SUFFOLK COUNTY HIKE AND BIKE MASTER PLAN

March 2020

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ACKNOWLEDGMENTS

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EXECUTIVE SUMMARY

INTRODUCTION

The Suffolk County Department of Economic Development and Planning (SCEDP) has undertaken the development of a comprehensive Suffolk County Hike + Bike Master Plan (the Plan) to facilitate development of safe, integrated, and well-designed network of pedestrian and bicycle facilities throughout the County. The main focus of the Plan is to identify both point projects and linear network improvements to improve the comfort and level of connectivity of the active transportation network. This Plan primarily includes the development of a proposed network of on-road and off-road bike facilities, shared-use paths, and sidewalks.

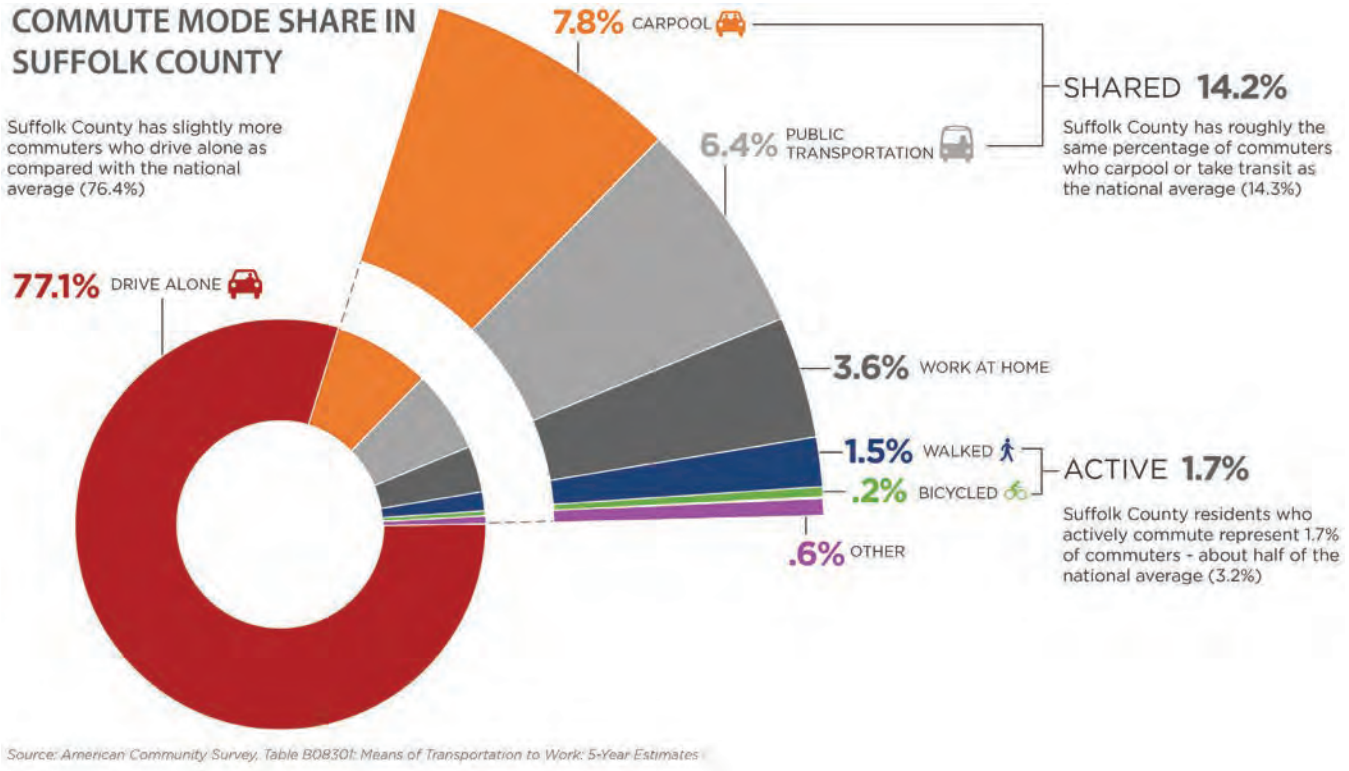
Implementation of the recommended network and improvements will potentially expand mobility choices and improve the quality of life for County residents, reduce the reliance on automobiles, promote public health and boost economic activity.

This Plan will guide County and Town leaders and staff on how to develop and enhance the environment for walking and cycling. The Plan was developed with extensive engagement with County residents, town planners, hike and bike enthusiasts and advocates, local planning organizations, the County Departments of Public Works and Parks, and New York State Department of Transportation.

SUFFOLK COUNTY GEOGRAPHY

The land use and geography of Suffolk County ranges from urban, semi-urban / residential, suburban, and rural areas connected by a network of state, county, and locally-owned roads that can present challenges for those who walk and bike. A number of downtown Central Business Districts, train stations, university / college campuses, popular parks and beaches, and other destinations represent environments that, with improved pedestrian and bicycle facilities and

Figure 1: Commute Mode Share in Suffolk County



programs, offer the opportunity to replace many short automobile trips with walking and bicycle trips.

Much of the landscape is historic and scenic and provides opportunities to promote additional recreational riding and bicycle tourism as well.

DEMOGRAPHIC ANALYSIS

Population: As of 2017, the latest year for which comprehensive data is available, 1,497,595 people live in Suffolk County.

Education: 19% of adults in Suffolk County have a Bachelor's Degree, roughly the same as the average within the United States.

Race + Ethnicity: 68% of residents identify as white, 19% identify as Hispanic or Latino, 7% identify as Black or African-American, and 4% identify as Asian.

Commute Mode Choice: Approximately 1.5% of area residents walk to work, and 0.2% bicycle. 77% of residents drive to work alone., while 14% either carpool or take public transit. (See graphic below.)

EXISTING CONDITIONS

To help inform the pedestrian and bicycle network recommendations, the Alta/FHI/AKRF team ("team") mapped existing on-road bicycle facilities and off-road bicycling, hiking, and walking trails. Additionally, the team generated a list of over 1,000 trip destination points (nodes) to understand where pedestrians and bicyclists want more comfortable connections. The following summary analysis provided the foundation for the development of the recommended walk, bike, and hike network across Suffolk County.

Connectivity / Nodes Analysis: The team identified over 1,000 Nodes that represent likely walk, hike, and bike trip generators and destination points. This data-driven process assigned a score to each of the 35 node categories in Suffolk County and focused on the need for active transportation options where people live, work, play, shop, learn, and access transit. The team used individual and clusters of Nodes to identify missing links in both the on-road and off-road trail network for pedestrians, hikers, and bicyclists.

Figure 2: Suffolk County Equity Indicators Map (Darker colors represent areas of higher need)

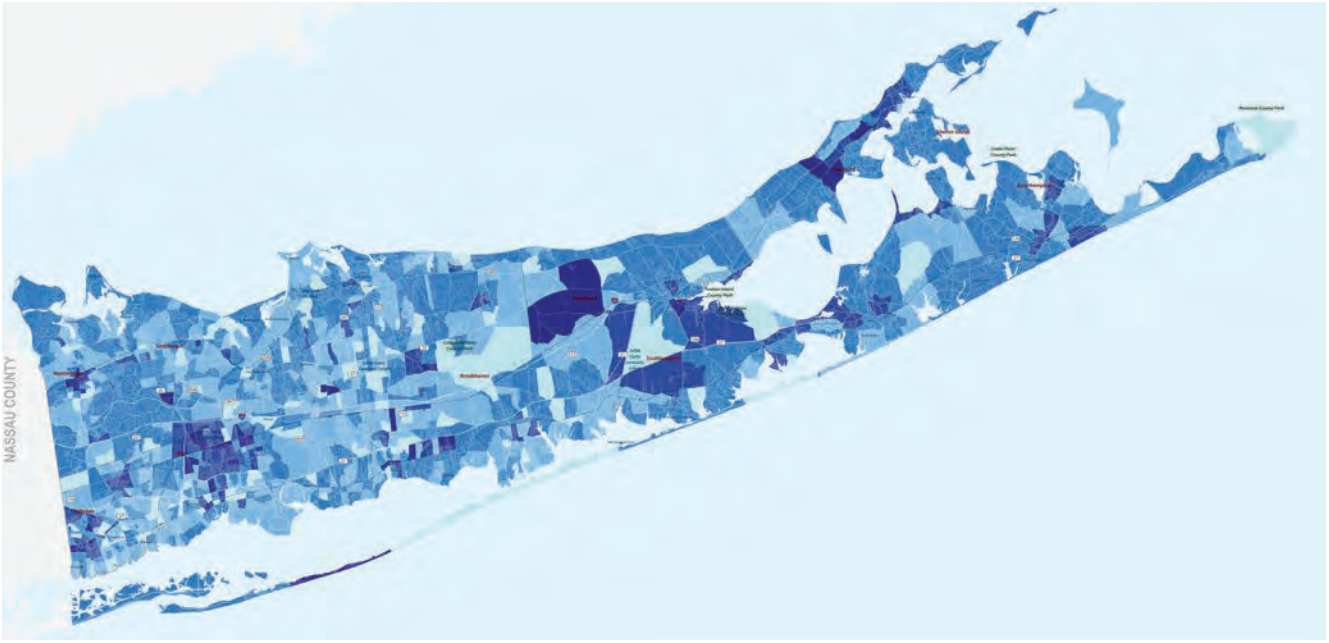


Table 1 indicates the node classifications and their scores which were factored into the project impact / prioritization process. Each broad node category was assigned a score between 1 and 5 to help understand the importance of individual projects linking nodes.

Figure 3: Grangabel Park, with a score of 4

Figure 4: Setauket Greenway trail, with a score of 4

Figure 5: Downtown Patchogue Shopping Area, with a score of 5

Safety Analysis: The safety analysis included the review of crashes that involved pedestrians or bicyclists from 2013 - 2017. These crash locations are often intersections and roadway segments that lack sidewalks or roadway shoulders, have poor sight lines or high posted speed limits, or require pedestrians to cross multi-lane roadways.

Table 1: Node Classifications and Score

CLASSIFICATION	SCORE	QUANTITY
LIRR Station	5	122
Ferry Landing		
Regional Employment Center		
Downtown Shopping Area		
Mall		
Municipal Park / County Park	4	564
State Park / Beach		
Bike Hostel		
Trailhead Access		
Future Bike Share Station		
Connect L.I. Development		
School / College / Library		
Hospital	3	95
Public Health Center		
Municipal Building		
Municipal Recreation Center		
Museum	2	184
Performance / Sports Venue / Theater		
Vineyard / Brewery / Cidery / Distillery		
Pool		
Airport	1	110
Research Institute		
Observatory		
Zoo / Aquarium / Amusement Park		
Historic Site		

Equity Analysis: The Equity Analysis identified areas that demonstrate a relative need for transportation investments based on concentrations of historically vulnerable populations. Areas with the highest need for equitable transportation options were based on:

- Age: People under 18 and over 65
- Low-Income Households
- Households with No Motor Vehicle Access
- Households with Limited English Proficiency

PUBLIC AND STAKEHOLDER ENGAGEMENT

The Suffolk County Department of Economic Planning and Development and the Hike-Bike Technical Advisory Committee (HB-TAC) provided oversight and critical input to the consultant team throughout the planning process. Five bi-monthly meetings with the HB-TAC, three pop-up public input events, and the online public input map provided critical insight into the project plan.

At the three pop-up events in April and May 2019, community members were able to review poster-sized maps and draw areas where they wanted more comfortable walk, hike and bike connections. The three pop-up events were held at Earthstock at Stony Brook University, Eco-Carnival at the Seatuck Environmental Association, and the 15K Race to the Port Jeff Brewing Company.

ONLINE PUBLIC INPUT MAP

The 2019 online input map went live in March and was open for approximately 12 weeks. Map users had the ability to draw points and lines on the map indicating:

- **Point:** A barrier to biking or walking, such as a busy intersection or missing sidewalk
- **Line:** A walking or bicycling route that needs improvement

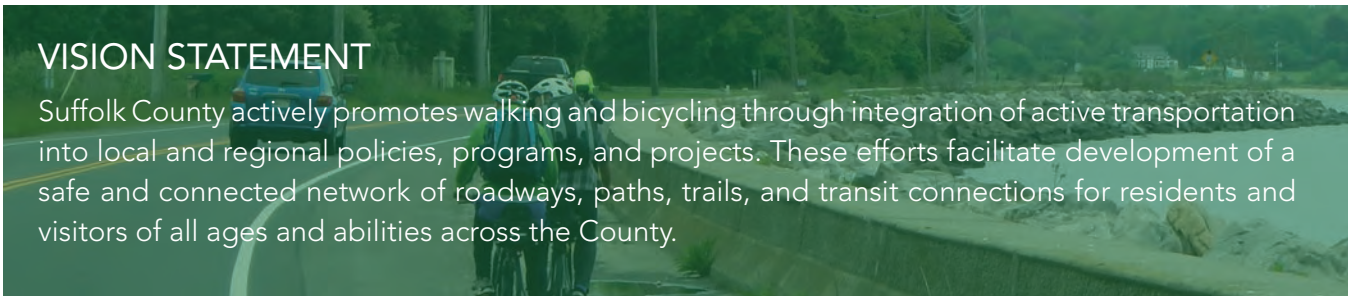
The point and linear project recommendations make up the bulk of the various point and linear proposed projects as the result of this planning project.

PROJECT IMPACT ASSESSMENT

In order to help Suffolk County prioritize its hundreds of pedestrian and bicycle treatments, the Plan used six criteria to evaluate and score each linear project based on GIS-based data sources. These criteria were derived from the planning goals established early on the process and include:

- **Safety**: The number of pedestrian- or bicyclist-involved crashes between January 2014 and December 2018 within a 0.25-mile radius of a project recommendation.
- **Connectivity**: Node score within a 0.5-mile radius of a recommended project.
- **Design**: The ability of a proposed facility to create separation between people walking, hiking or bicycling and people driving motor vehicles.
- **Equity**: A composite equity score using US Census data was applied
- **Economic Development**: The aggregate Node Score of the downtown shopping areas, LIRR stations, and Connect Long Island Developments as measured within a 0.5-mile radius of the project recommendations
- **Health + Environment**: Percent of students in public school districts reporting as being overweight or obese.

VISION & GOALS FOR THE PLAN



VISION STATEMENT

Suffolk County actively promotes walking and bicycling through integration of active transportation into local and regional policies, programs, and projects. These efforts facilitate development of a safe and connected network of roadways, paths, trails, and transit connections for residents and visitors of all ages and abilities across the County.

PLAN GOALS

GOAL 1: SAFETY

Increase pedestrian and bicyclist safety with improvement projects, policies, and programs

GOAL 2: CONNECTIVITY

Connect communities and common destinations by expanding the network of walking and bicycling routes for people

GOAL 3: DESIGN

Reduce the pedestrian and bicyclist Level of Traffic Stress on State, County, and local roads and at trail crossing locations

GOAL 4: POLICY

Strengthen and streamline County and local policies that fund construction and maintenance of hiking, walking, and bicycling infrastructure across municipal lines

GOAL 5: EQUITY

Ensure equitable distribution of funding for hiking trails, sidewalks, shared-use paths, and on-road bicycle infrastructure

GOAL 6: ECONOMY

Leverage County and municipal assets to enhance walking, hiking, bicycling, and overall quality of life to promote economic development and tourism

GOAL 7: EDUCATION + ENCOURAGEMENT

Develop programs that promote knowledge of how to safely navigate walk, hike, and bicycle facilities and establish awareness of facility location

GOAL 8: HEALTH

Increase the number of active transportation and recreation opportunities to all Suffolk County residents, particularly those reporting poor health

THE VALUE OF WALKABLE AND BICYCLE-FRIENDLY COMMUNITIES

Accessibility and Mobility Benefits

Pedestrian and bicycle facilities offer additional mobility options for those who do not have access to a motor vehicle due to age (children and seniors), economic status, disability, or temporary impairment and for those who choose not to drive.

Generally, pedestrian and bicycle facilities help minimize traffic conflicts, which provides improved motor vehicle capacity and eases congestion.

In the U.S., 40% of motor vehicle trips are under two miles in length, and many travelers would access destinations by bicycle or on foot if comfortable pedestrian and bike facilities were provided.

National Household Transportation Survey

Safety Benefits

One study that looked at 13 years of data from 12 U.S. cities concluded that cities with robust bicycling facilities had the largest reduction in fatal crashes. Bike facilities can help to calm speeding motor vehicle traffic, which can reduce the occurrence of fatalities.

Science Daily, 29 May 2019. www.sciencedaily.com/releases/2019/05/190529113036.htm

Improved pedestrian and bicycle facilities have led to an increase in the number of walkers and bicyclists and decreased numbers of crashes, injuries, and fatalities through the "safety in numbers" effect because of an enhanced awareness of vulnerable users by motorists.

https://injuryprevention.bmj.com/content/9/3/205.short

Even relatively small improvements, like median refuge islands at pedestrian crossings can reduce crash rates by 46%, while installing sidewalks can reduce crash rates up to 89%.

https://safety.fhwa.dot.gov/ped_bike/

Health Benefits

Walking and bicycling provide an opportunity for people to integrate into their daily lives the Centers for Disease Control (CDC) recommended 150 minutes of weekly aerobic activity.

Men who cycle to work are significantly less likely to be overweight and obese (39.8%) then those who drive to work (60.7%).

https://www.ncbi.nlm.nih.gov/pubmed/17904210

Economic Benefits

Property assessments within one block of the eight-mile Indianapolis Trail have increased 148% since it opened in 2008, an increase of $1 billion in assessed property value.

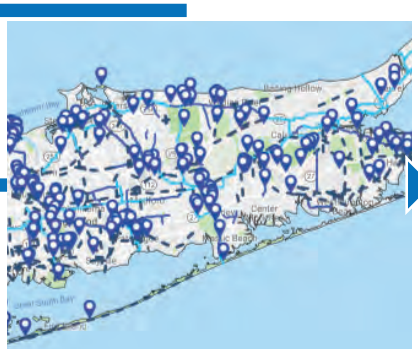
https://indyculturaltrail.org/2015/07/23/economic-impact-figures-released/

DEVELOPMENT OF THE HIKE-BIKE NETWORK

NETWORK DEVELOPMENT PROCESS

Public Engagement

Three Pop-Up Events



Online Input Map

- Dozens of hand-written comments
- 200+ members of the public engaged at three events
- 448 point and 336 linear project ideas / issues added by public

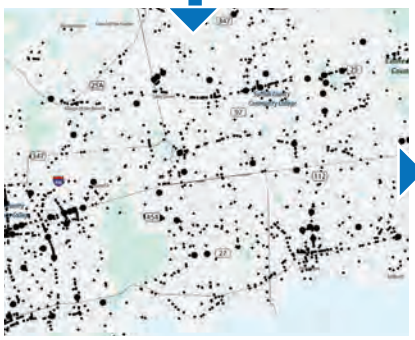
Node / Gap Analysis

Economic Development Node Points

Gaps In Network Identified

- Over 1,000 Node Points mapped: train stations, ferry terminals, regional employment center, downtown shopping areas, etc.
- 544 linear project ideas drawn by consultant team

Impact Analysis



Safety: > 4,000 Crashes Mapped

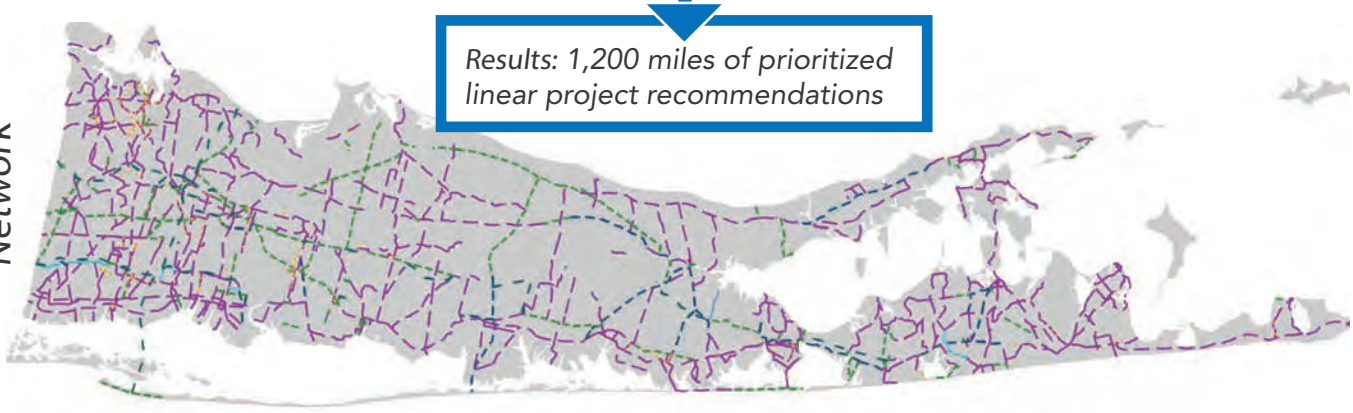
Health: School District Obesity Data

Criteria for Impact Analysis:

- Safety
- Connectivity
- Equity
- Design
- Economic Development
- Health

Prioritized Hike-Bike Network

Results: 1,200 miles of prioritized linear project recommendations



TOOLKIT OF NETWORK RECOMMENDATIONS

The recommended pedestrian and bicycle network was produced based on the needs identified during public engagement efforts, analyses done during the existing conditions inventory, and input from the County's Hike-Bike Technical Advisory Committee. The recommended pedestrian and bicycle facilities intend to create a safe and connected active transportation network throughout Suffolk County, linking popular destinations, employment hubs, schools, transit stops, and residential areas.

RECOMMENDED BICYCLE NETWORK

Most bicycle-related improvements can be done at low cost since the majority of linear project recommendations (bike lanes) require only paint and signage. Others, such as the paved sidewalk-level sidepath along Long Island Motor Parkway in Islandia, will carry a higher price tag.

THE TOOLKIT OF BICYCLE FACILITIES INCLUDES:

- Shared-Use Paths / Sidepaths
- Separated Bike Lanes
- Buffered Bike Lanes
- Bike Lanes
- Bike Boulevards / Signed Routes

SHARED-USE PATH

SEPARATED BIKE LANE

BIKE BOULEVARD

RECOMMENDED PEDESTRIAN NETWORK

THE TOOLKIT OF PEDESTRIAN FACILITIES (LINEAR AND CROSSING TREATMENTS) INCLUDES*:

- Shared Use Paths / Sidepaths
- Sidewalks
- Crosswalks
- Curb Extensions
- Median Refuge Islands
- Curb Ramps
- Pedestrian Countdown Signals
- Leading Pedestrian Interval
- Rectangular Rapid Flashing Beacons
- Roundabouts
- Chicanes / Chokers
- Speed Tables

The above crossing treatments aim to achieve comfort and safety improvements for both the proposed linear and point projects. Additionally, proposed point projects that would improve mobility, offer opportunities for recreation, and enhance the overall facility use experience, include:

- Hiking Trail Opportunity
- Mountain Bike Trail Opportunity
- Mid-block Crossing Treatment
- Trailhead Facilities
- Wayfinding Signage

See the legend on the Gaps Analysis maps in the Appendix for additional point project-specific locations.

