Programs/Transportation-Improvement-Program-(TIP)/Project-Tracker-(NOTIS).aspx. Accessed November 3, 2025

[viii] The Transportation Alternatives Set-Aside Program (TA Set-Aside; formerly known as Transportation Alternatives Program, or TAP) is administered by the U.S. Federal Highway Administration (FHWA) and helps states fund a variety of activities related to improving transportation assets, including on- and off-road pedestrian and bicycle facilities, environmental mitigation, and creating or improving recreational trails projects. Accessed November 3, 2025. https://www.adaptationclearinghouse.org/resources/usdot-transportation-alternatives-set-aside-program.html

[ix] The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads with a focus on performance. Accessed November 3, 2025. https://highways.dot.gov/safety/hsip

[x] https://www.njtpa.org/lsp.aspx Accessed November 3, 2025.

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