*See Section 4.2 for information related to the safety effectiveness of the various pedestrian treatments

LEADING PEDESTRIAN INTERVAL

PEDESTRIAN REFUGE ISLAND

RRFB AND CURB EXTENSION

HIGH SCORING PROJECTS

Based on feedback from SCEDP, and the HB-TAC, the six criteria were weighted to reflect the emphasis given to the Safety and Equity criteria. The proposed Project Impact Assessment process then applied a unique score to each of the ~880 linear proposed projects. The tables in the Appendix display all recommended projects sorted by implementation score in descending order, from the highest scoring to the lowest. Some of the highest-ranked projects include:

SHARED-USE PATHS

- On 4th Avenue, from Railroad Plaza to West Main Street in Islip (0.4 mile)
- On Peconic Avenue / East Main Street, from Flanders Road to Ostrander Avenue in Southampton (0.5 mile)
- Extending the existing River Walk in Patchogue connecting from Main Street to the Patchogue Ferry Terminal in Brookhaven (two linear projects totalling 0.5 miles)

SIDEWALKS

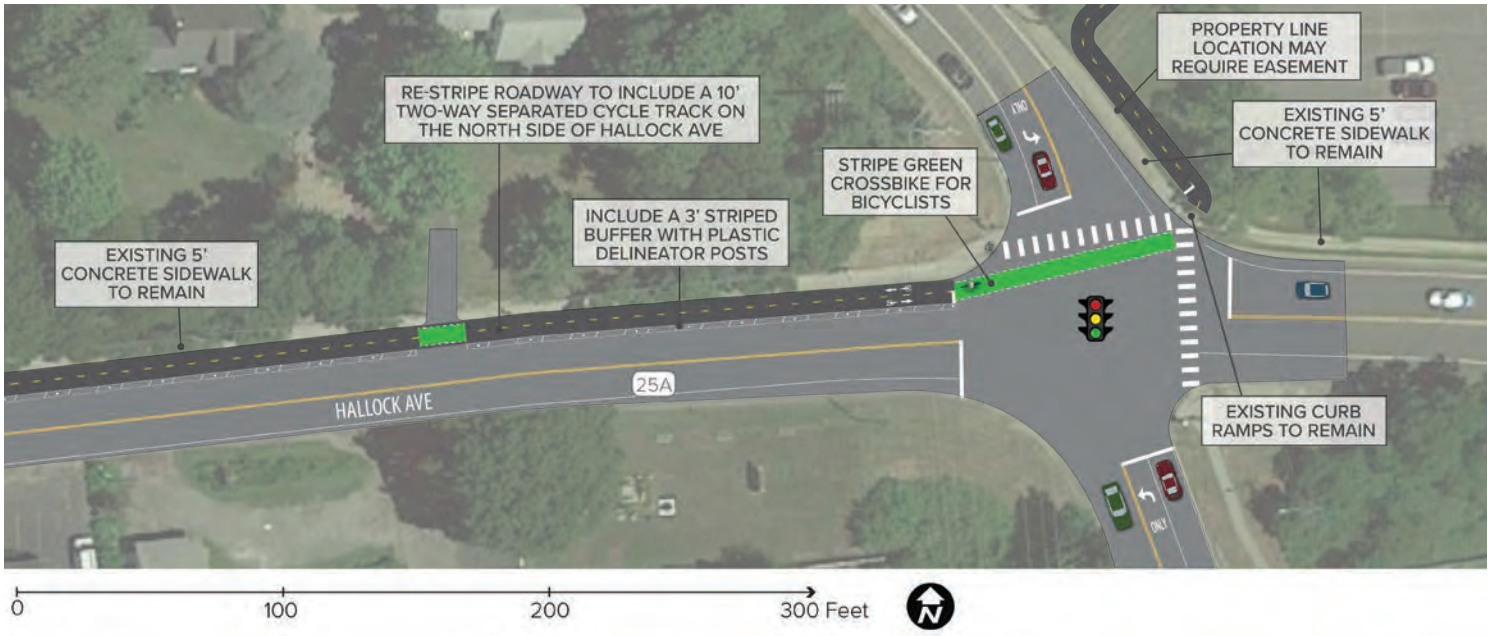
- On Jefferson Avenue from Arthur Street to Suffolk Avenue in Islip (1.7 miles)
- On Crooked Hill Road from Commack Road to Wicks Road in Islip (3.0 miles)

BIKE LANES + BUFFERED BIKE LANES

- Bike Lanes: On Roanoke Avenue from Sound Avenue to East Main Street in Riverhead (4.0 miles)
- Buffered Bike Lanes: On Riverleigh Avenue / County Road 104 / Old Riverhead Road from Flanders Road to South Perimeter Road in Southampton (6.2 miles)

Although not in the highest ranking projects, an especially important project for east-west connectivity across the north part of Suffolk County is the Hallock Avenue Connector. (See Figure 6 below.)

Figure 6: Plan view diagram illustrating street-level, separated cycle tracks along Hallock Avenue between existing off-road trail segments



IMPLEMENTATION STRATEGY

The linear Project Impact Assessment involved ranking each individual linear project against all of the other projects to determine a unique score. This process was completed in order to help SCEDP staff weigh the impact of a particular project and can serve as a guide for determining project significance for each municipality. Higher scoring projects are forecasted to provide a higher level of impact in terms of safety, connectivity, equity and health than lower scoring projects.

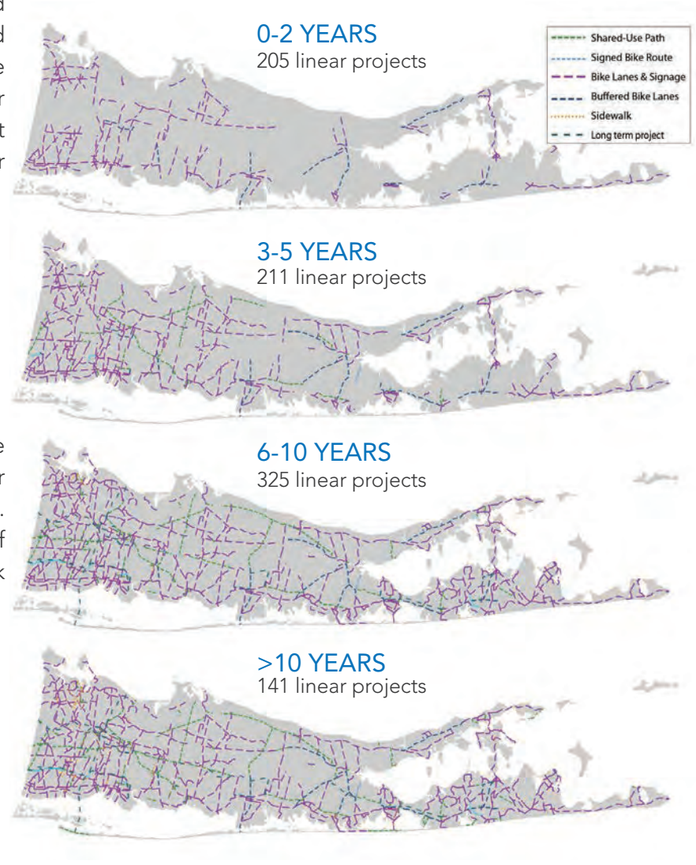
IMPLEMENTATION TIMELINE

The potential implementation timeline for any given project within the proposed hike and bike network was determined by combining the project impact score with the anticipated amount of time for project design and construction. Project implementation timelines fall under four categories:

- 0 – 2 Years
- 3 – 5 Years
- 6 – 10 Years
- > 10 Years

The following map series illustrates the various projects under each of the four implementation schedule time frames. The graphic encourages understanding of the growth of the hike and bike network over time.

Figure 7: Photo simulation illustrating a mid-block crossing with Rectangular Rapid Flashing Beacons and a crosswalk extension to a pedestrian underpass beneath the rail tracks on Trolley Line Road in Babylon



WESTERN SUFFOLK COUNTY - PROPOSED HIKE-BIKE NETWORK

NASSAU COUNTY

Match Line

Caumsett S.P.
Target Rock National Wildlife Refuge
Asharoken
Lloyd Harbor
Huntington Bay
Northport
Sunken Meadow S.P.
Nissequogue River S.P.
Nissequogue
Head of the Harbor
Old Field
Poquott
Belle Terre
Port Jefferson
Stony Brook University
Shoreham
Wildwood S.P.
Brookhaven S.P.
Riverhead
Rocky Point Pine Barrens
Cathedral Pines County Park
Long Island State Pine Barrens
David A. Sarnoff Preserve
Suffolk County Community College
Southampton
Cold Spring Harbor S.P.
Huntington
Smithtown
Lake Grove
Village of the Branch
Galeb Smith S.P.
Brookhaven
High-lighted NY112 bike lane segment to be constructed in 2020
Outlined Long Island Greenway Trail segment to be constructed in 2020
Brentwood S.P.
Suffolk County Community College
Islandia
Connetquot River S.P.
Wertheim National Wildlife Refuge
Patchogue
Bellport
West Hampton Dunes
Fire Island National Seashore
Islip
Belmont Lake S.P.
Bayard Cutting Arboretum
Babylon
Brightwaters
Lindenhurst
Amityville
Seatuck National Wildlife Refuge
Heckscher S.P.
Ocean Parkway shared-use path is under construction
Captree S.P.
Gilgo S.P.
Robert Moses S.P.
Saltaire
Ocean Beach

0 5 10 Miles

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

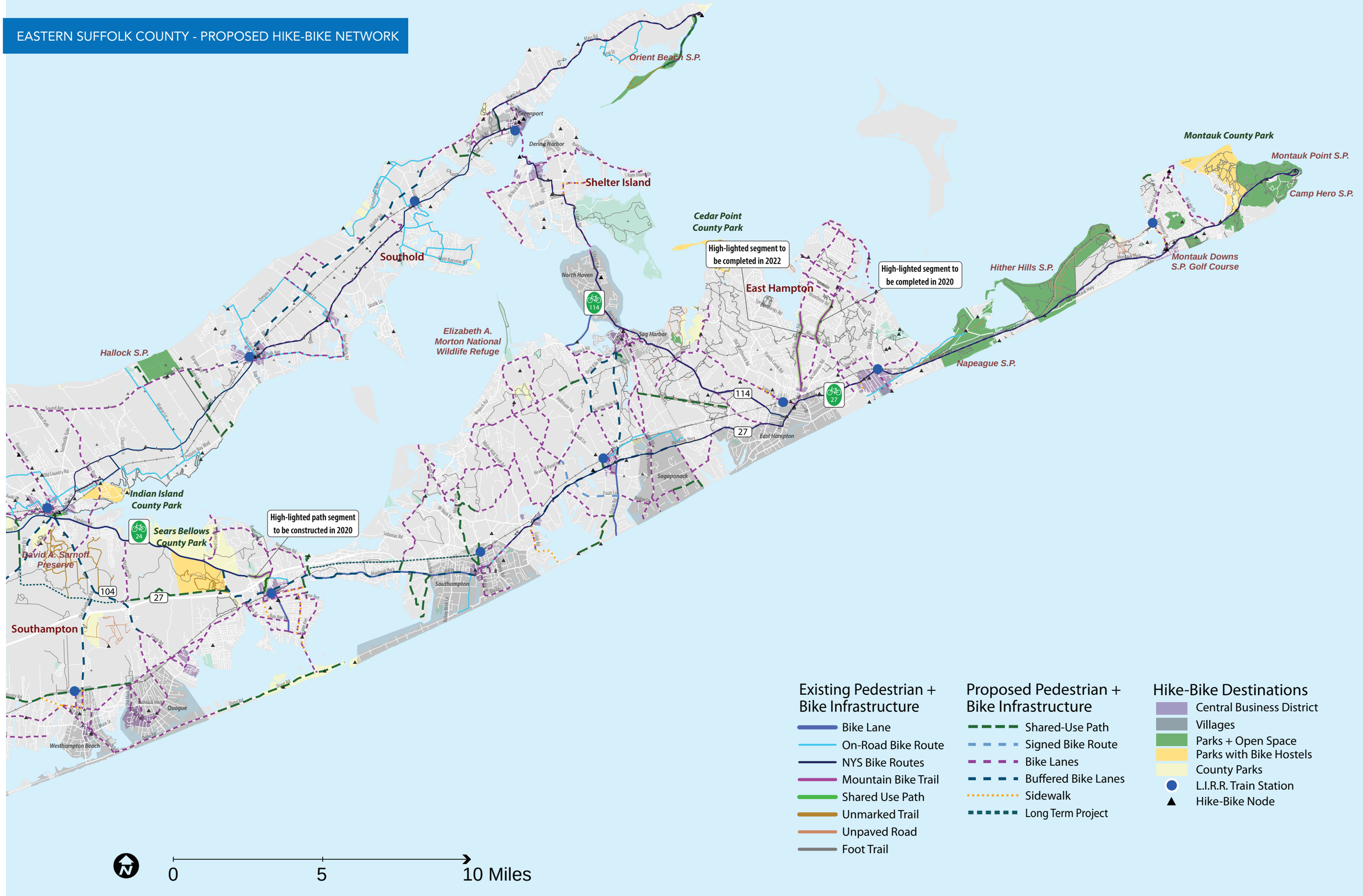
Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes
- Buffered Bike Lanes
- Sidewalk
- Long Term Project

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node

EASTERN SUFFOLK COUNTY - PROPOSED HIKE-BIKE NETWORK



Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

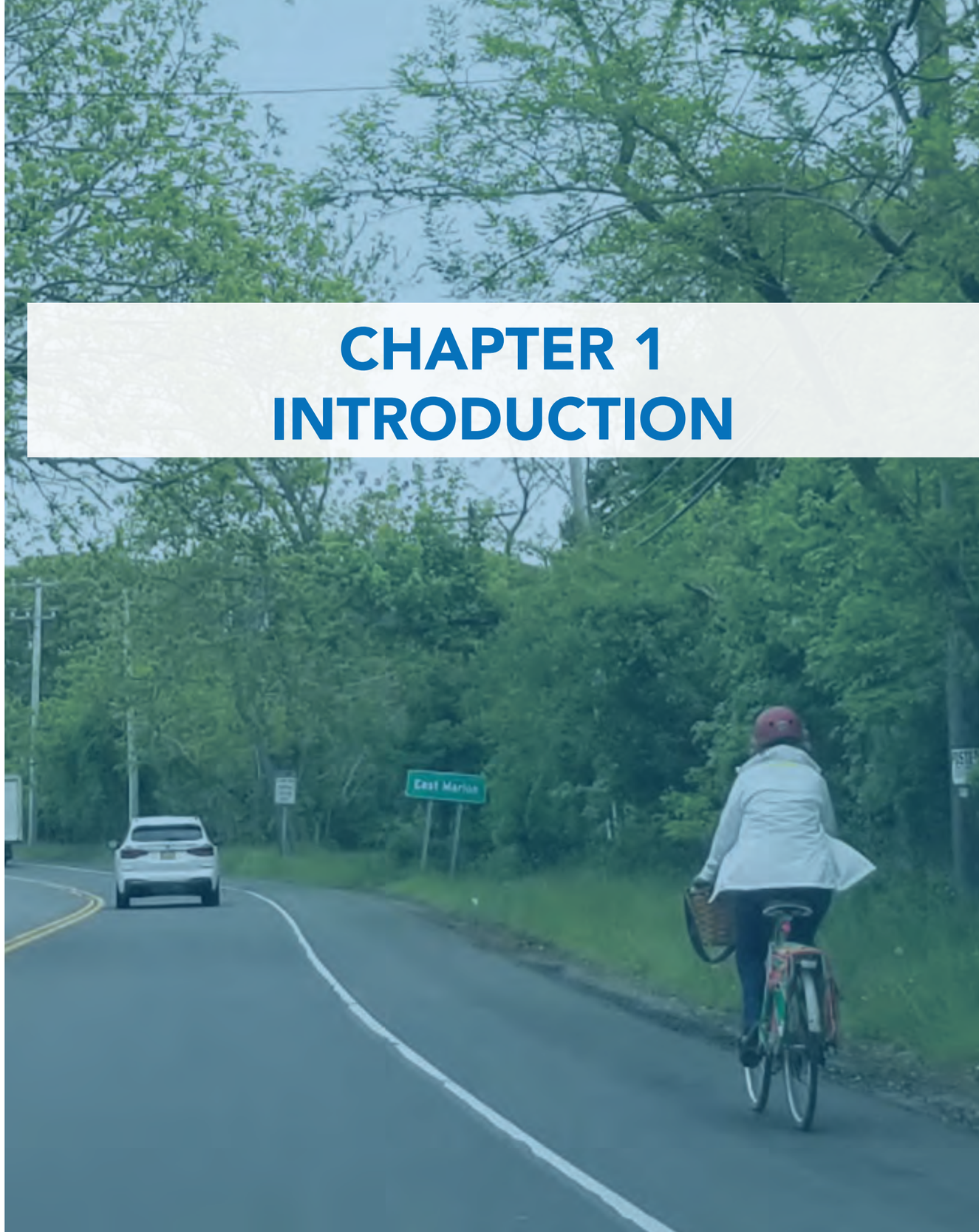
Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes
- Buffered Bike Lanes
- Sidewalk
- Long Term Project

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node

CHAPTER 1
INTRODUCTION



1.1 PURPOSE OF THE PLAN

Suffolk County wants to further expand its pedestrian and bicycle network and improve the safety of those who choose to walk, hike and bicycle in the county. The Suffolk County Hike + Bike Master Plan (Plan) will guide the planning, funding, and implementation of improved infrastructure for pedestrians and bicyclists. Begun in 2019, the planning process included strong public feedback through the Hike Bike- Technical Advisory Committee (HB-TAC), outreach at a variety of community events, and a custom web-based application for residents to document issues and needs. The year-long planning process combined the public feedback obtained, site tours, anecdotal and qualitative and quantitative analysis of existing bicycle and pedestrian infrastructure on County, State, and locally-owned roadways to inform improved infrastructure recommendations. In addition, the consultant team worked closely with Suffolk County Department of Economic Planning and Development (SCEDP) to investigate the feasibility of recommending off-road shared-use paths and, where warranted, on-street connections to complete the Long Island Empire State Trail extension.

The Plan outputs include:

- A final report that highlights the various bicycle and pedestrian infrastructure options available to state, county, and municipal planning agencies and departments;
- Tables that showcase projects in each municipality based on the Plan's prioritization methodology to recommend project phasing;
- A GIS database that includes linear and point project recommendations that has been vetted by the SCEDP and the HB-TAC; and
- Maps that indicate existing conditions, gaps between hike and bike facilities, and recommended bicycle and pedestrian projects.

The Suffolk County Hike and Bike Master Plan is intended to fulfill three primary outcomes:

Regional Coordination: The plan provides an opportunity for regional stakeholders to coordinate on issues such as trail alignment planning, utility ROW usage, contextual facility designs, bicycle and pedestrian policies and programs, towards the intent to create an integrated environment for people walking and biking in Suffolk County.

Local Guidance: The plan will provide general analysis and guidance to local towns and villages to plan and prioritize active transportation improvements within their jurisdictions. The plan will also provide guidelines to serve as useful resource as they consider project development and implementation.

County-wide Dynamic Database: The plan's outputs include a series of maps and an exhaustive GIS database of existing trails as well as public input on recommended improvements. The County intends to develop a web-based map to showcase the data, and regularly update the web-based map to reflect the state of active transportation infrastructure within the County.

EXPECTED BENEFITS OF PLAN IMPLEMENTATION

Ultimately, the safety and infrastructure improvements within the Plan are expected to generate direct and indirect benefits for the students, employees, residents, and visitors to Suffolk County. Potential benefits include:

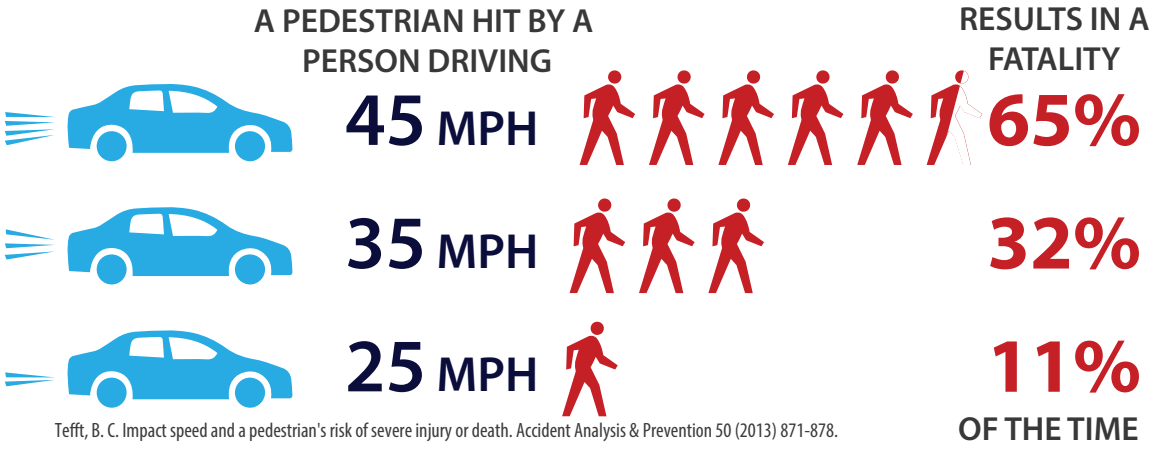
TRANSPORTATION BENEFITS

- Pedestrian and bicycle facilities offer additional mobility options for those who do not have access to a motor vehicle due to age (children and seniors), economic status, disability, or temporary impairment and for those who do not wish to use a car.
- Generally, pedestrian and bicycle facilities help minimize traffic conflicts, which provides improved motor vehicle capacity and eases congestion.
- In the U.S., 40% of motor vehicle trips are under two miles in length and many travelers would access destinations by bicycle or on foot if comfortable pedestrian and bike facilities were provided.[1]

SAFETY BENEFITS

- In one of the most comprehensive studies of bicyclist and road safety, researchers have found that cities with robust bicycling facilities had the largest reduction in fatal crashes. The study, which looked at 13 years of data from 12 U.S. cities, found that bicycle facilities can slow motor vehicle speeds and help reduce the occurrence of fatalities.[2]
- Based on FHWA's Crash Reduction Factors database, installing a:
  - » Sidewalk along a roadway can reduce the probability of a pedestrian crash by 65-89%
  - » Pedestrian countdown timers can reduce the probability of a pedestrian crash by 25%[3]

Figure 8: Crash Survivability for Pedestrians by Speed[6]



» Raised median island at a crosswalk can reduce the probability of a pedestrian crash by 46%[4]

- Improved pedestrian and bicycle facilities have led to an increase in the number of walkers and bicyclists and decreased number of crashes, injuries, and fatalities through the "safety in numbers" effect because of an enhanced awareness of vulnerable users by motorists.[5]
- Pedestrian and bicycle infrastructure improvements - e.g. bicycle lanes, on-street parking with curb extensions, median islands, and other traffic calming measures - help to moderate traffic speeds, reducing the severity of crashes (see Figure 8).

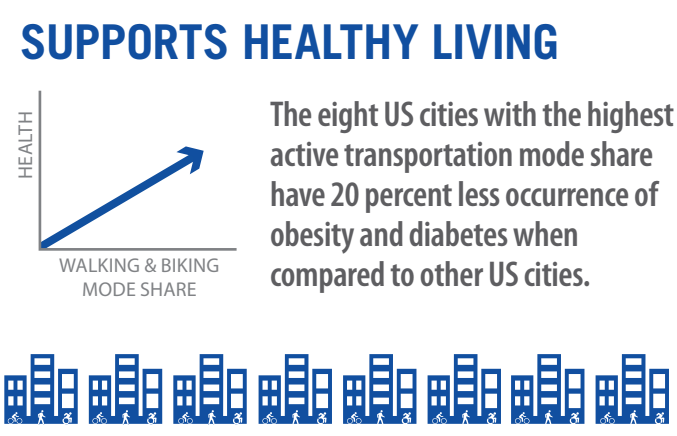
ECONOMIC BENEFITS

- Studies have shown that pedestrians and bicyclists make more frequent trips and spend more money overall per month compared to motor vehicle drivers.
- When new separated bicycle lanes were added to Broadway in Salt Lake City, retail sales increased 8% the following year, despite a 30% reduction in on-street parking; over 80% of business owners were supportive or neutral of the new bicycle lanes and other streetscape improvements.

HEALTH BENEFITS

- Walking and bicycling provide an opportunity for people to integrate into their daily lives the Centers for Disease Control and Prevention's (CDC) recommended 150 minutes of weekly aerobic activity.
- Men who cycle to work are significantly less likely to be overweight and obese (39.8%) than those who drive to work (60.7%).
- Suffolk County lies within the highest/best quartile of New York State counties in relation to both public health outcomes (how long people live and how healthy they feel), and public health factors, which

Figure 9: Additional Health Benefits



1.2 VISION AND GOALS

The Plan's Vision guides the planning, funding, and implementation of bicycle and pedestrian infrastructure in Suffolk County. The Vision, Goals, Objectives, and Performance Measures were generated through discussions with the Hike + Bike Technical Advisory Committee and based on comments received at three pop-up events open to the public.

VISION

Suffolk County actively promotes bicycling and walking through integration of active transportation into local and regional policies, programs, and projects. These efforts facilitate development of a safe and connected network of roadways, paths, trails, and transit connections for residents and visitors of all ages and abilities across the County.

GOALS, OBJECTIVES AND PERFORMANCE MEASURES

The Plan was guided by eight (8) goals intended to support the Vision. Each of the goals listed below are supported by objectives intended to further articulate the goal with achievable action items as well as performance measures that provide benchmarks to gauge progress over time.

1. **Safety**: Increase pedestrian and bicyclist safety with improvement projects, policies, and programs
2. **Connectivity**: Connect communities and common destinations by expanding the network of walking and bicycling routes for people
3. **Design**: Reduce the pedestrian and bicyclist level of traffic stress on State, County, and local roads and at trail crossing locations
4. **Policy**: Strengthen and streamline County and local policies that fund construction and maintenance of hiking, walking, and bicycling infrastructure across municipal lines
5. **Equity**: Ensure equitable distribution of funding for hiking trails, sidewalks, shared-use paths, and on-road bicycle infrastructure
6. **Economy**: Leverage County and municipal assets to enhance walking, hiking, bicycling, and overall quality of life to promote economic development and tourism
7. **Education & Encouragement**: Develop programs that promote knowledge of how to safely navigate hike, walk, and bicycle facilities and establish awareness of facility location
8. **Health & Environment**: Increase the number of active transportation and recreation opportunities to all Suffolk County residents, particularly those reporting poor health

GOAL 1: SAFETY

INCREASE PEDESTRIAN AND BICYCLIST SAFETY WITH IMPROVEMENT PROJECTS, POLICIES, AND PROGRAMS

Table 2: Safety Objectives

ID	OBJECTIVE
SA-1	Promote "Vision Zero" by working to eliminate pedestrian and bicycle-related fatalities, injuries and collisions through increased speed enforcement, traffic calming measures, and new pedestrian and bicycle facilities and motorist education programs
SA-2	Focus resources on safety improvements for pedestrians near schools, busy intersections, mid-block crossings, and trail crossings
SA-3	Support third-party pedestrian and bicycle safety education and awareness efforts with funding and organizational capacity
SA-4	Develop a local driver education campaign aimed at improving behavior around pedestrians and bicyclists (see Newport Waves program in Rhode Island)
SA-5	Work with County police to train officers on safe bicycling practices and current laws related to bicycling
SA-6	Encourage municipalities to conduct before and after studies of new pedestrian and bicycle facilities to measure effectiveness

Table 3: Safety Performance Measures

ID	PERFORMANCE MEASURE
PM1	Reduction in the pedestrian and bicycle-involved crashes resulting in injuries and fatalities
PM2	Number of intersections and mid-block crossings outfitted with pedestrian-safety improvements (e.g., signals, beacons, medians, and curb extensions)
PM3	Number of new sidewalk or traffic calming projects within one mile of a public or private K-12 school or a university
PM4	Increase in the percentage of law enforcement officers going through training programs related to pedestrian and bicyclist safety and traffic laws

GOAL 2: CONNECTIVITY

CONNECT COMMUNITIES AND COMMON DESTINATIONS BY EXPANDING THE NETWORK OF WALKING AND BICYCLING ROUTES FOR PEOPLE

Table 4: Connectivity Objectives

ID	OBJECTIVE
CO-1	Identify, prioritize, and map regional and local connections through an on- and off-street network that helps to link popular destinations, including train stations, ferry terminals, village centers, employment areas, residential neighborhoods, schools, parks, existing trails, and other recreational opportunities
CO-2	Continue to support the proposed Long Island Empire State Trail Extension
CO-3	Provide enhanced multimodal transit access for people wanting to travel on foot and by bicycle to LIRR stations, bus stops, and ferry terminals
CO-4	Expand the availability and accessibility of hiking trails, shared-use paths, and on-street bicycle facilities

Table 5: Connectivity Performance Measures

ID	PERFORMANCE MEASURE
PM5	Percentage increase in miles of hiking trails, sidewalks, shared-use paths, and on-street bicycle facilities (e.g., 25% increase in 2019 miles by 2025, 50% by 2030, and 100% by 2035)
PM6	Number of new access points to existing trails/shared-use paths from adjacent neighborhoods
PM7	Number of designated sidewalk gaps eliminated

GOAL 3: DESIGN

REDUCE THE PEDESTRIAN AND BICYCLIST LEVEL OF TRAFFIC STRESS ON STATE, COUNTY, AND LOCAL ROADS AND AT TRAIL CROSSING LOCATIONS

Table 6: Design Objectives

ID	OBJECTIVE
DE-1	Facilitate sidewalks on at least one side of the street and safe crossings on State and local arterial/ collector streets in retail/commercial and residential areas. Provide sidewalks on at least one side of County highways and coordinate with DPW to update County highway sidewalk policy to reflect this change
DE-2	Facilitate crosswalks on State roadways (coordinate with New York State Pedestrian Safety Action Plan) and local arterial and collector streets with traffic signals, median refuge islands, mid-block crossings, active warning beacons (RRFBs), highly visible marked crosswalks, or pedestrian over/underpasses where warranted
DE-3	Reduce travel lanes on local roadways to 10'-11' in width to slow traffic and accommodate wider shoulders, or striped or buffered bicycle lanes where possible
DE-4	Design "all ages and abilities" on-street bicycle facilities that provide a painted buffer or vertical separation from motor vehicle traffic; establish a requirement for the use of flexible bollards or physical barriers in all seasons except winter months
DE-5	Incorporate traffic calming through innovative roadway design elements (e.g., narrower lanes, on-street parking with curb extensions, roundabouts, raised speed reduction medians, horizontal and vertical deflection, changing one-way streets to two-way, etc.)

Table 7: Design Performance Measures

ID	PERFORMANCE MEASURE
PM8	Miles of new sidewalks constructed
PM9	Number of marked pedestrian crossings implemented on State, County, village, and town roadways
PM10	Miles of constructed "all ages and abilities" bicycle facilities

GOAL 4: POLICY

STRENGTHEN AND STREAMLINE COUNTY AND LOCAL POLICIES THAT FUND CONSTRUCTION AND MAINTENANCE OF HIKING, WALKING, AND BICYCLING INFRASTRUCTURE ACROSS MUNICIPAL LINES

Table 8: Policy Objectives

ID	OBJECTIVE
PO-1	Establish dedicated local funding streams for hiking trails, pedestrian, and bicycle projects as a complement to the federal Transportation Alternatives Program (TAP)
PO-2	Develop local policies that establish a consistent funding mechanism to close gaps in the sidewalk network across municipal boundaries, repair existing sidewalks, and maintain them in the future
PO-3	Establish policies and funding streams for winter maintenance on the hiking trail/shared-use path network and on both County- and locally-maintained sidewalks
PO-4	Ensure adherence to the existing County Complete Streets policy that requires appropriate walking and bicycle accommodations in all publicly-funded roadway projects (except limited-access highways)
PO-5	Continue and expand upon current pedestrian and bicycle count locations along trails and on streets and sidewalks within municipalities
PO-6	Host national "best practices" trainings for County and local transportation planners and engineers related to pedestrian and bicycle facility design (e.g., NACTO or the FHWA Small Town and Rural Multimodal Networks)
PO-7	Update the Suffolk County Hike + Bike Master Plan every 10 years
PO-8	Promote walking and bicycling to work by town, County, and other municipal employees through County or municipal-based Transportation Demand Management (TDM) programs that offer financial incentives
PO-9	Develop and publish a "Bicycling and Walking Benchmark Report" every 5 years in order to track implementation of policies, programs, and projects, as well as to quantify changes in the various policy-related Performance Measures
PO-10	Leverage new policies, programs, and infrastructure projects in order to improve individual town, business, and university rankings within the League of American Bicyclists Bicycle-friendly ranking (as of January 2019, NYS had four municipalities with a ranking of Bronze or above, none of which were in Suffolk County)
PO-11	Promote adoption of local Complete Streets policies in all Suffolk County municipalities
PO-12	Create a position of county-wide active transportation coordinator to advance plan objectives, coordinate projects with municipalities, liaise with local active transportation groups, advocate for Complete Streets in County street reconstruction projects, and advance safety, equity, encouragement and education initiatives.

Table 9: Policy Performance Measures

ID	PERFORMANCE MEASURE
PM11	Percentage of capital and maintenance project funding that is dedicated to building and maintaining pedestrian and bicycle facilities
PM12	Number of County planning and engineering staff attending pedestrian and bicycle facility design trainings and workshops
PM13	Percentage change in the number of walking and bicycle trips at established trail and roadway count locations
PM14	Percent of County residents who walk, use transit, or bicycle to work
PM15	Gross number of bicycle parking racks at LIRR stations and bus hubs

GOAL 5: EQUITY

ENSURE EQUITABLE DISTRIBUTION OF FUNDING FOR HIKING TRAILS, SIDEWALKS, SHARED-USE PATHS, AND ON-ROAD BICYCLE INFRASTRUCTURE

Table 10: Equity Objectives

ID	OBJECTIVE
EQ-1	Prioritize investment in pedestrian and bicycle facilities in traditionally underserved communities[11] and communities with low access to vehicles (ACS data)
EQ-2	Distribute projects across Suffolk County, taking into account need, collision hot spots, and future demand

Table 11: Equity Performance Measures

ID	PERFORMANCE MEASURE
PM16	Percent of funded pedestrian and bicycle facility projects in traditionally underserved communities
PM17	Percent increase of residents in traditionally underserved neighborhoods walking or bicycling to work (per ACS data)

GOAL 6: ECONOMY

LEVERAGE COUNTY AND MUNICIPAL ASSETS TO ENHANCE WALKING, HIKING, BICYCLING, AND OVERALL QUALITY OF LIFE TO PROMOTE ECONOMIC DEVELOPMENT AND TOURISM

Table 12: Economy Objectives

ID	OBJECTIVE
EC-1	Encourage local land use policies and urban design strategies that encourage walkability and bikeability
EC-2	Encourage municipalities to alter existing building codes or regulations to require bicycle parking, separated bikeways, consolidate curb cuts, and shared parking lots to create longer stretches of un-interrupted sidewalks through the development of a best practice guide for municipalities
EC-3	Promote Suffolk County as a recreation tourism destination for both on-road bicycling, trail hiking, and mountain biking through more-contiguous bicycle routes and promotional programs that feature North Fork Wineries, Bike-Camping Hostels at County Parks, and mountain bike parks

Table 13: Economy Performance Measures

ID	PERFORMANCE MEASURE
PM18	Increase in the number of new municipal policies and regulations explicitly formulated to promote hiking, walking, and bicycling
PM19	Increase the number of Suffolk County businesses designated as "Bicycle Friendly Businesses" by the League of American Bicyclists

GOAL 7:
EDUCATION + ENCOURAGEMENT

DEVELOP PROGRAMS THAT PROMOTE KNOWLEDGE OF HOW TO SAFELY NAVIGATE HIKE, WALK, AND BICYCLE FACILITIES AND ESTABLISH AWARENESS OF FACILITY LOCATION

Table 14: Education & Encouragement Objectives

ID	OBJECTIVE
EE-1	Publicize pedestrian and bicycle-facility projects in each of the ten (10) towns in Suffolk County
EE-2	Develop hike + bike safety and encouragement/education campaigns in partnership with local hike and bicycle groups that offer monetary or prize incentives to encourage people to walk and bicycle to work; this can include programs developed by public agencies, such as NYS DOH's "See! Be Seen!", from which Suffolk County is likely able to re-use existing materials
EE-3	Incorporate comprehensive wayfinding and signage across Suffolk County that directs residents and tourists to local walk and bicycle facilities
EE-4	Use existing Safe Routes to School public education materials and develop additional encouragement and education materials to promote safe walking and bicycling to schools
EE-5	Work with local libraries and advocacy groups to offer bicycle/trail information and classes on bicycle safety and etiquette on trails.
EE-6	Work with individual municipalities to recommend a Non-Motorized or Pedestrian-Bike Advisory Committee as a centralized source to organize town-wide pedestrian and bicycle facility information, programs, and projects

Table 15: Education & Encouragement Performance Measures

ID	PERFORMANCE MEASURE
PM20	Number of safety education programs/campaigns conducted

GOAL 8: HEALTH

INCREASE THE NUMBER OF ACTIVE TRANSPORTATION AND RECREATION OPPORTUNITIES TO ALL SUFFOLK COUNTY RESIDENTS, PARTICULARLY THOSE REPORTING POOR HEALTH

Table 16: Health & Environment Objectives

ID	OBJECTIVE
HE-1	Enable residents and visitors to meet the CDC's recommended physical activity guidelines[12] through utilitarian walking and bicycling
HE-2	Partner with local organizations to promote mode shift to walking and bicycling for health benefits using public education campaigns
HE-3	Expand the number and scope of programs that educate students about pedestrian and bicycle safety and its relation to public health
HE-4	Ensure that a mix of sidewalks, trails, bicycle lanes, and bicycle racks exist in each of the ten (10) towns in Suffolk County

Table 17: Health & Environment Performance Measures

ID	PERFORMANCE MEASURE
PM21	Rate of physical activity/exercise reported in the State's Behavioral Risk Factor Surveillance System (BRFSS) survey
PM22	Increase the rate of walk and bicycling commuting over proscribed time increments (TBD)
PM23	Percentage increase of K-12 students involved in a walk and bicycle safety events annually
PM24	Percent of residents within 2 miles of a designated trail, bikeway, or shared-use path

1.3 STUDY PROCESS

The study process involved three primary milestones that were used to achieve the end goal of increased access to safe and comfortable walk, hike and bike facilities. The three primary milestones included:

- Nodes / Gaps Analysis
- Impact Analysis
- Robust public input

The following is a brief summary of each of the three milestones and how they contributed to the resulting list of recommended and prioritized linear projects.

- **Nodes / Gap Analysis**: The team identified approximately 1,100 Nodes -- or walk, hike, and bike trip destination and origin points -- to help us understand where people in Suffolk County travel to. We looked at the spaces in between Nodes and worked on establishing better connections between the Node points. We utilized windshield tours, Google street view, and local expertise from members of the SCEDP and the HB-TAC to zoom in on critical gaps and include linear project recommendations to close those gaps.
- **Impact Analysis**: Following the existing conditions, nodes, and gaps analysis, the team developed six criteria to measure the impact of each proposed active transportation project recommendation. We used GIS data for each of the six impact criteria and translated that impact into a numeric score, which allowed us to prioritize each linear project based on its score.
- **Public Input:** The team utilized a variety of pubic input formats to ensure project ideas came from across Suffolk County:
  - » Three public pop-up events
  - » Online public input map
  - » Establishment of and hosting five meetings with the Hike-Bike Technical Advisory Committee (HB-TAC)

In aggregate, the process provided the team with the data necessary to recommend a network of traditional, buffered, and separated bike lanes; sidepaths; shared-use paths; and hiking and mountain bike trails. The remainder of the report includes additional detail regarding each of the three milestones listed above.

Figure 10: HB-TAC Meeting 3 was held at Patchogue-Medford public library

1.4 STAKEHOLDER PARTICIPATION

PUBLIC POP-UP EVENTS

The three public pop-up events provided hundreds of comments and suggestions regarding places that people currently like to walk, hike, and bicycle as well as recreational destinations that they would like **more comfortable** walk, hike, and bicycle access to.

ONLINE PUBLIC INPUT MAP

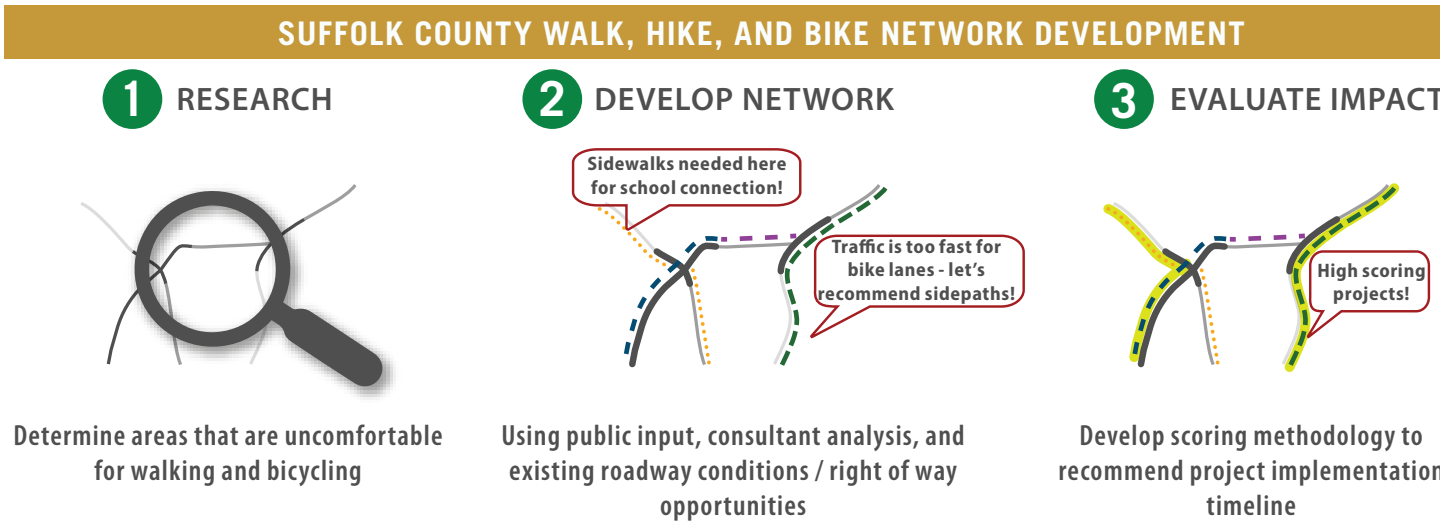
The online public input was promoted at the three public pop-up events, at gyms, bike shops, running equipment stores, vitamin shops, and at the three public pop-up events. A variety of line and point comments furthered the development of the robust walk, hike, and bike network recommendations made as part of this report.

HB-TAC

The Hike-Bike Technical Advisory Committee provided critical insight into filling in key pieces of the active transportation network between Nodes and within the countless residential neighborhoods, beaches, parks, villages, hamlets, and towns within Suffolk County.

Figure 11: Hundreds of bookmarks promoting the online public input map were distributed across the County

Figure 12: Stakeholder participation summary graphic



1.5 IMPACT OF THE HIKE AND BIKE MASTER PLAN RECOMMENDATIONS

RECOMMENDED NETWORK

The recommended network includes:

- Signed bike route: 2.3 miles
- Bike boulevard: 10.8 miles
- Sidewalk: 62 miles
- Buffered bike lanes: 75 miles
- Shared-use path: 250 miles
- Bike lanes and signage: 802 miles
- Total: ~1,200 miles of proposed walk, hike and bike facilities in Suffolk County

IMPACT

The total population of Suffolk County is 1.48 million people. The population that resides within one half-mile of a proposed project is 1.24 million people.

In the next two decades when New York State, Suffolk County, and the ten Towns build out the entire hike-bike network: **84% of the population will have access to an improved active transportation facility.**

Figure 13: A half-mile buffer around each of the ~880 proposed linear projects encompasses 84% of the total Suffolk County population

CHAPTER 2
EXISTING CONDITIONS

2.1 DEMOGRAPHIC ANALYSIS

To help the team better understand the needs of Suffolk County residents, a base-level demographics analysis was conducted and included: geography, population, education, commute mode, poverty levels, vehicle availability, and public health. The land use and geography in Suffolk County is a mix of urban, suburban, and semi-rural areas connected by a network of state, county, and town roads that represent challenges to walking and bicycling due primarily to the high volumes and traffic speeds.

POPULATION

The population of Suffolk County in 2017 – the latest year for which comprehensive data is available – was 1,497,595, a higher population than 11 U.S. States.[13]

EDUCATION

The number of adults over 25 who have earned a Bachelor's Degree in 2017 is 19.1%, which is the same as the average within the U.S. as a whole. In Suffolk County, there has been a 5.5% increase in the number of adults over 25 with a Bachelor's since 2013.[14]

RACE AND ETHNICITY

The American Community Survey (ACS) asks respondents questions about their race and ethnicity. In Suffolk County, 68% of respondents identify as White, 19% identify as Hispanic or Latino, 7% identify as Black or African-American, 4% identify as Asian, and 2% identified as two or more races or as some other race.[15]

INCOME AND POVERTY

Suffolk County residents saw an 8.3% increase in reported income from 2013 to 2017. Average income increased from $36,945/year to $40,277/year.[16] This is considerably higher than the nationwide average income of $31,177. Over the same time period, the percent of County residents living in poverty rose 0.8%, from 6.4% in 203 to 7.2% in 2017.[17]

Nationwide, the number of people living in poverty is approximately 14.6%, and ACS data indicates lower-income and minority communities more frequently lack access to a private automobile for access to jobs and services. Lower-income (and minority) communities are often more dependent on ways to access jobs and services without the use of a private automobile. It is important that this plan understand the location of neighborhoods with lower-income and minority households in order to ensure equitable distribution of recommended bicycling, walking, and hiking facilities throughout the country.

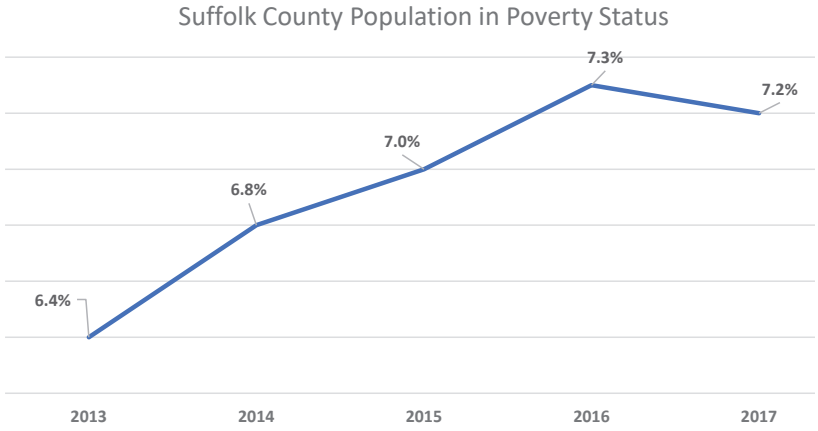


Figure 14: Percent of Suffolk County Residents Living in Poverty (ACS, five-year estimates, 2013-2017)

PUBLIC HEALTH

In addition to providing improved mobility options, hiking, walking, bicycling, offer additional health benefits, including reducing obesity levels. Twenty-four percent of Suffolk County adults were considered obese in 2015 (compared to 26% statewide).[18]

The percentage of adults who report no leisure-time physical activity in Suffolk County (24%) is also comparable to the statewide average (25%).[19] The U.S. Department of Health and Human Services recommends the following levels of activities by age group:

- Children and adolescents (ages 6 through 17 years) should engage in 60 minutes or more of moderate-to-vigorous daily physical activity
- Adults should engage in 150 minutes to 300 minutes of weekly moderate-intensity aerobic physical activity or 75 minutes to 150 minutes of weekly vigorous-intensity aerobic physical activity
- When older adults cannot do 150 minutes of moderate-intensity aerobic physical activity per week because of chronic conditions, they should be as physically active as their abilities and conditions allow

More and better-connected pedestrian and bicycle facilities will encourage and promote active transportation, enabling both adults and adolescents to reach the recommended activity levels as part of their daily routines. New trails, sidewalks, pedestrian-friendly intersections, and on-street bikeways are excellent ways to promote a healthier and more active lifestyle by encouraging recreational and utility trips.

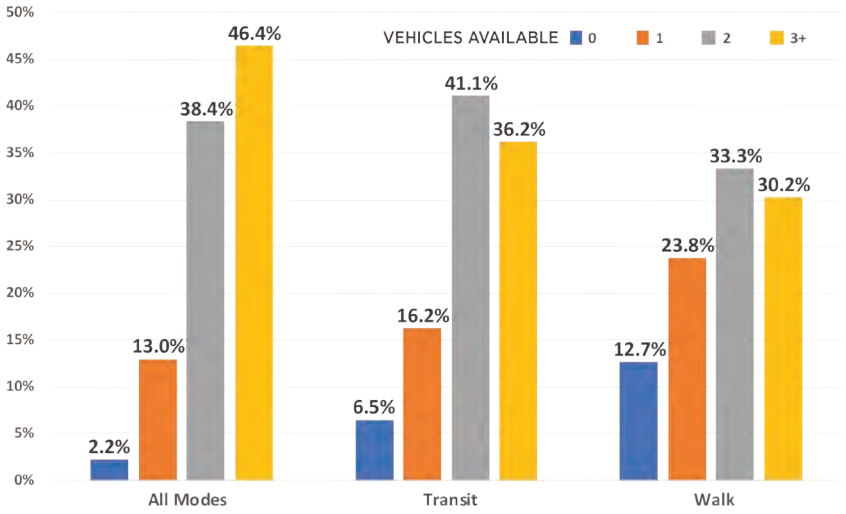
COMMUTE MODE CHOICE AND VEHICLE AVAILABILITY

A significant percentage of the County's residents who walk or take transit to work have access to two or more vehicles. This is likely due to the difficulty and expense of driving and parking in Nassau County and New York City, and the reliability of the Long Island Rail Road and other local transit systems. While Suffolk County has a below average proportion of residents who walk or bicycle to work when compared with the national average, County residents are matched nearly evenly with the nationwide average when it comes to carpooling or taking public transportation.[20] Similar to the nationwide average, the majority of residents (77.1%) travel to work by driving alone.[21] Enhanced bicycle and pedestrian facilities will provide attractive active transportation options and may change the Commute Mode Choice numbers, especially in relation to providing pedestrian and bicycle connections to major employment areas and LIRR stations. See the Vision and Goals in section 1.2 to learn more about achievable targets for reducing the number of residents who drive alone to work and increasing the number of residents who bicycle and walk to work. See additional Commute Mode Share in Suffolk County graphic on the following page.

COMMUTE CHOICE BY NUMBER OF VEHICLES AVAILABLE IN SUFFOLK COUNTY

Residents who took transit and walked to work were more likely to not have access to a car compared to other commute modes

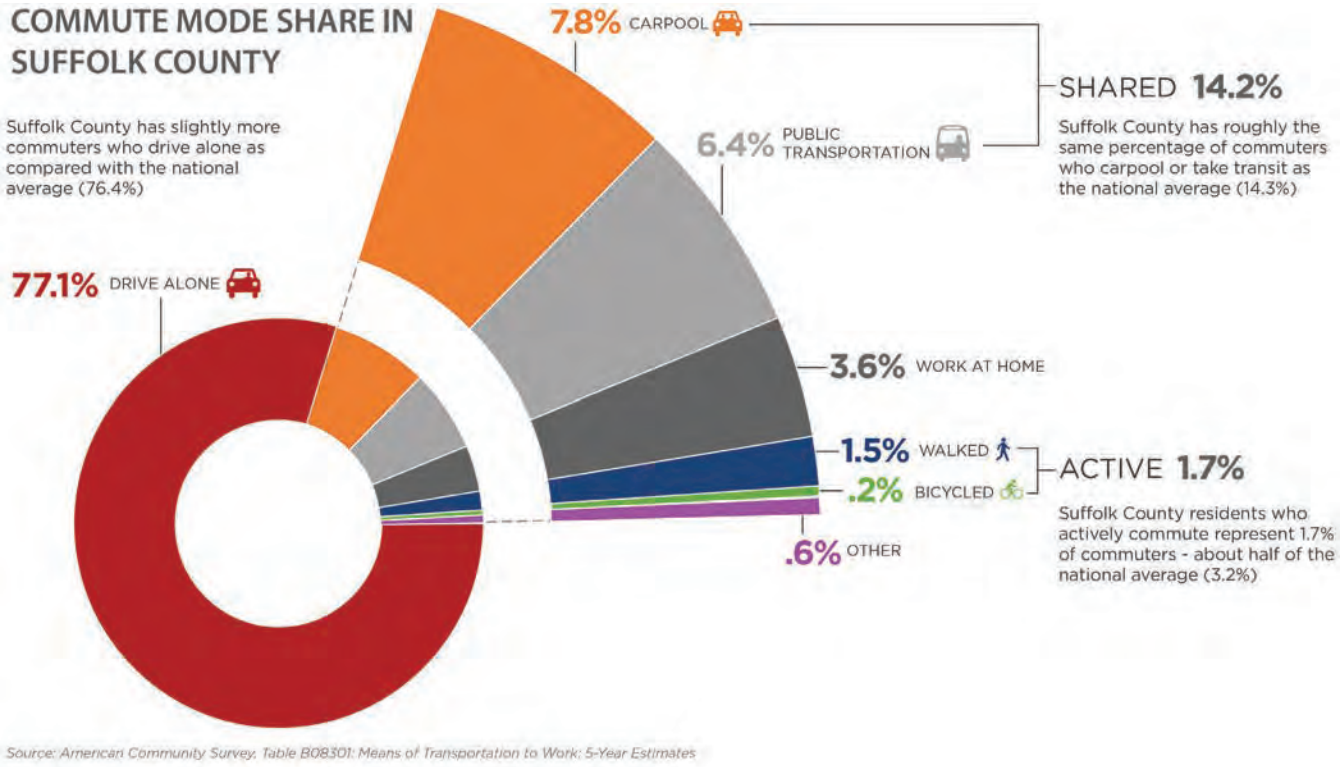
A relatively high proportion of people -- 33% -- who walk to work have access to two or more cars



Source: American Community Survey, Table B08141: Means of Transportation to Work by Vehicles Available: 5-Year Estimates

Figure 15: Commute Mode Choice by Vehicles Available in Suffolk County (ACS, five-year estimate, 2017)

Figure 16: Overall Commute Mode Share in Suffolk County (ACS, five-year estimate, 2017)



Source: American Community Survey, Table B08301: Means of Transportation to Work: 5-Year Estimates

2.2 EXISTING ACTIVE TRANSPORTATION INFRASTRUCTURE

Documenting existing conditions in Suffolk County allowed the planning team to understand the different types of pedestrian and bicycle facilities currently used by people who live in, work in, or travel to Suffolk County. The network of bicycle and pedestrian facilities includes sidewalks, bike lanes within varying roadway contexts, shared-use paths, hiking and walking trails, and mountain bike trails.

SIDEWALK AND ON-ROAD BICYCLE FACILITY TYPOLOGIES

Sidewalk: Sidewalks are important for all road users; everyone is a pedestrian at some point in their travels. Sidewalks dedicate an exclusive space for pedestrians that includes furniture such as bicycle parking, benches, and street lights. Sidewalks exist in each of the 10 Towns in Suffolk County and are primarily located in more-densely populated areas close to downtowns and central business districts. Away from central business districts, many sidewalks contain gaps between segments and end as land uses move from dense residential to more open space, industrial, and commercial. While Suffolk County has many miles of well-used sidewalks in vibrant downtowns, there are many gaps in sidewalk networks in residential neighborhoods and automobile-oriented areas. See Section 3.1 for more information on existing sidewalk gaps in Suffolk County.

Figure 17: Sidewalk with furniture zone on Main Street in Patchogue

Shared Lane Marking (AKA "SLM", "Sharrow"): Shared lane markings are not a bicycle facility type per se. Rather, they are "road markings used to indicate a shared lane environment for bicycles and automobiles…with a variety of uses to support a complete bikeway network[22]." Shared lane markings can be used to recommend proper lane positioning and offer directional guidance to

Figure 18: Shared Lane Marking on Conklin Street in East Farmingdale (Image: Google Street View)

riders. They are helpful in constrained conditions where bicycle ridership exists but there is no room for bike lanes. The example on the previous page, while over-sized, reminds motorists to expect to see and share the road with bicyclists. Shared lane markings should be used in conjunction with additional traffic calming measures, and only if space for more robust bicycle facilities is not available.

Bikeable Shoulder: Bikeable shoulders offer an area for bicycling that is comfortable for some, but not all, potential bicyclists. Additionally, there are no legal ramifications for motorists who park in the shoulder. If a shoulder area is designated as a bike lane, motor vehicles are prohibited from parking there. It is important to note that many bicyclists ride on roads that may be designated (signed or un-signed) as Bike Routes and that may not have bike lanes or other bike infrastructure.

Figure 19: Bikeable shoulder on Old Town Road near Lynx Lane

NY 25 / Sound Ave along the north shore and Montauk Highway along the South Shore.

Bicycle Lane: Typically, 5' – 6' in width, bicycle lanes designate an exclusive space for bicycles along a roadway using line striping, pavement markings, and signage. A variety of individual bike lanes exists in Suffolk County; however, they often do not continue or connect to other bicycle lanes or shared-use paths. Other examples, like the bike lanes on NY 454 and NY 24, exist with no buffer (horizontal separation) or physical separation (vertical separation) from fast moving traffic (posted speed limit 55 MPH.)

Figure 20: Bicycle Lane adjacent to parking on Stonybrook Road near Perigree Drive

Buffered Bicycle Lane: Buffered bicycle lanes use a diagonal striping pattern to delineate the bicycle lane from travel lanes and/or parking aisles. Separated bicycle lanes (SBL) add a physical barrier such as parked cars, planters, raised curbs, or delineator posts to create visual separation. SBLs can be designated as one-way or two-way and are generally considered to be an effective way to encourage novice riders and families to feel more comfortable riding along on-street bike facilities.

Shared-use Path: Commonly called "bike paths", shared-use paths are completely separate from motor vehicle traffic and typically lie on former utility corridors, rail corridors, or unused portion of a wide right of way. These facilities are shared by pedestrians, runners, skaters, and bicyclists. The existing shared-use paths and trails are a major recreation asset and provide an important alternative transportation option for commuters and students. The Setauket Greenway Trail in Port Jefferson stretches 3 miles and stops just shy of Stony Brook University. The Setauket Greenway connects to residential neighborhoods, parks, as well as retail shopping areas. The path ends at NY 112 where it connects to a bike lane.

The NY 347 sidepath extends for just under 5 miles along the busy roadway. The paved-asphalt path connects Hauppauge High School area north east to just shy of the NY 25 / Middle Country Road intersection. The path connects to dozens of businesses, schools, residential neighborhoods, and employers. Other shared-use paths include the sidepath around the Stony Brook University campus, the sidepath from Belmont Lake State Park to Babylon, the path through Heckscher State Park, among others.

Figure 21: Buffered Bicycle Lane on Portion Road / County Road 16 in Lake Ronkonkoma near Patchogue-Holbrook Road

Figure 22: Shared-use Path on Smithtown Bypass / State Route 347 near Helen Avenue

Hiking and Walking Trails: Hiking and walking trails typically exist in wooded or other natural areas or parks, and are often made of a natural surface such as crushed stone, dirt, or mulch. Hiking and walking trails have both recreation and transportation purposes if they connect residential areas with retail locations, schools, or other common destinations.

Longer distance hiking-only trails (bicycles prohibited), including the Long Island Greenbelt Trail (LIGBT) and the Paumanok Path in central and eastern Suffolk County (from the north to the south shore as well as from Montauk to near Brookhaven State Park.) The 32-mile north-south Long Island Greenbelt Trail connects through, or very close to, five state parks: Sunken Meadow S.P., Nissequogue River S.P., Caleb Smith Park Preserve S.P., Connetquot River S.P., and Heckscher S.P. The trail also travels close to the Smithtown and Great River LIRR stations. The LIGBT trail crosses the 6-lane NY 454 / Veterans Memorial Highway with a pedestrian-actuated push-button traffic light crossing.

The Paumanok Path is a 125-mile long recreational trail that stretches from Rocky Point in Brookhaven to Montauk Point in the east end / south fork. The trail was many years in the making, with one of the last remaining gaps closed in April 2016.

The following table shows the total miles of on-road and off-road bicycle facilities as well as hiking and other trails. The County does not currently maintain an active database of existing sidewalks; therefore, sidewalks have not been included in the summary table below.

Figure 23: A Hiking Trail in Cold Spring Harbor

Table 18: Length of Existing Facilities

FACILITY	LENGTH (MILES)
On-road Bicycle Lanes	92
On-road Bicycle Route	266
Shared-use Path	32
Mountain Bike Trails	60
Foot Trails	571
Unmarked Trail	59

WESTERN SUFFOLK COUNTY - EXISTING CONDITIONS

NASSAU COUNTY

Caumsett S.P.
Target Rock National Wildlife Refuge
Asharoken
Eloyd Harbor
Huntington Bay
Northport
Sunken Meadow S.P.
Nissequogue River S.P.
Nissequogue
Head of the Harbor
Old Field
Poquott
Belle Terre
Port Jefferson
Stony Brook University
Shoreham
Wildwood S.P.
Brookhaven S.P.
Riverhead
Rocky Point Pine Barrens
Cathedral Pines County Park
Long Island State Pine Barrens
David A. Sarnoff Preserve
Suffolk County Community College
Southampton
Smithtown
Cold Spring Harbor S.P.
Huntington
Caleb Smith S.P.
Village of the Branch
Lake Grove
Brookhaven
High-lighted NY112 bike lane segment to be constructed in 2020
Islandia
Brentwood S.P.
Suffolk County Community College
Islip
Connetquot River S.P.
Wertheim National Wildlife Refuge
Patchogue
Bellport
West Hampton Dunes
Fire Island National Seashore
Outlined Long Island Greenway Trail segment to be constructed in 2020
Belmont Lake S.P.
Babylon
Bayard Cutting Arboretum
Brightwaters
Lindenhurst
Amityville
Seatuck National Wildlife Refuge
Heckscher S.P.
Ocean Parkway shared-use path is under construction
Ocean Beach
Saltaire
Captree S.P.
Gilgo S.P.
Robert Moses S.P.
Match Line

0 5 10 Miles

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node

EASTERN SUFFOLK COUNTY - EXISTING CONDITIONS

Orient Beach S.P.
Greenport
Main Rd
Village Lane
Front St
Peconic Bay Blvd
Manor Ln
Middle Rd
Roanoke Ave
Deering Harbor
Ram Island Dr
S Ram Island Dr
Shelter Island
W Neck Rd
Smith Rd
Shelter Island Dr
Cedar Point County Park
Southold
Main Bayview Rd
Oregon Rd
Depot Ln
Skunk Ln
North Haven
Sag Harbor
Elizabeth A. Morton National Wildlife Refuge
East Hampton
Spring Close Banks Rd
Accabonac Rd
Old Stone Highway
Old Northwood Rd
Hands Creek Rd
Town Lane
Hither Hills S.P.
Napeague S.P.
Montauk County Park
Montauk Point S.P.
Camp Hero S.P.
Montauk Downs S.P. Golf Course
Rampage Ave
Edgemere St
E Lake Dr
W Lake Dr
Montauk Hwy
Hallock S.P.
Northville Turnpike
Sound Ave
Old Country Rd
Middle Rd
Deerfield Rd
Bergen Ave
Aldrich Ln
Main Rd
Hallock Ave
Route 25
Depot Rd
Indian Island County Park
Sears Bellows County Park
David A. Sarnoff Preserve
Red Creek Rd
Pleasure Dr
Old Northwood Rd
Southampton
Lowes Rd
Quogue
Old Main Rd
Montauk Hwy
Dune Rd
Westhampton Beach
Main St
Rose Ave
Foster Ave
Meadow Rd
Middle Rd
Scuttle Hole Rd
Mitchell Ln
Water Mill Towd Rd
Head Of Pond Rd
Sagaponack
Pauls Ln
Bridge Ln
Majors Path
W Neck Rd
Sebonac Rd
Cooper Neck Rd
Cooks Rd
Hampton Rd
Lynn Ave
Bay Ave
Little Ave
Jobs Ln
Halsey Neck Ln
Noyac Rd
Noyac Path
Sagg Main St
Brick Kiln Rd
Millstone Rd
Long Ln
Cedar St
Main St
Newtown Rd
Red Creek Rd
Route 24
Route 27
Route 104
Route 114
Route 27
East Hampton
Southampton
Sagaponack
Quogue
Westhampton Beach
North Haven
Shelter Island
Greenport
Orient Beach S.P.
Hallock S.P.
Indian Island County Park
Sears Bellows County Park
David A. Sarnoff Preserve
Elizabeth A. Morton National Wildlife Refuge
Cedar Point County Park
Hither Hills S.P.
Napeague S.P.
Montauk County Park
Montauk Point S.P.
Camp Hero S.P.
Montauk Downs S.P. Golf Course

High-lighted path segment to be constructed in 2020

0 5 10 Miles

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node

BICYCLE SHARE IN SUFFOLK COUNTY

BETHPAGE RIDE

Suffolk County launched a regional Bike Share system on September 15th, 2019. The system, known as 'Bethpage Ride' is owned and operated by Zagster. The title sponsor is Bethpage Federal Credit Union. The system is expected to contribute to the local economy by increasing access to bicycles for tourists as well as extending the reach of existing transit networks via critical last-mile connections between transportation hubs and other destinations.

Bethpage Ride is currently operating in four communities: Babylon, Patchogue, Riverhead, and Hampton Bays. The system includes 22 stations with a total of 100 bicycles.

Figure 24: Local officials pose with a Bethpage Rides bike on the day of the launch

WOLF RIDE

Stony Brook University launched the Wolf Ride bikeshare program in 2013 which includes 78 bikes at 12 stations. It is used by students, faculty, and staff. The bikeshare system is well-used, and as of December 2016, the student body rented more than 1,200 bikes, logging over 290 hours of ride-time. On average, bikes were used 42 times per day, with each ride lasting approximately 13 minutes.[23]

SUPPORTING BIKE INFRASTRUCTURE

Connections to relevant assets is an important part of the Suffolk County Hike + Bike Master Plan effort. Providing comfortable connections to state and county parks, camping and swimming areas, bike hostels, tourist information, and other services will likely increase the number of folks who would try commuting by bike or visit Suffolk County as a bicycle tourist. Suffolk County Parks has a bicycle hostel policy to encourage long-distance bicycle tourists to camp overnight at five parks. The Parks that participate in the program include Cathedral Pines in Middle Island, Sears Bellows in Hamptons Bay, Indian Island in Riverhead, Cedar Point in East Hampton, and at Third House in Montauk County Park in Montauk. Hostel areas are available for one-night stays only and allow access to restrooms, showers and bike racks[24]. Two State Parks in Suffolk County – Wildwood S.P. in Riverhead and Hither Hills S.P. in Montauk – allow bike camping as well. Reservations are required for those who plan to bike-camp at Suffolk County Parks or State Parks on Long Island.

2.3 CRASH / SAFETY DATA

Understanding bicyclist and pedestrian-involved crashes is important to identify potentially hazardous intersections and roadway segments where crashes have occurred and are more likely to occur. Analysis of Suffolk County crash data between January 2014 – December 2018 provided critical insights into crash type, frequency, and location. The locations and clustering of the crashes are an important consideration when planning the recommended pedestrian, hike and bicycle network and can be used as a criterion in the evaluation and scoring of individual projects. It is also important to determine trends surrounding non-motorist-involved crashes. Information provided by the State Department of Transportation includes crash location, manner in which the crash occurred, number of injuries, injury severity, and whether or not there was a fatality as a result of the crash. Additional information includes time of day, whether or not the crash took place at an intersection, and other information.

According to the NYSDOT data set, there were 4,472 bicycle or pedestrian-involved collisions between 2014 through 2018 in Suffolk County (61% were pedestrians and 39% were bicyclists). The number of crashes and the rates at which either pedestrians and bicyclists were involved remain rather consistent throughout the 5-year period. However, there was a noticeable spike in pedestrian fatalities in 2015 and as well as a noticeable spike in bicycle fatalities in 2018. 4.4% of all crashes resulted in a fatality.

Figure 25: Total Bicyclist- and Pedestrian-involved Collisions (NYSDOT, 2014-2018)

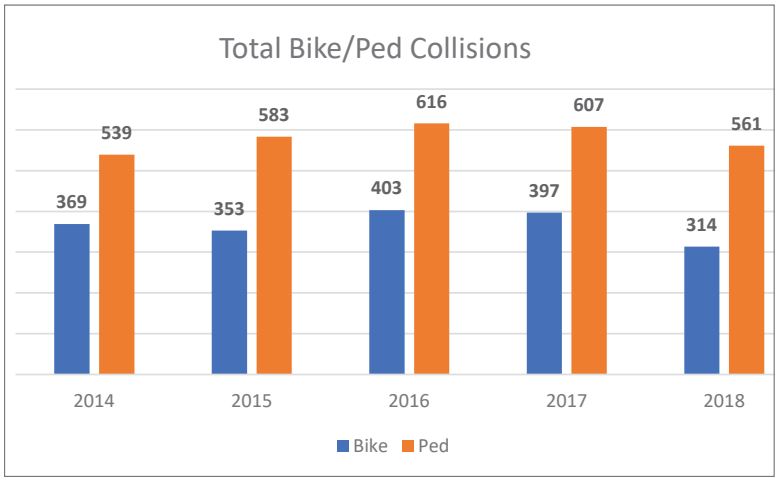
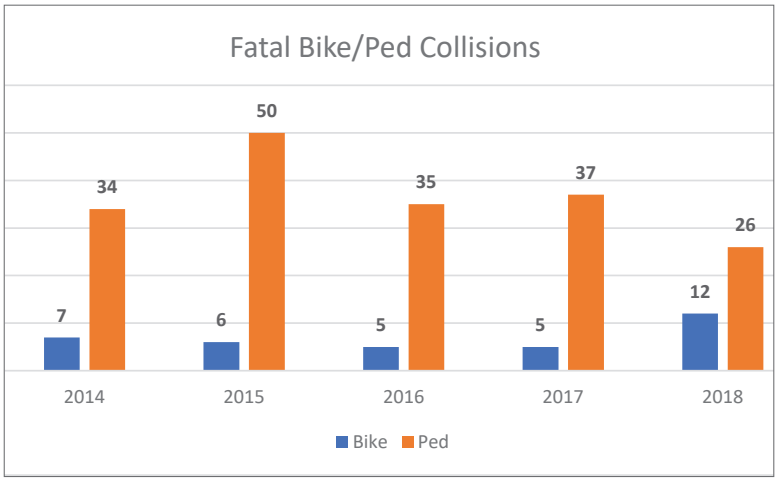


Figure 26: Fatal Bicyclist- and Pedestrian-involved Collisions (NYSDOT, 2014-2018)



CHAPTER 3
NEEDS ASSESSMENT

3.1 BIKE / PED CONNECTIVITY / ACCESSIBILITY ISSUES

BICYCLE CONNECTIVITY ISSUES

While Suffolk County has a variety of signed bicycle routes, on-road bicycle lanes, and off-road shared-use paths and mountain bike trails, they are not well connected. Additionally, many roadways that represent desirable routes between residential areas and employment centers or recreational destinations feel uncomfortable for bicycling. This may be due to a variety of factors, including:

- Wide lanes, the number of travel lanes, and the lack of defined space
- Automobile-oriented streets with many curb cuts and drive-through establishments
- The discontinuation of a bicycle facility, or the lack of clear striping through an intersection or channelized turn lane
- Traversing large intersections in close proximity to fast-moving motor vehicle traffic
- The presence of permitted parking within the shoulder where bicycle facilities may otherwise be placed
- Narrow bike lanes or inconsistent facility width along a corridor

The following examples illustrate bicycle-facility connectivity issues in Suffolk County. Figure 27 through Figure 35 are courtesy of Google Maps and Google Street View.

In some cases, simply reallocating roadway space using paint can result in fewer bicycle facility connectivity issues. In locations where existing roadway space allows, medians and shoulders can be repainted to include bike lanes, or if space allows, buffered bike lanes.

Figure 27: Bicycle Infrastructure Continuity Issues

NY 347 at NY 454 Veterans Memorial Highway in Smithtown: The sidepath on NY 347 ends with few options for bicyclists to continue straight towards the County offices and traffic court buildings in Hauppauge.

NY 347 at NY 454 Veterans Memorial Highway in Smithtown: Intersections designed to accommodate fast-moving and free-flowing automobile traffic can be very difficult to navigate.

William Floyd Pkwy / County Rd 46 at Mastic Blvd in Brookhaven: Between Mastic-Shirley LIRR station and Fire Island beaches, the 7-lane cross section and 18'-20' median leaves little shoulder space for comfortable bicycle facilities. (William Floyd Pkwy has bike lanes 2-3 miles south of this location.)

William Floyd Pkwy / County Rd 46 at Havenwood Drive in Brookhaven: Blue circle indicates area where skip line striping and green pavement markings -- a visual indication to motorists that the area is a continuation of a bicycle lane -- should be placed.

Elsewhere, inconsistent bicycle-facility width can present uncomfortable and sometimes hazardous conditions for bicyclists. Additionally, there are examples where roadway space dedicated to striped medians or other features could be reallocated to provide wider, more comfortable bicycle facilities.

Finally, striping bicycle infrastructure around regional destinations including schools, shopping centers, amusement parks, dense residential areas, and other locations can help to fill in gaps in the bicycle network and provide comfortable facilities for a range of bicyclists.

Figure 28: Lack of Defined Travel Space for Bicyclists in Roadways

Suffolk Ave between Brentwood LIRR station and Suffolk County Community College - Grant Campus in Islip: Wide lanes, many driveways / curb cuts in an automobile oriented streetscape.

Figure 29: Insufficient Width for Shoulders and Bike Lanes

Miller Place-Yaphank Rd between Miller Place High School and Whiskey Rd in Brookhaven: While Miller Place Rd has designated bike lanes, the effective width on the west side is roughly 24 inches in some places, creating uncomfortable conditions for bicyclists.

NY25A near Wading River Manor Rd in Riverhead: On roads with high speeds, excess roadway space can be utilized for wider or buffered bike lanes rather than striping medians.

Figure 30: Lack of Bicycle Infrastructure Connectivity to Major Destinations

Sally Lane at NY-25 in Ridge: Connecting destinations along either end of the north-south William Floyd Parkway requires updated striping and infrastructure at existing crossings.

Leland Ln and Narrow Ln in Southampton: No bicycle facilities exist on either of the streets approaching Southampton Intermediate School or Southampton High School - two important destinations for students and staff who bicycle.

SIDEWALK CONNECTIVITY AND ACCESSIBILITY ISSUES

Due to the history of checkerboard jurisdictions, some neighborhoods feature roads owned and maintained by the Village or Town, others by the County, and still others by New York State. Also, because of automobile-oriented land use and development patterns, many sidewalk continuity issues exist throughout Suffolk County. The example below (Carlls Path in Babylon) shows that the sidewalk on the left side ends abruptly at the municipal border. On the right side of the photo, a car blocks the sidewalk, and the roadway striping pattern changes from striped shoulders to no edge striping. This incohesive sidewalk and striping pattern leaves pedestrians without comfortable sidewalks, and may leave bicyclists wondering what happened to the bikeable shoulder.

The following photos from Google streetview depict other sidewalk issues, including:

- Abruptly-ending sidewalks
- Sidewalk gaps and desire lines
- ADA-compliance issues
- Uncomfortable pedestrian crossings, and

The bicycle connectivity and sidewalk connectivity and accessibility issues research was instrumental to the gaps analysis portion of the planning effort.

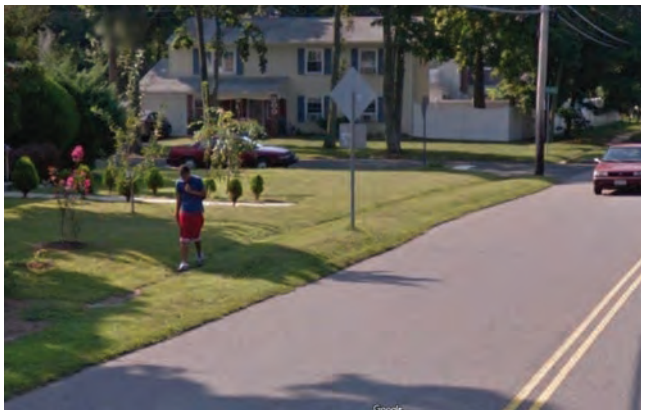
Figure 31: Connectivity issue at the Babylon and Huntington town line result in inconsistent bicycle and pedestrian infrastructure on Carlls Straight Path near Priscilla Avenue (Google Street View)

Figure 32: Sidewalk Ends Abruptly

Jefferson Street near Connetquot High School in Islip.

Indian Wells Highway in East Hampton.

Figure 33: Sidewalk Gaps and Desire Lines



Absence of a sidewalk and clear desire line on Van Buren Avenue in Babylon.

Noyac Road in Southampton has bike lanes and a narrow paved area for pedestrians with pinch points at bridges, but lacks sidewalks

The lack of sidewalks on Hubbards Path in Babylon forces pedestrians to share the road with motor vehicle traffic.

There is a clear opportunity on Wheeler Road in Islip to fill in a gap in the sidewalk network.

Figure 34: ADA-Compliance Issues

The location of the mailbox and the utility pole reduces the effective width of this sidewalk on Carlls Path in Babylon.

Utility poles placed in the center of this sidewalk on Wyandanch Avenue in Babylon reduce the effective width, making it impossible for someone in a wheelchair to pass.

Figure 35: Uncomfortable Crossings

Crosswalks to Nowhere: This sidewalk on Caledonia Hill Road in Huntington ends abruptly. There is no curb ramp for the mobility-impaired, and the crosswalks does not connect to a sidewalk on the opposite side of the street.

Unclear RR Crossings: This sidewalk on Saxon Avenue in Islip ends abruptly at a railroad crossing. Pedestrian facilities at RR crossings should be given extra width and include extruded rubber profiles for pedestrian safety.

This sidewalk on Oakdale-Bohemia Road in Islip ends with no crosswalk or pedestrian curb ramp to access the continuing sidewalk on the other side.

The intersection of Flamingo Street at West Lake Drive in East Hampton has channelized right turn lanes on each approach, yet no crosswalks resulting in uncomfortable conditions for pedestrians.

3.2 NETWORK GAP ANALYSIS

INTRODUCTION

The Network Gap Analysis identified missing links in both the on-road and off-road/trail network for pedestrians and bicyclists throughout Suffolk County. The analysis took into account significant destinations, identified in this planning effort as "Nodes". The team utilized a mix of resources to identify a robust list of network gaps, including:

- Gaps identified by mapping the 1,075 hike-bike nodes and performing the hike-bike nodes ranking analysis, which resulted in Tier I and Tier II corridors
- The online public input tool and the three pop-up events where participants could either use the online tool or take home a bookmark with the URL to use the online tool at home

HIKE-BIKE NODES

The consultant team worked with SCEDP staff to develop a list of 1,075 hike-bike nodes – i.e, locations that would likely be a hike or bike trip origination point or destination point. The nodes were organized by category, with each category given a uniform score based on the relative importance of walking, hiking, and bicycling access to the node, and the potential of the node to generate pedestrian and bicyclist traffic. The table at right presents the 36 node categories with their corresponding score, and the quantity of nodes in that category. The consultant team drew lines representing gaps in the active transportation network between nodes as part of the Network Gap Analysis process.

NODE SCORE RANKING ANALYSIS

The Network Gap Analysis lines were then scored using an equation that took into account their proximity to, as well as the cumulative score

Table 19: Hike-Bike Node Scores

CLASSIFICATION	SCORE	QUANTITY
LIRR Station	**5**	**122**
Ferry Landing		
Regional Employment Center		
Downtown Shopping Area		
Mall		
Municipal Park / County Park	**4**	**564**
State Park / Beach		
Bike Hostel		
Trailhead Access		
Future Bike Share Station		
Connect L.I. Development		
School / College / Library		
Hospital	**3**	**95**
Public Health Center		
Municipal Building		
Municipal Recreation Center		
Museum	**2**	**184**
Performance Venue / Theater / Sports Venue		
Vineyard / Brewery / Cidery / Distillery		
Pool		
Airport	**1**	**110**
Research Institute		
Observatory		
Zoo / Aquarium / Amusement Park		
Historic Site		

of, each node within a half mile of the line. The process included three steps:

1. Draw a half-mile buffer around each "gap" in bicycle and walk facilities
2. Sum the total scores of each node within the buffer area and apply it to the gap line
3. Divide the total score by the length of the line, resulting in Node Score Per Mile

Because of the clustering of the highest scoring lines around the more populous region of the County, the consultant team included a qualitative analysis to define the "development sections." The draft development sections include two tiers:

- **Tier I:** Longer, cross-county routes across municipalities
- **Tier II:** Residential neighborhood, school and other destination connections within municipalities

A variety of corridors were then recommended as the spine for the future active transportation network in Suffolk County.

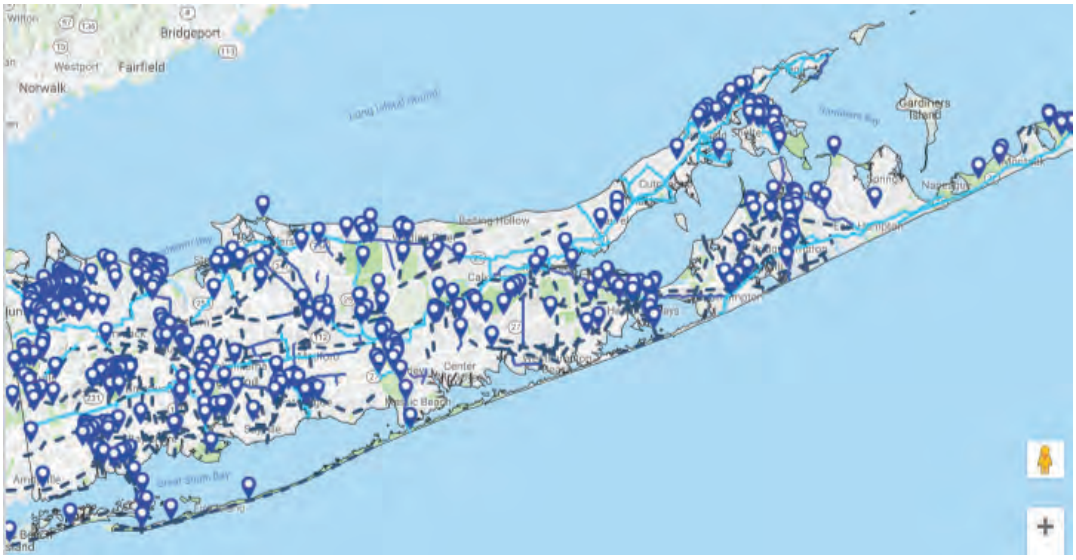
ONLINE PUBLIC INPUT TOOL

The online public input tool allowed the public to drop "points" and draw "lines" and categorize them as a specific need, e.g. "Crosswalk Missing at Intersection" or "No Bike Lane." When the online public input tool was closed, 488 points and 336 lines were placed. Based on the input received in the Comments field, new categories were added to certain points (after the tool was closed) because they came up repeatedly, including:

- Mountain bike trail needed
- Trail should be for hiking only, no bicycles
- Possible trail/bike path connection

After consolidation of the various points and lines, the consultant team issued maps that included 441 draft gap lines. Each gap was labeled as either a gap in the sidewalk network, the on-road bicycle network, or needing a shared-use path to accommodate both pedestrians and bicyclists. Some of the gap lines drawn exist along roadways that feature a considerable shoulder for bicycling or walking and provide some level of comfort for average bicyclists. These gaps represent

Figure 36: Screen shot of the public feedback on gaps from the online input tool



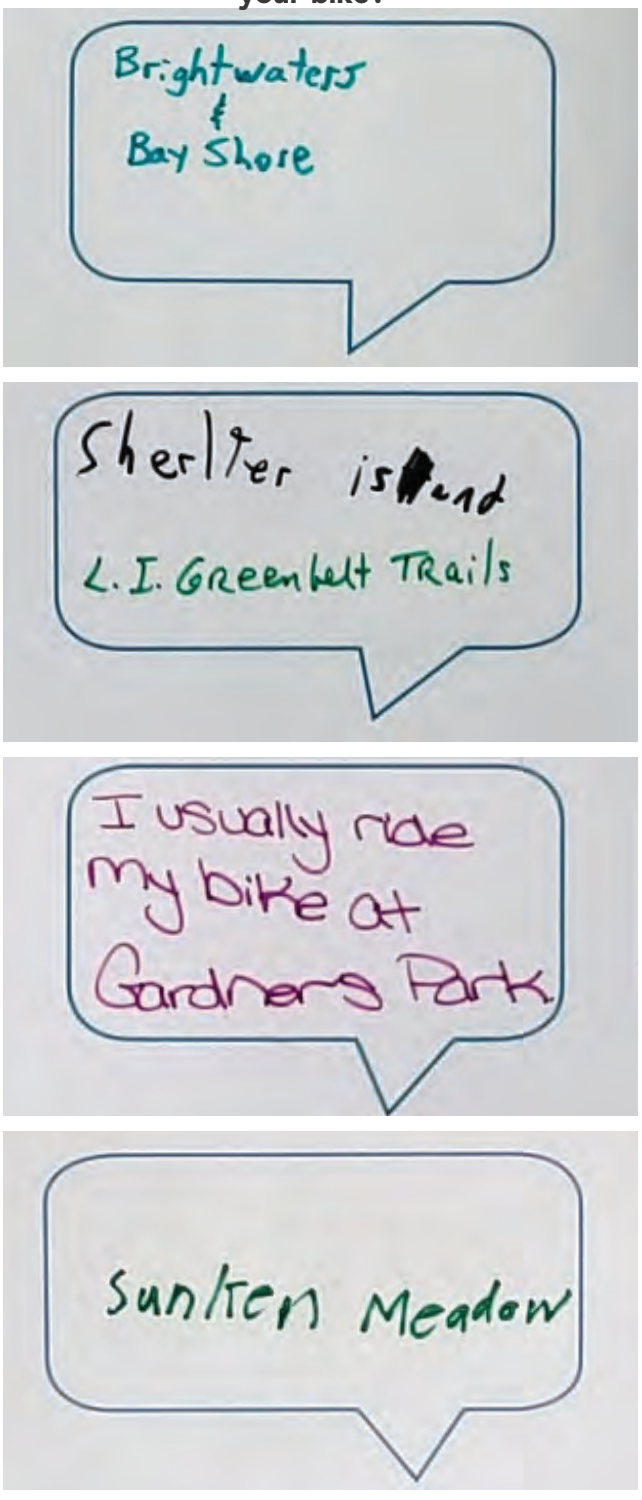
conditions that could ultimately benefit from enhanced signage or bike lane stenciling and may not necessarily require significant roadway reconstruction or reconfiguration. Other gap lines are shown on roadways that are not currently well-configured for pedestrian and bicycle travel due to high traffic volumes, high speeds, and a narrow or no shoulder. In some cases, these network gaps may evolve into longer term recommendations to improve conditions for pedestrians and bicyclists. In many instances, improvement options for consideration include:

- Narrowing existing travel lanes and widening the shoulder to create designated space for pedestrian and bicycle travel;
- Building a shared-use path, or sidepath, parallel with the roadway (typically in the public right-of-way or within an adjacent easement); or
- Using a nearby, lower-volume road running roughly parallel to the identified gap corridor. Improvements to local roadways can include a range of options, from signage, shoulder striping, traffic calming, or where sidewalks exist; striped bike lanes.

After completion of the Network Gap Analysis mapping, a specific facility typology recommendation was added to each line.

Figure 37: Thought bubbles filled in by public pop up event participants

"Where do you like to walk, hike, or ride your bike?"



3.3 PROJECT IMPACT EVALUATION

IMPACT EVALUATION PROCESS

The process to prioritize the hike/bike network project recommendations followed the gap analysis and node scoring completed after HB-TAC meeting #3 in the summer of 2019. The process used buffers applied around each of the linear gaps drawn by the public, HB-TAC members, SCEDP staff, and the consultant team. It then calculated how the buffer interacted with a variety of impact criteria to give each linear project a designated score. The six impact criteria were derived from the eight project goals. Two of the established goals -- Policies and Programs -- were not part of the formal impact scoring process, however.

The following six criteria were used to score the project recommendations and determine their phasing:

1: Safety - Improve pedestrian and bicyclist safety with improvement projects, policies, and programs

- Evaluation Input - The number of pedestrian- or bicyclist-involved crashes between January 2014 and December 2018 within a 0.25-mile* radius of a project recommendation.

2: Connectivity - Connect communities and common destinations by expanding the transportation network for pedestrians and bicyclists.

- Evaluation Input - Node score within a 0.5-mile** radius of a recommended project.

3: Design - Reduce stress associated with walking or bicycling on State, County, and local roads and at trail crossing locations.

- Evaluation Input – The ability of a proposed facility to create separation between people walking, hiking or bicycling and people driving motor vehicles.

4: Equity - Encourage equitable distribution of funding for areas with concentrations of youths, seniors, low-income households, households with limited access to motor vehicles, and individuals with limited English proficiency.

- Evaluation Input - A composite equity score using US Census data will be applied utilizing a 0.5-mile2 radius around the project recommendation. The equity indicators to be used are:
  - » **Age**: Populations under 18 and over 65 years old have fewer transportation options.
  - » **Low-Income Households**: People living in poverty may experience limited options for accessing community services, high-quality food, recreation facilities, and healthcare facilities.
  - » **No Motor Vehicle Access**: Individuals without access to a car are more likely to rely on other modes of transportation such as walking and bicycling.
  - » **Limited English Proficiency**: Research shows that people with limited ability to speak English are less likely to

*The 0.25-mile buffer recommended for the Safety impact criterion is due to the sheer volume of crash locations on a given roadway in Suffolk County. The critical goal is to analyze a corridor project recommendation and factor in the crashes on that corridor. If a larger buffer distance was used, crashes from other corridors may be factored inadvertently.

**The 0.5-mile buffer recommended for the Connectivity, Equity, Economic Development, and Health and Environment impact criteria is a commonly accepted measure of how far most people are willing to go out of their way to walk, hike, or bicycle on a more comfortable facility.

participate in community planning processes within the United States.

5: Economic Development - Leverage County and municipal assets to enhance walking, hiking, bicycling, and overall quality of life to promote economic development and tourism.

- Evaluation Input – The aggregate Node Score of the downtown shopping areas, LIRR stations, and Connect Long Island Developments as measured within a 0.5-mile radius of the project recommendations.

6: Health & Environment - Increase the number of active transportation and recreation opportunities to all Suffolk County residents, particularly those reporting poor health.

- Evaluation Input – Percent of students in public school districts reporting as being overweight or obese.

A score was assigned to each of the proposed linear projects using the six criteria listed above. Scores were then weighted to reflect from both SCEDP and HB-TAC input on the level of importance among the criteria.

Table 20 details the inputs for each criterion, the methods used to determine a score for each criterion, the scoring system, and recommended weighting.

Figure 38: West Main St / NY-25 in Riverhead

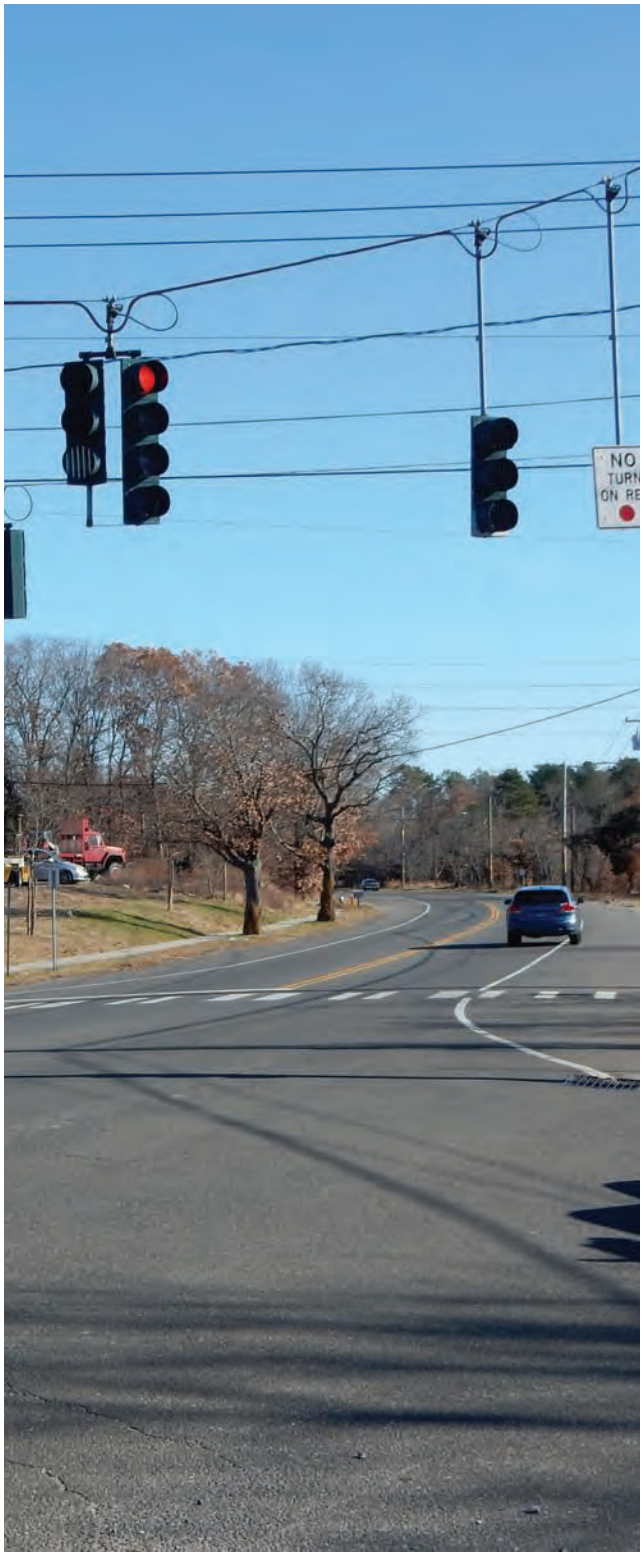


Table 20: Project Impact Criteria and Scoring Methodology

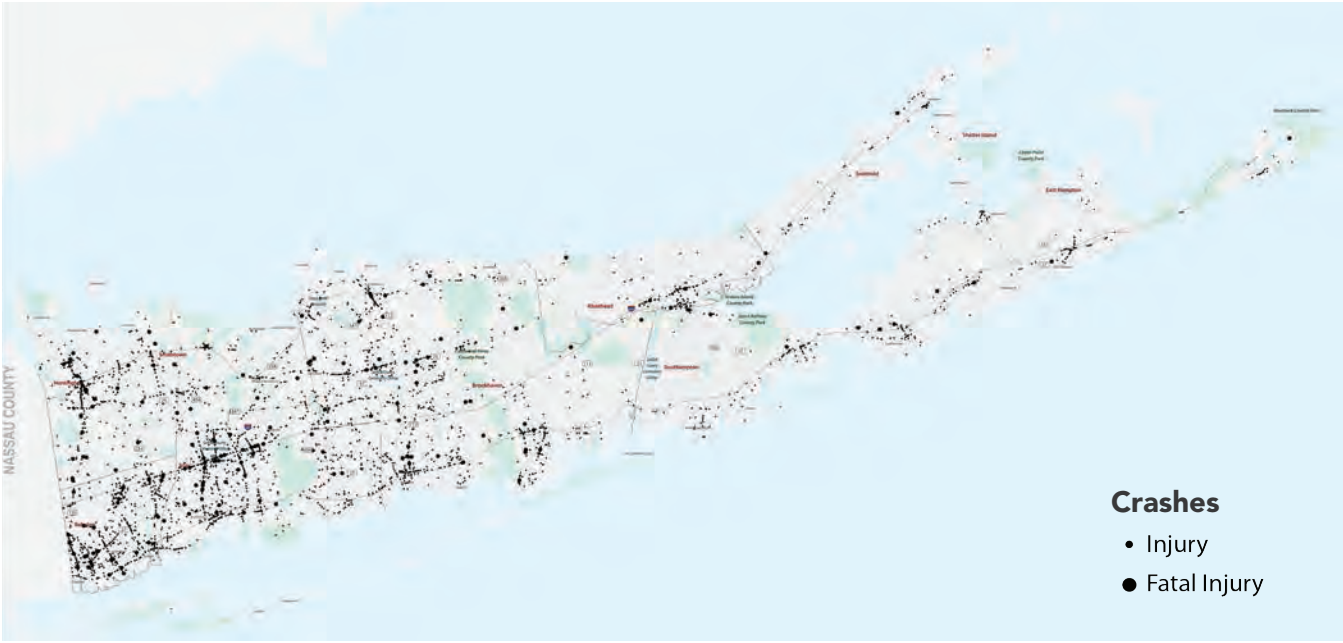
CRITERION	RUBRIC	SOURCE	WEIGHT
Safety	Relative percent of crashes in the County using a 0.25-mile radius. A weighting approach was used based on crash severity: Fatal = 10, Serious = 5, and Injury = 1. (4,763 bicyclists- or pedestrian-involved crashes.)	Based on data from January 2014 – December 2018 provided by NYSDOT.	21%
Connectivity	Relative percent of Nodes in the County using a 0.5-mile radius. (Out of 1,075 possible nodes.)	Nodes developed and finalized in July 2019.	17%
Design	"Signed Bike Route" and "Shared lane markings" projects score = 1. "Buffered bike lanes" and "Bike Lanes" projects score = 3. "Shared-use paths" and "Sidewalks" projects score = 5.	Alta and SCEDP staff vetted and agreed on proposed project typologies.	18%
Equity	Relative percent of Composite Equity score in the County using a 0.5-mile radius.	American Community Survey	21%
Economic Development	Relative % of Economic Development Nodes (Downtown shopping areas, LIRR Stations, and Connect Long Island Developments) in the County using a 0.5-mile radius. (109 Nodes.)	Nodes developed and finalized in July 2019.	16%
Health	Relative percent of students who report as being overweight or obese within the 68 Suffolk County school districts. (60 of 68 school districts reported weight data.)	New York State Health Connector – Student Weight Data Explorer (NYSCH.health.ny.gov)	7%
		TOTAL	**100%**

IMPACT INPUTS

The maps on the following pages highlight the location of the critical information related to each impact input and its spatial relation to the proposed linear projects. Figure 46 shows all ~880 recommended project lines and highlights those that scored above a 50.

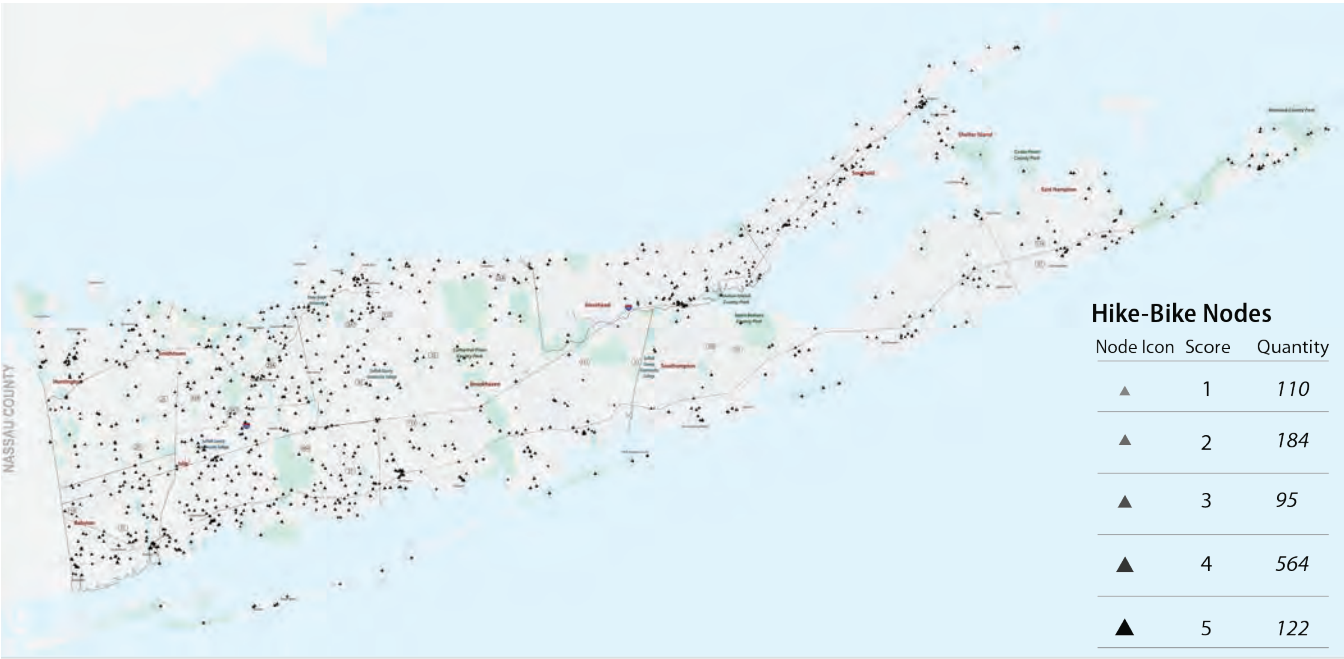
Safety – Proposed projects with buffers that included crashes resulting in a fatality or an injury received a higher score, or rank, based on the desire to provide facilities to bicyclists and pedestrians that would improve the perceived level of safety along the corridor.

Figure 39: Crash Locations in Suffolk County from January 2014 - December 2018



Connectivity – Proposed projects with buffers that contained a higher number of connectivity nodes received a higher rank than those projects that contained fewer or no connectivity node points. The relative score of each connectivity node was factored into the analysis as well.

Figure 40: Connectivity Nodes in Suffolk County

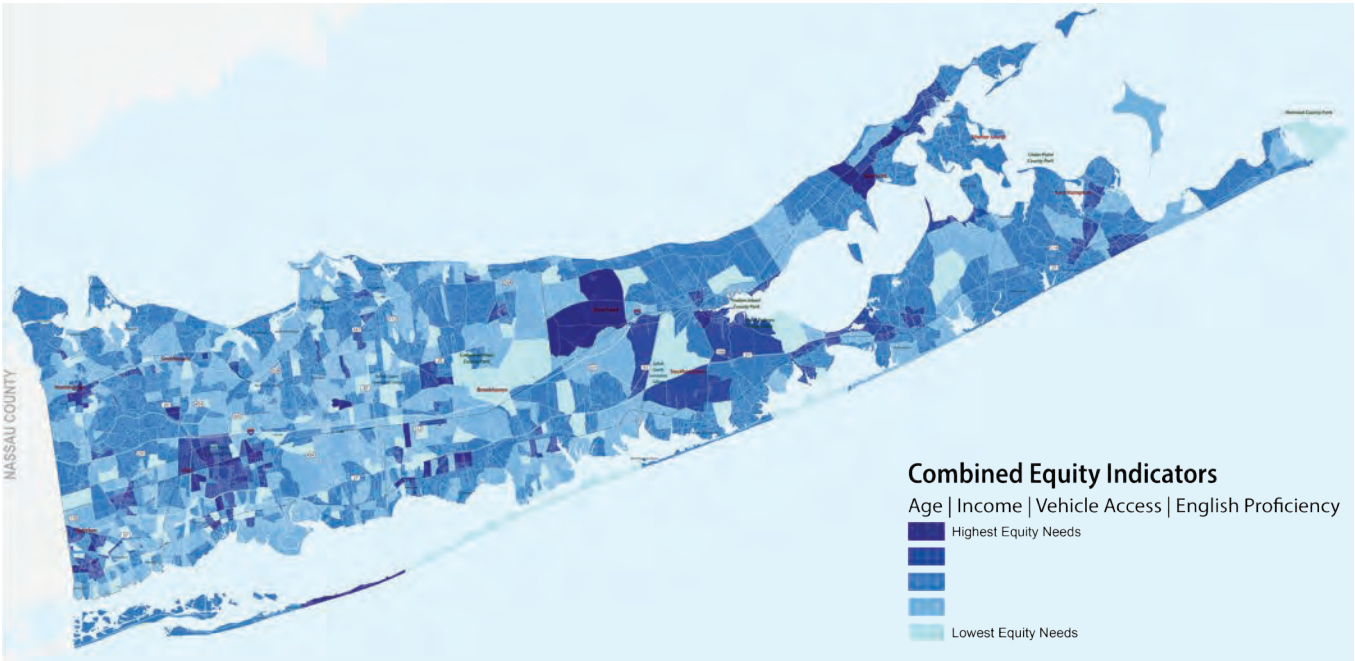


Design – Proposed projects that provide more separation between people walking and bicycling and motor vehicle traffic received a higher rank than those projects that provide less separation.

Figure 41: Each of the ~880 proposed line projects assigned a specific bicycle or pedestrian facility typology

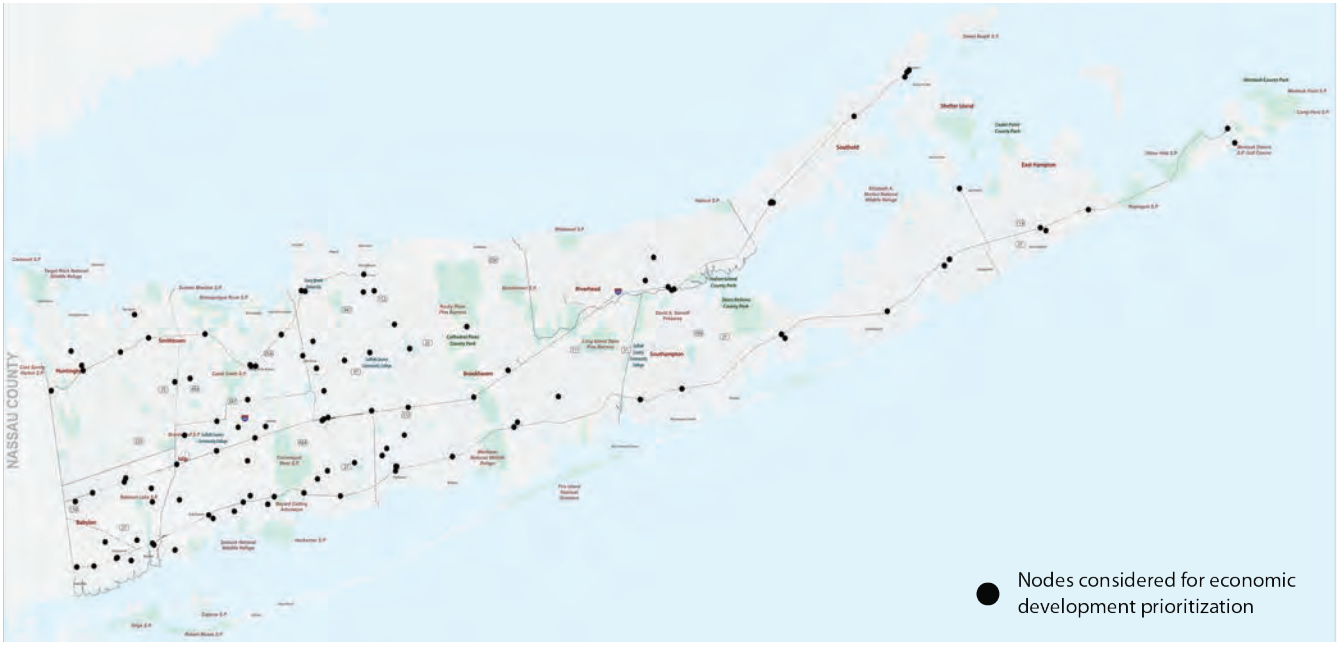
Equity – Proposed projects with buffers that intersect areas indicating a high degree of need for additional active transportation and recreation facilities received a higher rank than those project buffers that intersect areas with lower needs.

Figure 42: Combined Equity Indicator map using US Census data



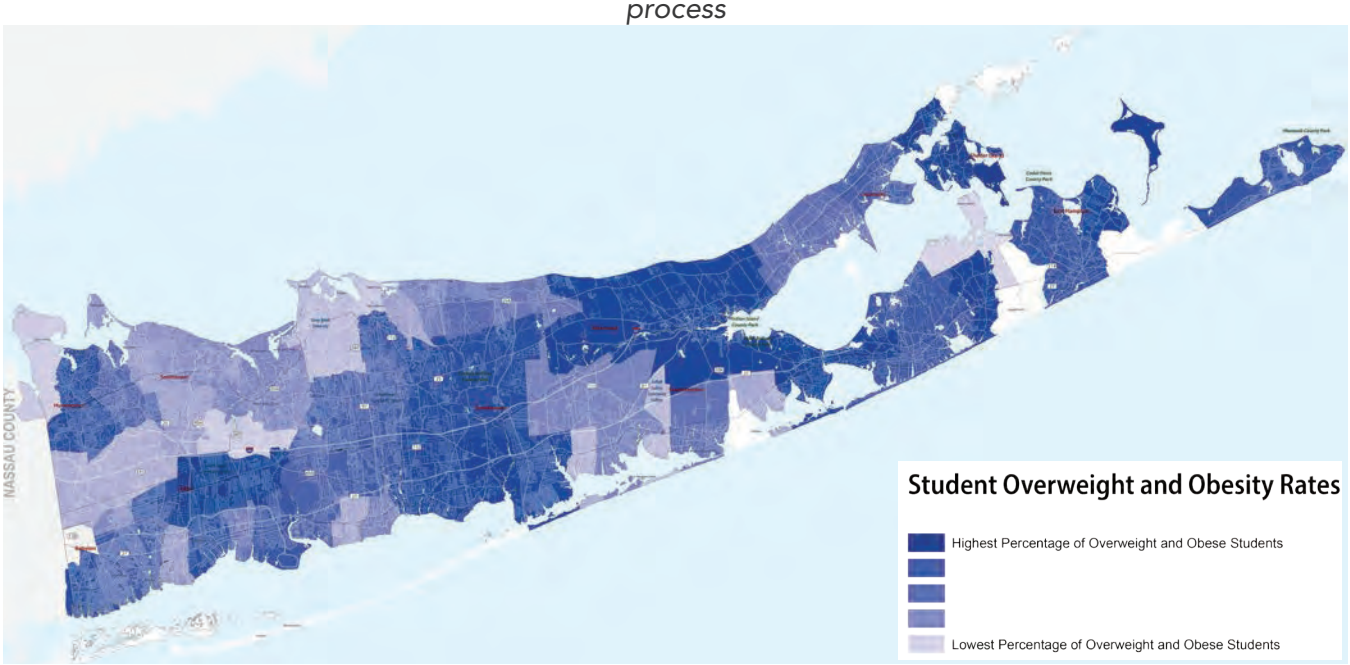
Economic Development – Among the 35 categories of Nodes utilized in the Connectivity impact criterion, the three related to economic development were used to elevate a projects' rank given that project buffers proximity to the three categories. The economic development nodes include: Long Island Rail Road stations, Connect Long Island Developments (major transit-oriented residential or mixed-use developments), and; Downtown shopping areas.

Figure 43: Map indicating the 109 Economic Development Nodes incorporated into the impact process



Health – Proposed projects with buffers that intersected school districts with a higher percentage of students reporting as overweight or obese received a higher rank than project buffers that intersected areas with lower rates of students reporting as overweight or obese.

Figure 44: Health data from 60 out of 68 Suffolk County school districts used in the impact scoring process



IMPACT SCORING PROCESS OUTCOME

The process concluded with a score between 1 and 100 assigned to each linear project recommendation. The histogram chart below shows the distribution of project scores by the number of projects that fall into a particular "bin", or score category. A tool used to quickly evaluate the success of the project impact scoring process, the **chart indicates good score distribution across the ~880 proposed linear projects**. If the chart below indicated that the majority of projects were extremely low or high scoring, it would indicate a likely problem with the methodology or require more investigation into additional data sources to use for criteria.

The Suffolk County Hike + Bike Master Plan also included hundreds of point projects that are important to the overall walk, hike, and bike plan network. The point pedestrian and bicycle facility recommendations (e.g., countdown timers, mid-block crossing, and pedestrian push-button crossing) complement the variety of proposed linear projects (e.g., bike lanes and signage, shared-use path, and new sidewalks.) The point projects are not included in the formal impact scoring process. See Section 4.2 for more information about the point projects.

Figure 45: Histogram Chart showing the Score Distribution of the Prioritized Linear Projects

The impact scoring process outcome also resulted in equitable distribution of project score geographically. Each of the ten towns in Suffolk County have a handful of projects that scored a 50 or higher.

Figure 46: Each of the 10 Towns in Suffolk County received high ranking projects (a yellow underlay indicates a project with a score above 50)

IMPACT PROCESS CONCLUSION AND PHASING

The final outcome of the linear project impact process resulted in a robust list of projects that are ranked against all other projects. This effort helped SCEDP staff weigh the impact of a particular project and serves as a guide for determining project significance for each municipality. Higher scoring projects are forecasted to provide a higher level of impact in terms of safety, connectivity, equity, and health relative to lower-scoring projects. Therefore, taking into consideration the project readiness and funding availability, higher scoring projects are recommended to be designed and constructed first. However, because it is not desirable to have a smattering of disconnected bike lanes, shared use paths, or sidewalks, County and/or municipal planners should consider the proximity of connecting facilities when deciding which facilities are to be implemented first. Additional components regarding constructability and phasing are discussed in the Potential Implementation Timeline in section 4.5.

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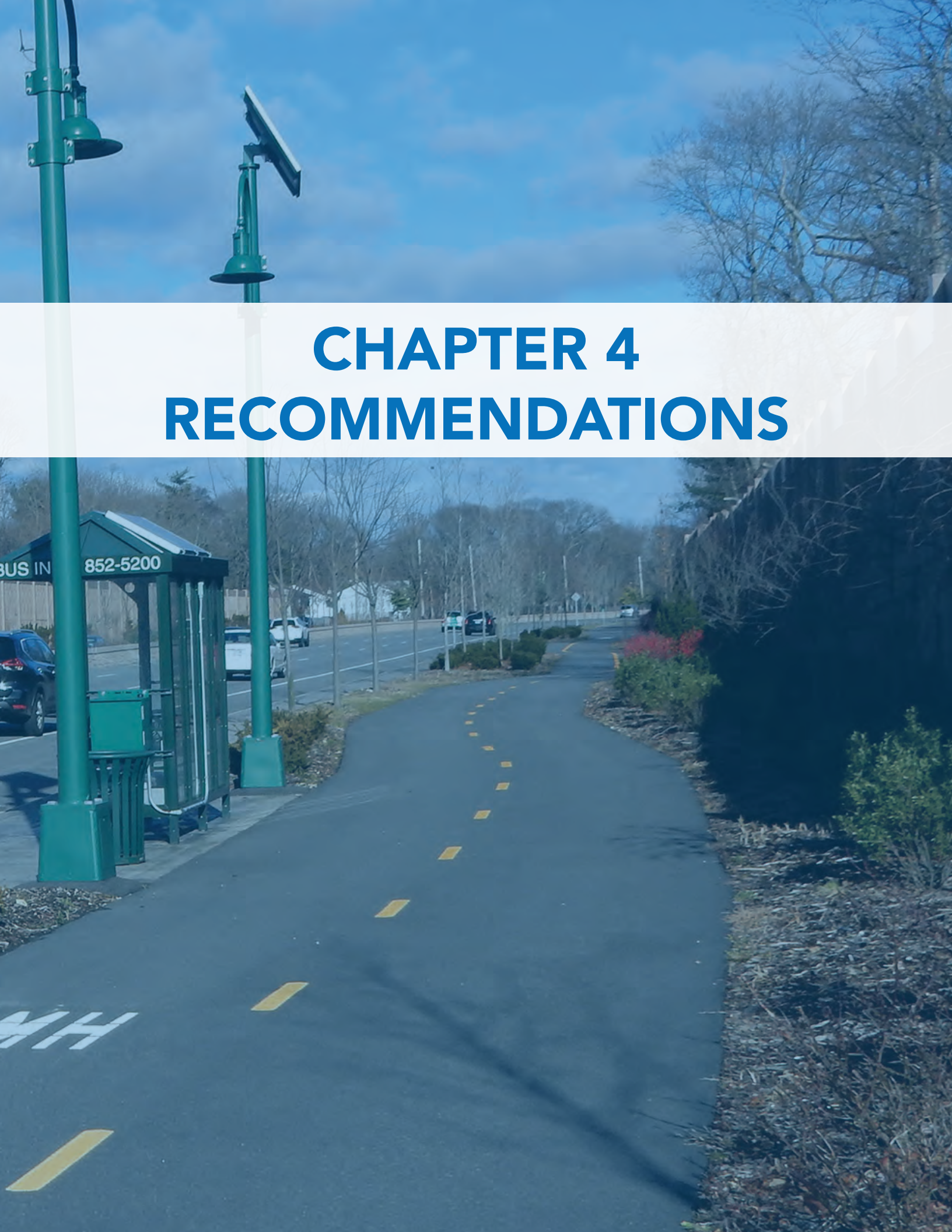


CHAPTER 4
RECOMMENDATIONS

4.1 RECOMMENDED NETWORK

The recommended linear network includes approximately 1,200 miles of bike lanes, separated / buffered bike lanes, shared-use paths, signed routes, and sidewalks. Once complete, the network will link residential neighborhoods to schools, retail areas, businesses, train stations, parks, and many other important destinations throughout Suffolk County.

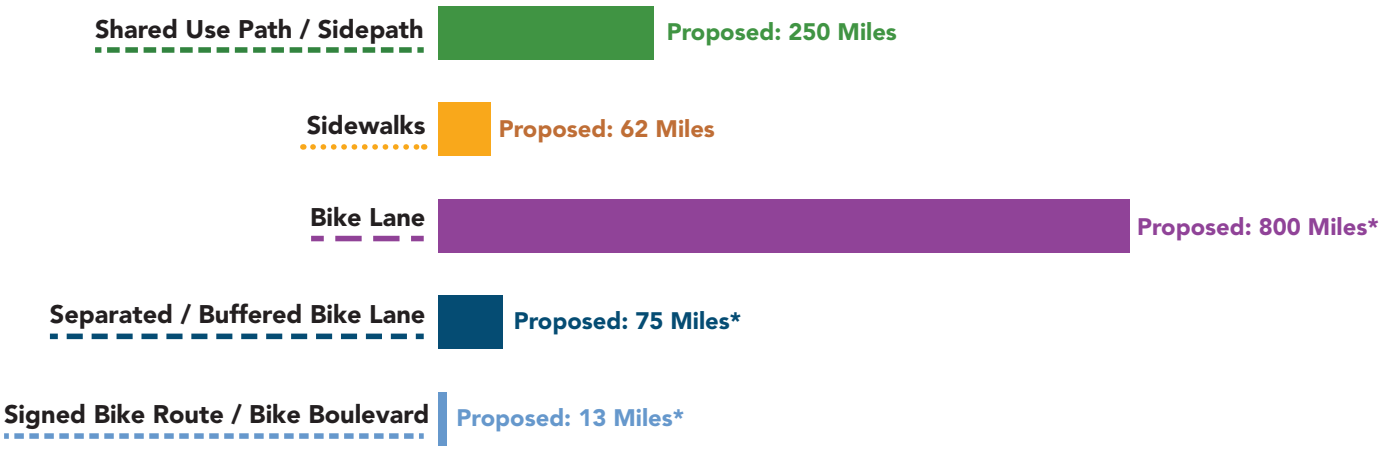
The graphic below illustrates the number of miles of each facility type recommended in this report. It is important to note that upon the next steps towards implementation that the actual facility type may differ than the one proposed in this plan. Therefore, the mileage numbers are likely to fluctuate in the future, given that each individual project will undergo a full engineering review prior to construction.

Roadway ownership and maintenance responsibility information was included for each linear project recommendation that was part of this planning effort. Table 21 on the next page includes each project that was determined to run along or within a New York State-owned right-of-way. Table 22 on following pages includes projects that run alongside or within a Suffolk County-owned right-of-way.

Suffolk County will need to work closely with NYSDOT Region 10 to implement recommended projects that run within State rights-of-way.

The remainder of the proposed projects in the plan are either on Town- or Village-owned rights-of-way.

Figure 47: Summary of linear Network Recommendations



* Assumes facility accommodates travel in both directions, except on one-way streets (i.e. for bike lanes, this equates to roadway centerline miles).

Table 21: Linear Projects Organized by State Highway Route Number

ID	Proposed	Miles	Tier	Street	To	From	Town	State Route	EST	Order of Magnitude Cost Estimate
483	Bike lanes and signage	1.8	2	Conklin St	Nassau County Border	Wellwood Ave	Babylon	24	N	$$
23	Shared-use path	1.2	1	Hallock Ave	Patchogue Rd	Nesconset Hwy	Brookhaven	25	Y	$$$$
27	Shared-use path	1.8	1	Middle Country Rd	Brookhaven Trail	Calverton Pines Yellow Trail	Riverhead	25	N	$$$$$
37	Shared-use path	0.5	1	Peconic Ave / E Main St	Flanders Rd	Ostrander Ave	Southampton	25	N	$$$$
45	Bike lanes and signage	0.4	2	Main St	Park Ave	Church St	Smithtown	25	N	$
70	Bike lanes and signage	6.9	1	Main Rd	Maple Ln	Dock Rd	Southold	25	Y	$$$
71	Bike lanes and signage	0.4	2	Lower Rd	Ackerly Pond Ln	S Harbor Rd	Southold	25	N	$
91	Bike lanes and signage	2.7	1	W Jericho Tpke	Wyandanch Blvd	W Main St	Smithtown	25	N	$$
144	Bike lanes and signage	1.6	1	Main St	Mill Creek Rd	Oakland Ave	Brookhaven	25	N	$$
159	Bike lanes and signage	2.4	2	N Country Rd / Route 25A	Main St	The Hills Dr	Brookhaven	25	N	$$
165	Bike lanes and signage	2.4	1	Middle Country Rd	John Jones Ln	Smithtown Border	Smithtown	25	N	$$
182	Bike lanes and signage	0.1	2	Chapel Ln	North Rd	Main Rd	Southold	25	N	$
219	Bike lanes and signage	9.5	1	Middle Country Rd	County Road 83	E Margin Rd	Brookhaven	25	N	$$$
231	Bike lanes and signage	2.3	2	Fort Salonga Rd	Smithtown Border	Sunken Meadow Pkwy SB	Smithtown	25	N	$$
234	Bike lanes and signage	4.7	1	Main / E Main / Fort	Woodbury Rd	Woodbine Ave	Huntington	25	N	$$$
235	Bike lanes and signage	1.3	2	Goose Hill Rd	Huntington Rd	Harbor Rd	Huntington	25	N	$$
320	Install sidewalk on one side	1.0	2	Fort Salonga Rd	Centerport Rd	Woodbine Ave	Huntington	25	N	$$$$$
342	Buffered bike lanes	5.7	1	Middle Country Rd	Kay Rd	I-495	Riverhead	25	N	$$$$$
366	Bike lanes and signage	1.0	2	Fort Salonga Rd	Rinaldo Rd	Bread and Cheese Hollow Rd	Huntington	25	N	$$
532	Bike lanes and signage	0.1	1	Dock Rd	Main Rd	Orient Point Ferry	Southold	25	N	$
534	Bike lanes and signage	0.4	1	Front St	9th St	3rd St	Southold	25	Y	$
535	Bike lanes and signage	0.9	1	North Rd	Maple Ln	Main St	Southold	25	Y	$$
537	Bike lanes and signage	3.1	2	Main Rd	Love Ln	New Suffolk Rd	Southold	25	N	$$
539	Bike lanes and signage	5.1	2	Main Rd	S Harbor Rd	New Suffolk Ave	Southold	25	N	$$$
555	Bike lanes and signage	1.9	1	Jericho Tpke	Smithtown Border	Wyandanch Blvd	Smithtown	25	N	$$
605	Bike lanes and signage	0.2	1	Route 25A	Oakland Ave	Hallock Ave	Brookhaven	25	N	$
613	Bike lanes and signage	3.2	1	Middle Country Rd	Brookhaven Border	Nicolls Rd SB	Brookhaven	25	N	$$
614	Bike lanes and signage	0.9	1	W Main St	Route 25A	Elm Ave	Smithtown	25	N	$$
615	Bike lanes and signage	1.1	1	E Main St	Elm Ave	John Jones Ln	Smithtown	25	N	$$
644	Bike lanes and signage	0.7	2	W Main St	Sunken Meadow Pkwy	Park Ave	Smithtown	25	N	$
650	Bike lanes and signage	0.9	2	Harbor Rd	Shore Rd	Lawrence Hill Rd	Huntington	25	N	$$
694	Bike lanes and signage	1.4	1	W Main St	Middle Country Rd	Pecnonic Ave	Riverhead	25	Y	$$
695	Bike lanes and signage	0.9	1	W Main St	River Rd	Kroemer Ave	Riverhead	25	N	$$
696	Bike lanes and signage	0.9	1	W Main St	Utility ROW - NY-25	Middle Country Rd	Riverhead	25	Y	$$$
800	Bike lanes and signage	0.2	1	Front St	3rd St	Main St	Southold	25	N	$
835	Bike lanes and signage	1.0	1	Main Rd	Chapel Ln	9th St	Southold	25	Y	$$
853	Bike lanes and signage	0.1	1	Main Rd	Chapel Ln	Utility Facility - Main Rd	Southold	25	Y	$
896	Bike lanes and signage	0.9	1	Fort Salonga Rd	Rinaldo Rd	Vernon Valley Rd	Huntington	25	N	$$
984	Install sidewalk on one side	0.5	2	E Main St	Park Ave	Randou Dr	Huntington	25	N	$$$$
4	Long term	13.9	2	Sunken Meadow Pkwy / Sagtikos Pkwy / Robert Moses Cswy	Northern State Pkwy	Robert Moses State Park	Islip	27	N	$$$$$
205	Bike lanes and signage	0.8	1	W Main St	Windsor Ave	4th Ave	Islip	27	N	$$
346	Bike lanes and signage	1.2	1	Montauk Hwy	Halsey Rd	Flying Point Rd	Southampton	27	Y	$$
351	Bike lanes and signage	1.3	1	E Main St	Carleton Ave	Montauk Hwy	Islip	27	N	$$
438	Install sidewalk on one side	0.7	1	Montauk Hwy	White Horse Tpke	Wainscott NW Rd	East Hampton	27	N	$$$$$
463	Bike lanes and signage	16.3	1	Montauk Hwy	Montauk Light	Abrahams Landing Rd	East Hampton	27	Y	$$$$
626	Bike lanes and signage	6.2	1	Montauk Hwy	Nassau County Border	Islip Border	Babylon	27	N	$$$
627	Bike lanes and signage	1.2	1	Main St	E Main St	W Main St	Islip	27	N	$$
628	Bike lanes and signage	1.3	1	E Main St	Maple Ave	Degnon Blvd	Islip	27	N	$$
629	Bike lanes and signage	0.2	1	S Country Rd	W Montauk Hwy	W Main St	Islip	27	N	$
630	Bike lanes and signage	1.5	1	W Montauk Hwy	Montauk Hwy	S Country Rd	Islip	27	N	$$
631	Bike lanes and signage	1.9	1	Montauk Hwy	Islip Border	Mccall Ave	Islip	27	N	$$
712	Bike lanes and signage	0.6	1	W Main St	Main St	Carleton Ave	Islip	27	N	$
767	Bike lanes and signage	3.0	1	Woods Ln	Toilsome Ln	Main St	East Hampton	27	N	$$
768	Bike lanes and signage	0.9	1	Main St	Woods Ln	Newtown Ln	East Hampton	27	N	$$
769	Bike lanes and signage	1.2	1	Pantigo Rd	Main St	Skimhampton Rd	East Hampton	27	Y	$$
770	Bike lanes and signage	1.8	1	Montauk Hwy	Skimhampton Rd	Abrahams Landing Rd	East Hampton	27	Y	$$
900	Bike lanes and signage	2.0	1	Sunrise Highway Service Rd	Barnes Rd	William Floyd Pkwy	Brookhaven	27	N	$$
901	Buffered bike lanes	2.2	1	Victory Ave	William Floyd Pkwy	Yaphank Ave	Brookhaven	27	N	$$$$
910	Shared-use path	5.3	1	Sunrise Hwy	Barnes Rd	Eastport Manor Rd	Brookhaven	27	Y	$$$$$
933	Buffered bike lanes	5.6	1	Montauk Hwy	Halsey Rd	Town Line Rd	Southampton	27	N	$$$$$
31	Buffered bike lanes	0.5	2	Route 109	Albany Ave	Wellwood Ave	Babylon	109	N	$$$
11	Bike lanes and signage	1.3	2	New York Ave	Anchorage Ln	Gerard St	Huntington	110	N	$$
119	Bike lanes and signage	4.3	2	New York Ave	Main St	Wolf Hill Rd	Huntington	110	N	$$$
442	Shared-use path	6.3	2	Broadhollow Rd	Northern State Pkwy	Southern State Pkwy	Babylon	110	N	$$$$$
579	Bike lanes and signage	1.1	2	Walt Whitman Rd	E 23rd St	Schwab Rd	Huntington	110	N	$$
94	Bike lanes and signage	4.0	1	Islip Ave	Suffolk Ave	Main St	Islip	111	N	$$$
557	Bike lanes and signage	1.9	1	Route 111	E Main St	Nesconset Hwy	Smithtown	111	N	$$
558	Bike lanes and signage	1.2	1	Wheeler Rd	Townline Rd	Utllity ROW	Islip	111	Y	$$
559	Bike lanes and signage	1.4	1	Joshuas Path	Central Ave	Suffolk Ave	Islip	111	N	$$
560	Bike lanes and signage	0.4	1	Route 111	Nesconset Hwy	Townline Rd	Smithtown	111	Y	$
561	Bike lanes and signage	0.5	1	Wheeler Rd	Utility ROW	Central Ave	Islip	111	N	$
58	Bike lanes and signage	0.9	1	Old Town Rd	County Road 83	Route 112	Brookhaven	112	N	$$
504	Bike lanes and signage	2.1	1	Route 112	Route 495	Woodside Ave	Brookhaven	112	N	$$
625	Bike lanes and signage	1.6	1	Medford Ave	Old Medford Ave	E Main St	Brookhaven	112	N	$$
462	Bike lanes and signage	4.5	1	Sag Harbor East Hampton	Lincoln St	Buckskill Rd	East Hampton	114	Y	$$$
765	Bike lanes and signage	0.4	1	Hampton St	Hempstead St	Lincoln St	East Hampton	114	Y	$
836	Bike lanes and signage	10.0	1	Ferry Rd	Front St	Milton Ave	Shelter Island	114	Y	$$$
962	Install sidewalk on one side	0.4	2	N Ferry Rd	School St	Saint Marys Rd	Shelter Island	114	N	$$$$
9	Shared-use path	2.0	1	Route 231	Southern State Pkwy	John St	Babylon	231	N	$$$$$

Linear Projects Organized by State Highway Route Number (Continued)

ID	Proposed	Miles	Tier	Street	To	From	Town	State Route	EST	Order of Magnitude Cost Estimate
237	Bike lanes and signage	3.5	1	Deer Park Ave	E Deer Park Rd	Huntington Border	Huntington	231	N	$$
651	Bike lanes and signage	2.9	1	Deer Park Ave	Huntington Border - Rutland St	August Rd	Babylon	231	N	$$
166	Shared-use path	6.5	1	Nesconset Hwy	Jayne Blvd	Middle Country Rd	Brookhaven	347	Y	$$$$$
455	Shared-use path	0.9	1	Nesconset Hwy	Gibbs Pond Rd	Middle Country Rd	Smithtown	347	Y	$$$$
68	Shared-use path	9.1	1	Veterans Memorial Hwy	Nesconset Hwy	Sunrise Hwy	Islip	454	N	$$$$$
84	Shared-use path	4.5	1	Veterans Memorial Hwy	Jericho Tpke	Nesconset Hwy	Smithtown	454	N	$$$$$
309	Install sidewalk on one side	0.3	2	Veterans Memorial Hwy	Lincoln Blvd	Macarthur Blvd	Islip	454	N	$$$$
441	Shared-use path	2.4	2	Orient State Pkwy	Main Rd	Orient Beach State Park	Southold	900	N	$$$$$
704	Buffered bike lanes	3.3	1	Montauk Hwy	Hillover Rd E	E Gate Rd	Southampton	900	Y	$$$$
775	Bike lanes and signage	0.5	2	State Access Rd	Kings Hwy	Express Dr N	Islip	901	Y	$
372	Bike lanes and signage	2.6	1	Sunrise Service Rd EB	Montauk Hwy	Lakeland Ave	Islip	906	N	$$
543	Bike lanes and signage	0.7	2	Sunrise Service Rd WB	N Windsor Ave	E 3rd Ave	Islip	906	N	$$
978	Shared-use path	0.5	1	Sunrise Service Rd EB	Broadway Ave	Church St	Islip	906	N	$$$$
980	Shared-use path	2.0	1	Sunrise Service Rd WB	Connetquot	Islip Ave	Islip	906	N	$$$$$
981	Shared-use path	0.4	1	Sunrise Service Rd WB	Ocean Ave	Oakdale-Bohemia Rd WB	Islip	906	N	$$$$
142	Long term	12.2	2	Northern State Pkwy	Plainview Rd	Veterans Memorial Hwy	Huntington	908	N	$$$$$
151	Long term	17.3	2	Southern State Pkwy	Carmans Rd	Heckscher Pkwy	Babylon	908	N	$ -
447	Long term	1.9	2	Sunken Meadow Pkwy	Jericho Tpke	Northern State Pkwy	Smithtown	908	N	$$$$$
448	Long term	5.1	2	Sunken Meadow Pkwy	Sunken Meadow State Park	Jericho Tpke	Smithtown	908	N	$$$$$
	Total mileage:	***262.9***								

NOTE: The above proposed projects may utilize only a short segment of a State Route.

Table 22: Linear Projects Organized by Suffolk County Route Number

ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	EST	Order of Magnitude Cost Estimate
12	Shared-use path	1.3	2	Smithtown Ave	Railroad Ave	Lakeland Ave	Islip	1	N	$$$$
261	Bike lanes and signage	4.7	2	Straight Path	Long Island Ave	Bethpage Rd	Babylon	2	N	$$$
691	Bike lanes and signage	1.5	2	Dixon Ave	34th St	Broadway	Babylon	2	N	$$
738	Bike lanes and signage	4.5	2	Wellwood Ave	Bendix Pl	Huntington Border	Babylon	3	N	$$$
739	Bike lanes and signage	2.2	2	Pinelawn Rd	Broadhollow Rd	Huntington Border	Huntington	3	N	$$
414	Bike lanes and signage	1.9	2	Commack Rd	Route 495	Burlington Ave	Huntington	4	N	$$
732	Bike lanes and signage	0.7	2	Commack Rd	Huntington Border - Burlington Ave	n/a	Babylon	4	N	$
926	Shared-use path	0.8	1	Commack Rd	New Hwy	Vanderbilt Pkwy	Smithtown	4	N	$$$$
482	Bike lanes and signage	0.7	2	Rabro Dr	Islip Border	Wheeler Rd	Islip	6	N	$
584	Bike lanes and signage	1.5	1	Wicks Rd	Vanderbilt Motor Pkwy	Mindres Ave	Islip	7	Y	$$
347	Bike lanes and signage	4.0	2	Elwood Rd	Fort Salonga Rd	Jericho Tpke	Huntington	10	N	$$$
167	Bike lanes and signage	1.5	2	Pulaski Rd	Park Ave	Broadway	Huntington	11	N	$$
365	Bike lanes and signage	2.3	2	W Pulaski Rd	W Rogues Path	E Pulaski Rd	Huntington	11	N	$$
724	Bike lanes and signage	0.3	2	Woodbury Rd	W Rogues Path	Huntington Border	Huntington	11	N	$
813	Bike lanes and signage	1.2	2	E Pulaski Rd	New York Ave	Park Ave	Huntington	11	N	$$
991	Install sidewalk on one side	0.2	2	Pulaski Rd	Cuba Hill Rd	Broadway	Huntington	11	N	$$$$
101	Bike lanes and signage	3.0	2	Crooked Hill Rd	Commack Rd	Wicks Rd	Islip	13	N	$$
124	Bike lanes and signage	3.6	2	5th Ave	Suffolk Ave	N Clinton Ave	Islip	13	N	$$
586	Bike lanes and signage	0.4	2	Wicks Rd	Mindres Ave	Suffolk Ave	Islip	13	N	$
470	Bike lanes and signage	1.1	2	Commack Rd	Jericho Tpke	Huntington Border	Huntington	14	N	$$
568	Bike lanes and signage	1.3	2	Smithtown Blvd	Nichols Rd	Smithtown Border	Smithtown	16	N	$$
718	Bike lanes and signage	0.4	2	Horseblock Rd	Yaphank Ave Ramp	Montauk Hwy	Brookhaven	16	N	$
903	Install sidewalk on one side	0.1	2	Horseblock Rd	n/a	Old Medford Ave	Brookhaven	16	N	$$$
702	Bike lanes and signage	1.8	2	Waverly Ave	Patchogue Holbrook Rd	W Main St	Brookhaven	19	N	$$
361	Bike lanes and signage	2.7	2	Yaphank Ave	E Main St	Horseblock Rd	Brookhaven	21	N	$$
260	Bike lanes and signage	1.2	2	New Hwy	Albany Ave	Sunrise Hwy	Babylon	28	N	$$
69	Bike lanes and signage	0.6	1	Old Riverhead Rd	S Perimeter Rd	Montauk Hwy	Southampton	31	N	$
184	Install sidewalk on one side	0.2	2	Old Riverhead Rd	77-55 Old Riverhead Rd	39 Old Riverhead Rd	Southampton	31	N	$$$$
185	Install sidewalk on one side	0.1	2	Old Riverhead Rd	Rogers Ave	n/a	Southampton	31	N	$$$
186	Install sidewalk on one side	0.0	2	Old Riverhead Rd	134-136 Riverhead Rd	Utility ROW	Southampton	31	N	$$$
232	Bike lanes and signage	3.2	2	Park Ave	New York Ave	Little Plains Rd	Huntington	35	N	$$
298	Install sidewalk on one side	0.1	2	Park Ave	Tasman Ln	Broadway	Huntington	35	N	$$$$
652	Bike lanes and signage	1.2	1	Park Ave	Maplewood Rd	E Jericho Tpke	Huntington	35	N	$$
653	Bike lanes and signage	1.2	1	Deer Park Rd	E Jericho Tpke	E Deer Park Rd	Huntington	35	N	$$
48	Bike lanes and signage	2.3	2	N Sea Rd	Little Peconic Bay	Little Fresh Pond Rd	Southampton	38	N	$$
432	Bike lanes and signage	2.5	2	Three Mile Harbor Rd	Harborview Ln	Springs Fireplace Rd	East Hampton	40	N	$$
427	Bike lanes and signage	3.2	2	Springs Fireplace Rd	Parsons Close	N Main St	East Hampton	41	N	$$
783	Bike lanes and signage	1.2	2	Shore Rd	Rocky Point Ave	W Neck Rd	Shelter Island	42	N	$$
690	Bike lanes and signage	1.8	2	Great Neck Rd	Albany Ave	Brookside Ct	Babylon	47	N	$$
108	Bike lanes and signage	2.1	1	North Rd	Chapel Ln	Old North Rd	Southold	48	Y	$$
577	Bike lanes and signage	1.6	1	North Rd	Main St	Chapel Ln	Southold	48	Y	$$
74	Bike lanes and signage	2.0	2	Flamingo ave	Major Rd	W Lake Dr	East Hampton	49	N	$$
547	Bike lanes and signage	1.1	2	Edgemere St	Manor Rd	Carl Fisher Plz	East Hampton	49	N	$$
827	Install sidewalk on one side	0.8	2	Edgemere St	Manor Rd	Stone Lion Inn	East Hampton	49	N	$$$$$
828	Install sidewalk on one side	0.0	2	Fort Pond Rd	Flamingo Ave	Montauk Train Station	East Hampton	49	N	$$
52	Bike lanes and signage	8.3	1	Union Blvd	Islip Border	Montauk Hwy	Islip	50	N	$$$
521	Bike lanes and signage	0.5	1	Simon Street / John St	Route 231	Deer Park Ave	Islip	50	N	$
460	Buffered bike lanes	6.9	1	CR 51 / Center Dr	Flanders Rd	Montauk Hwy	Brookhaven	51	Y	$$$$$
995	Buffered bike lanes	1.1	2	CR 51	CR 51 Ramp	Montauk Hwy	Brookhaven	51	N	$$$
662	Bike lanes and signage	0.9	2	Hulse Landing Rd	Wildwood Rd	Sound Ave	Riverhead	54	N	$$
664	Bike lanes and signage	0.2	2	Wildwood Rd	N Wading River Rd	15th St	Riverhead	54	N	$
443	Bike lanes and signage	2.2	2	Eastport Manor Rd	County Road 111	CR 51	Brookhaven	55	N	$$
864	Bike lanes and signage	0.7	1	Eastport Manor Rd	Sunrise Hwy	Montauk Hwy	Brookhaven	55	Y	$
915	Shared-use path	0.2	1	Eastport Manor Rd	CR 51	S Sunrise Hwy Service Rd	Brookhaven	55	Y	$$$
374	Bike lanes and signage	1.3	2	Long Ln	Stephen Hands Path	Newtown Ln	East Hampton	59	Y	$$
375	Install sidewalk on one side	0.7	2	Long Ln	Roberts Ln	Newtown Ln	East Hampton	59	Y	$$$$
49	Bike lanes and signage	1.6	2	Lake Ave	Flanders Rd	Center Dr S	Southampton	63	N	$$
246	Bike lanes and signage	0.4	1	Weeks St	River Ave	Atlantic Ave	Brookhaven	65	N	$
350	Bike lanes and signage	1.1	2	River Ave	W Main St	Sunset Ln	Brookhaven	65	N	$$
669	Bike lanes and signage	0.3	1	Atlantic Ave	Weeks St	Middle Rd	Brookhaven	65	N	$
670	Bike lanes and signage	2.1	1	Middle Rd	Collins Ave	Islip Border	Islip	65	N	$$
807	Bike lanes and signage	1.3	1	Middle Rd	Brookhaven Border	Atlantic Ave	Brookhaven	65	N	$$
657	Bike lanes and signage	2.2	2	Motor Pkwy	Bridge Rd	Rosevale Ave	Islip	67	N	$$
743	Buffered bike lanes	1.5	1	Vanderbilt Pkwy	Utility ROW	Village Hill Dr	Huntington	67	N	$$$$
801	Bike lanes and signage	2.8	1	Vanderbilt Pkwy	Half Hollow Rd	Huntington Border	Huntington	67	N	$$
912	Shared-use path	1.4	1	L.I. Motor Pkwy	Veterans Memorial Hwy	S Bedford Ave	Islip	67	Y	$$$$
954	Shared-use path	0.3	1	Vanderbilt Pkwy	Village Hill Dr	Commack Rd	Huntington	67	N	$$$
550	Bike lanes and signage	0.5	2	Old Country Rd	Montauk Hwy	Easport Manor Rd	Brookhaven	71	N	$
567	Bike lanes and signage	2.7	2	Townline Rd	Lincoln Blvd	Nichols Rd	Smithtown	76	N	$$
435	Bike lanes and signage	1.9	2	West Lake Dr	Flamingo Ave	Old West Lake Dr	East Hampton	77	N	$$
51	Bike lanes and signage	1.2	1	W Montauk Hwy	N Jones Rd	Bellows Pond Rd	Southampton	80	N	$$
88	Bike lanes and signage	1.2	1	Montauk Hwy	Mill Rd	Meeting House Rd	Southampton	80	N	$$
98	Bike lanes and signage	1.1	1	Montauk Hwy	Frowein Rd	Old Montauk Hwy	Brookhaven	80	N	$$
134	Bike lanes and signage	2.9	1	Montauk Hwy	S Country Rd	Mill Rd	Southampton	80	N	$$
146	Bike lanes and signage	1.3	2	Montauk Hwy	Lewis Rd	Old Country Rd	Southampton	80	N	$$

Linear Projects Organized by Suffolk County Route Number (Continued)

ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	EST	Order of Magnitude Cost Estimate
190	Install sidewalk on one side	0.6	2	Montauk Hwy	n/a	n/a	Southampton	80	N	$$$$
461	Bike lanes and signage	6.1	1	Montauk Hwy	S Country Rd	Frowein Rd	Brookhaven	80	N	$$$
517	Bike lanes and signage	0.6	1	Montauk Hwy	Old Country Rd	N Jones Hwy	Southampton	80	N	$
564	Bike lanes and signage	0.9	1	Montauk Hwy	Brookhaven Border	S Country Rd	Southampton	80	N	$$
565	Bike lanes and signage	0.6	1	Montauk Hwy	Old Montauk Hwy	Eastport Manor Rd	Brookhaven	80	Y	$
566	Bike lanes and signage	0.3	1	Montauk Hwy	Eastport Manor Rd	Southampton Border	Brookhaven	80	N	$
680	Bike lanes and signage	0.4	2	Montauk Hwy	Quogue St	County Road 104	Southampton	80	N	$
761	Bike lanes and signage	0.7	1	E Main St	Medford Ave	S Country Rd	Brookhaven	80	N	$
280	Bike lanes and signage	1.7	2	Higbie Ln	Clyde St	Union Blvd	Islip	82	N	$$
863	Bike lanes and signage	0.9	2	Udall Rd	W 3rd St	Higbie Ln	Islip	82	N	$$
242	Bike lanes and signage	2.8	2	Broadway	E Sanders Rd	E Jericho Tpke	Huntington	86	N	$$
325	Install sidewalk on one side	0.2	2	Broadway	Pulaski Rd	Cuba Hill Rd	Huntington	86	N	$$$$
327	Install sidewalk on one side	1.0	2	Centerport Rd	Fort Salonga Rd	E Sanders St	Huntington	86	N	$$$$$
297	Bike lanes and signage	2.8	2	Oakwood Rd	High St	W Jericho Tpke	Huntington	92	N	$$
100	Bike lanes and signage	1.2	2	Rosevale Ave	Islip Border	Pond Rd	Islip	93	N	$$
102	Buffered bike lanes	3.0	1	Lakeland Ave	Ocean Ave	Sunrise Hwy EB	Islip	93	N	$$$$
572	Bike lanes and signage	0.2	2	Rosevale Ave	Smithtown Blvd	Smithtown Border	Smithtown	93	N	$
890	Bike lanes and signage	2.1	2	Geat East Neck Rd / Bergen Ave	Little East Neck Rd	Dead end	Babylon	96	N	$$
250	Bike lanes and signage	3.1	1	Frowein Rd	Montauk Hwy	Montauk Hwy	Brookhaven	98	N	$$
247	Bike lanes and signage	1.6	1	Woodside Ave	Buckley Rd	Route 112	Brookhaven	99	N	$$
249	Bike lanes and signage	2.8	2	Patchogue Yaphank Rd	Long Island Ave	Sills Rd	Brookhaven	101	N	$$
253	Bike lanes and signage	2.4	1	Quogue Riverhead Rd	Lewis Rd	Montauk Hwy	Southampton	104	N	$$
760	Buffered bike lanes	2.2	1	CR 104	Old Riverhead Rd	Lewis Rd	Southampton	104	N	$$$$
349	Bike lanes and signage	3.9	1	Cross River Dr	Sound Ave	Southampton Border	Riverhead	105	N	$$$
711	Bike lanes and signage	1.4	1	Cross River Dr	Southampton Border	Old Quogue Rd	Southampton	105	N	$$
782	Bike lanes and signage	0.6	2	W Neck Rd	Shore Rd	N Ferry Rd	Shelter Island	115	N	$
	Total mileage:	***165.1***								

NOTE: The above proposed projects may utilize only a short segment of a County Route.

WESTERN SUFFOLK COUNTY - PROPOSED HIKE-BIKE NETWORK

NASSAU COUNTY

Match Line

Caumsett S.P.
Target Rock National Wildlife Refuge
Asharoken
Lloyd Harbor
Huntington Bay
Northport
Sunken Meadow S.P.
Nissequogue River S.P.
Nissequogue
Head of the Harbor
Old Field
Poquott
Belle Terre
Port Jefferson
Stony Brook University
Shoreham
Wildwood S.P.
Brookhaven S.P.
Riverhead
Rocky Point Pine Barrens
Cathedral Pines County Park
Long Island State Pine Barrens
David A. Sarnoff Preserve
Suffolk County Community College
Southampton
Cold Spring Harbor S.P.
Huntington
Smithtown
Lake Grove
Village of the Branch
Galeb Smith S.P.
Brookhaven
High-lighted NY112 bike lane segment to be constructed in 2020
Outlined Long Island Greenway Trail segment to be constructed in 2020
Brentwood S.P.
Suffolk County Community College
Islandia
Connetquot River S.P.
Wertheim National Wildlife Refuge
Patchogue
Bellport
West Hampton Dunes
Fire Island National Seashore
Islip
Belmont Lake S.P.
Bayard Cutting Arboretum
Babylon
Brightwaters
Lindenhurst
Amityville
Seatuck National Wildlife Refuge
Heckscher S.P.
Ocean Parkway shared-use path is under construction
Captree S.P.
Gilgo S.P.
Robert Moses S.P.
Saltaire
Ocean Beach

0 5 10 Miles

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

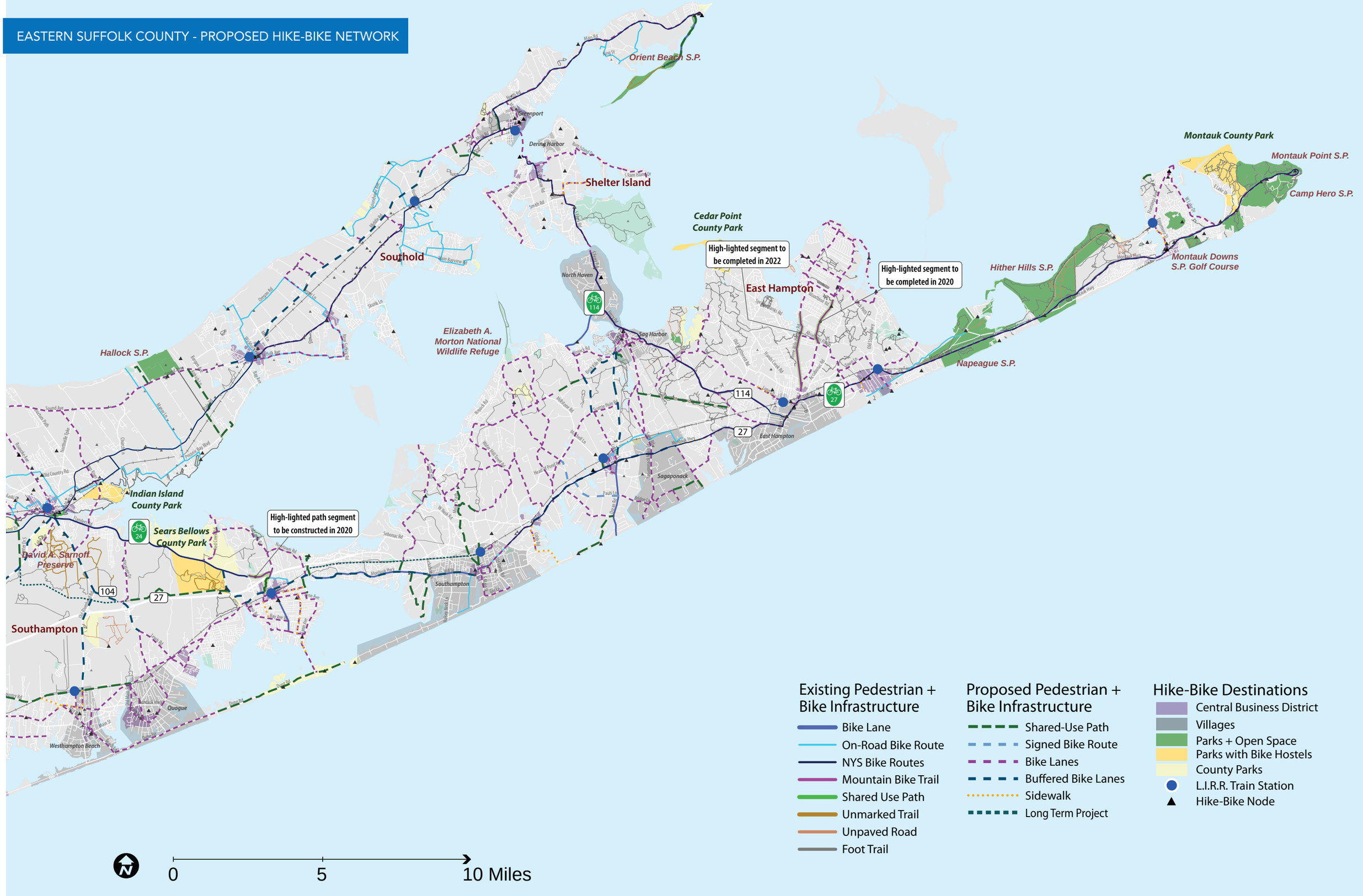
Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes
- Buffered Bike Lanes
- Sidewalk
- Long Term Project

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node

EASTERN SUFFOLK COUNTY - PROPOSED HIKE-BIKE NETWORK



Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
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Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
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- Bike Lanes
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- Long Term Project

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node

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4.2 POINT PROJECT RECOMMENDATIONS

POINT PROJECT RECOMMENDATIONS

In addition to the formally prioritized linear project recommendations discussed above, the Suffolk County Hike and Bike Master Plan includes 483 point project improvements. The table below identifies the 11 point project types (sorted alphabetically) and how many improvements are recommended throughout Suffolk County.

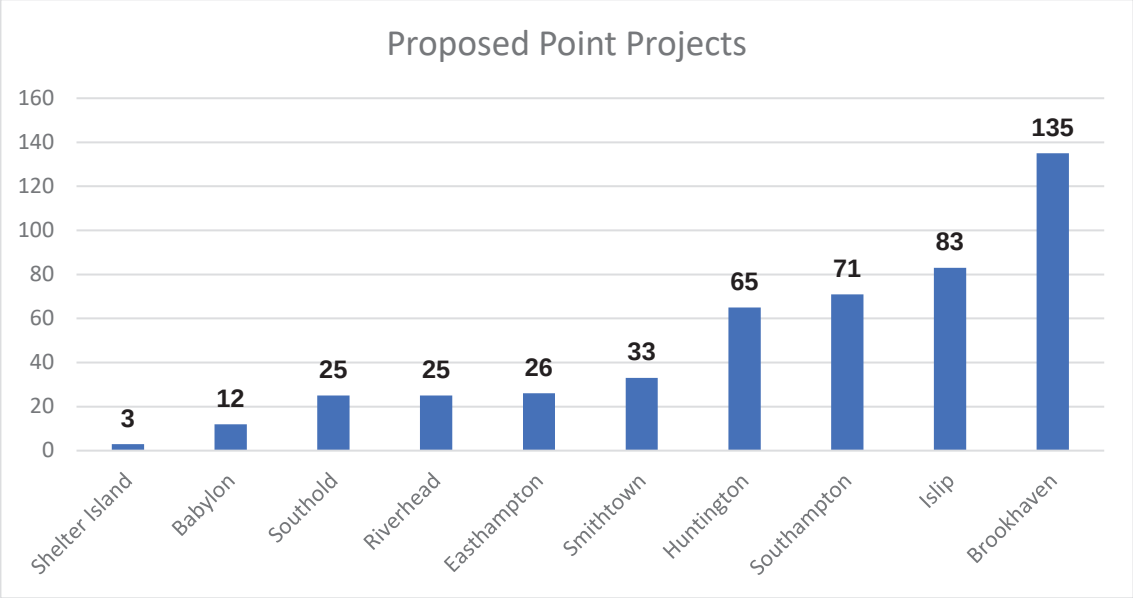
Roughly half of the point projects were submitted by the public through the online public input map in early 2019. The other half were added by the HB-TAC, the consultant team, and SCEDP as a result of additional investigations into specific shared-use path crossing locations, transitions between bicycle and pedestrian facility types, and a general review of linear facilities through windshield tours and online mapping programs.

It is important to note that the point projects are not meant to be substituted for a full engineering review for a given project. Rather, they simply call out the locations where a desire line for a mid-block crossing exists, and/or wayfinding signage may be needed.

In addition to the formally prioritized linear project recommendations discussed above, the Suffolk County Hike and Bike Master Plan includes 483 point project improvements. The table below identifies the 11 point project types (sorted alphabetically) and how many improvements are recommended throughout Suffolk County.

Roughly half of the point projects were submitted by the public through the online public input map in early 2019. The other half were added by the HB-TAC, the consultant team, and SCEDP as a

Figure 48: The locations of the proposed projects broken out by Town



result of additional investigations into specific shared-use path crossing locations, transitions between bicycle and pedestrian facility types, and a general review of linear facilities through windshield tours and online mapping programs.

It is important to note that the point projects are not meant to be substituted for a full engineering review for a given project. Rather, they simply call out the locations where a desire line for a mid-block crossing exists, and/or wayfinding signage may be needed.

Additionally, photograph examples of the areas with needs for point project improvements exist in section 3.1. In addition, the needs related to improved hiking trails and mountain bike trails, which are included below.

HIKING TRAILS AND MOUNTAIN BIKE TRAILS

A number of recommended point projects indicate examples of desirable locations for hiking trail expansions in Southold and Southampton. These locations were submitted by the public and include comments about working with individual Towns and the County to expand trail access and to create some trails that are restricted for hiking only. Recommendations for mountain biking trails were received from the community input process throughout Suffolk County, including a variety of State and County Parks, including:

- West Hills County Park
- Blydenburgh County Park
- Sunken Meadow State Park
- Nissequogue River State Park
- Southaven County Park
- Cathedral Pines County Park
- Manorville Hills County Park
- Peconic Hills County Park
- Hither Woods State Park
- Montauk County Park

Table 23: Point Project Improvements

PROJECT TYPE	QUANTITY
Hiking Trail Opportunity	5
Long term opportunity	4
Missing crosswalk at intersection	62
Mountain bike trail opportunity	45
Need mid-block crossing treatment	80
Pedestrian signal needed	77
Rail Crossing	10
Road/Intersection too wide	44
Trailhead facilities needed	39
Trail improvement needed	48
Wayfinding signage needed	69

Figure 49: NY25 at Wading River Manor Road is a location that would benefit from the addition of crosswalks and pedestrian signal heads (Image: Google street view)

However, prohibition of mountain biking should be considered near areas of environmental sensitivity. It should be noted that many parks are considered environmentally sensitive and may not be suitable for mountain biking trails. All proposed mountain biking trail projects will need to be studied further in coordination with the Department of Parks on a case by case basis.

Because mountain bike trails are gaining in popularity, the Plan encourages individual Towns to work with mountain biking advocate groups, notably Concerned Long Island Mountain Bikers (C.L.I.M.B.), Suffolk County, and State Parks to determine suitable locations for the establishment of new mountain biking trails, and use proper signage and trailhead facilities to legitimize safe mountain bike use on trails. Particular rules and regulations for each location should be agreed upon before determining final suitability of mountain biking trails. Particular rules and regulations for each location should be agreed upon before determining final suitability of mountain biking trails. Examples of existing mountain biking trails include the Rocky Point Trail.

Additionally, recommendations related to mountain biking trails infrastructure were made, including wayfinding and changing facilities.

MID-BLOCK CROSSINGS

There are 80 proposed point projects related to "Need Mid-block Crossing Treatment" referenced on the previous pages. Each of those, and many other, proposed point projects will need to undergo a full engineering review prior to determine if they meet the requirements for a mid-block unsignalized crossing based on guidelines within the ITE Recommended Practice, Designing Walkable Urban thoroughfares: A context Sensitive Approach, Chapter 9, ITE, 2010. National Cooperative Highway Research Program (NCHRP) Report 562, Improving Pedestrian Safety at Unsignalized Crossings, Transportation research Board, 2006.

The following table displays pertinent safety information related to the inclusion of additional features to increase pedestrian comfort and safety at mid-block crossings. See Appendix 7 for additional pedestrian / bicycle facility safety benefits.

Figure 50: Rocky Point Trail (Image: James Murray)

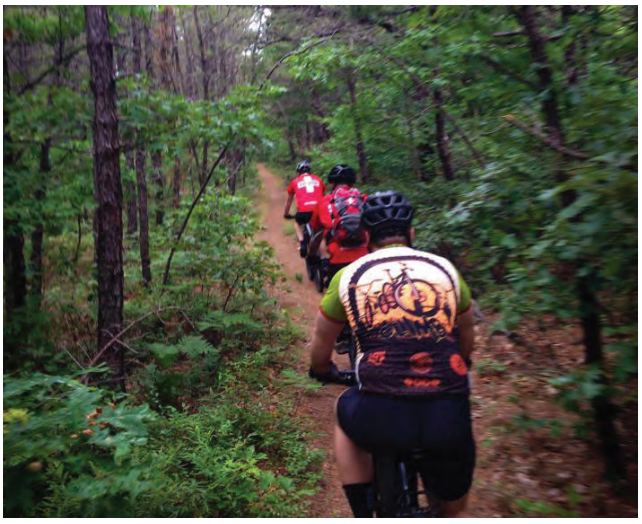


Table 24: Pedestrian crossing facility safety information

FACILITY DESIGN TREATMENT	SAFETY IMPACT	SOURCE
Raised medians	46% reduction in crashes at marked crosswalks and 39% reduction in crashes at unmarked crosswalks	L. Zegeer, C., Lyons, S., Sokolow, G., Ecklund, J., Pedestrian Bicycle Information Center. Federal Highway Administration (Webinar). May 30, 2012.
Pedestrian crossing island	56% reduction in pedestrian crashes. "Transportation agencies should consider medians or pedestrian crossing islands in curbed sections of urban and suburban multi-lane roadways with a significant mix of pedestrians and vehicle traffic and intermediate or high travel speeds. Example locations...include mid-block areas, approaches to multi-lane intersections, and areas near transit stops or other pedestrian focused sites."	https://safety.fhwa.dot.gov/provencountymeasures
Pedestrian hybrid beacon	69% reduction in pedestrian crashes, 29% reduction in total crashes, and 15% reduction in serious injury or fatal crashes	https://safety.fhwa.dot.gov/provencountymeasures

Figure 51: The locations of the proposed projects with more detailed design graphics

(See Appendix 3 for proposed project inset maps with locations for Concept Projects A, B, C, and E)

A

PROPOSED POINT PROJECT A: HIGH VISIBILITY PEDESTRIAN CROSSING

Trolley Line Road, Babylon: The following photo simulation depicts a high visibility crosswalk with RRFBs, wayfinding signage, and a short crosswalk extension through a striped parking lot. While proposed point projects within the report outline important recommended changes, local planners and engineers should discuss context-sensitive solutions to ensure active transportation modes are considered. For instance, the photo simulation below includes a striped crosswalk extension, intended to help trail users find their way beneath the LIRR crossing and connect to Belmont Lake State Park (at left).

Figure 52: This photo simulation shows a proposed pedestrian crossing with RRFB's on Trolley Line Road in Babylon

Figure 53: Existing conditions on Trolley Line Road in Babylon

4.3 LINEAR PROJECT RECOMMENDATIONS

The Suffolk County Hike and Bike Master Plan includes ~880 linear proposed projects to improve the walk, hike, and bike network. In sum, the proposed linear projects add up to ~1,200 miles of proposed walk, hike, and bike projects. Over half of the proposed linear projects were submitted by the public via the online public input map. The remainder were added by the consultant team as a result of additional investigations into specific connections between nodes and extending existing bicycle and walk facilities beyond where they currently end.

Each linear project recommendation, whether a sidewalk, separated / buffered bike lane, or shared-use path, will require an engineering review.

Examples of each of the proposed linear project facility types can be found in the Design guide in the following section of the report.

The full tables of ranked project recommendations are presented in Appendix 4 of this report. Of the hundreds of project recommendations developed during the planning process, five were chosen to be developed in more detail using plan view and perspective view graphics. The location of the projects are displayed in the map graphic below and the supporting graphics are displayed on the following pages. The five projects chosen include high visibility projects that:

- Provide a variety of facility types, ranging from new pedestrian crossings to buffered bike lanes to shared-use paths developed along utility corridor rights-of-way
- Reside in both dense and more suburban/ rural neighborhood settings
- Provide important connections to train stations, parks, residential areas, and employment areas

Each linear project recommendation, whether a sidewalk, buffered bike lane, or shared-use path, will require a full engineering review to determine suitable roadway width, the need for re-locating drainage or underground utilities, the proper location and angle of roadway crossings, and whether or not those crossings warrant a full traffic signal, a rectangular rapid flashing beacon (RRFB), or a pedestrian hybrid beacon (aka, a "HAWK" signal).

B

PROPOSED LINEAR PROJECT B: SHARED-USE PATH CROSSING

Long Island Motor Parkway, Islandia: The following photo simulation depicts a new shared-use path traveling along the utility corridor right-of-way and intersecting Long Island Motor Parkway at the existing crosswalk with South Bedford Ave. The proposed shared-use path crosses Long Island Motor Parkway and continues west along the roadway where it turns north near the intersection with Veterans Memorial Highway. The photo simulation depicts a 5-lane to 3-lane road diet along a short stretch of L.I.M.P. which carries approximately 10,000 vehicles per day.

Figure 55: Existing conditions on Long Island Motor Parkway in Islandia

Figure 54: Photo simulation showing proposed improvements to Long Island Motor Parkway in Islandia

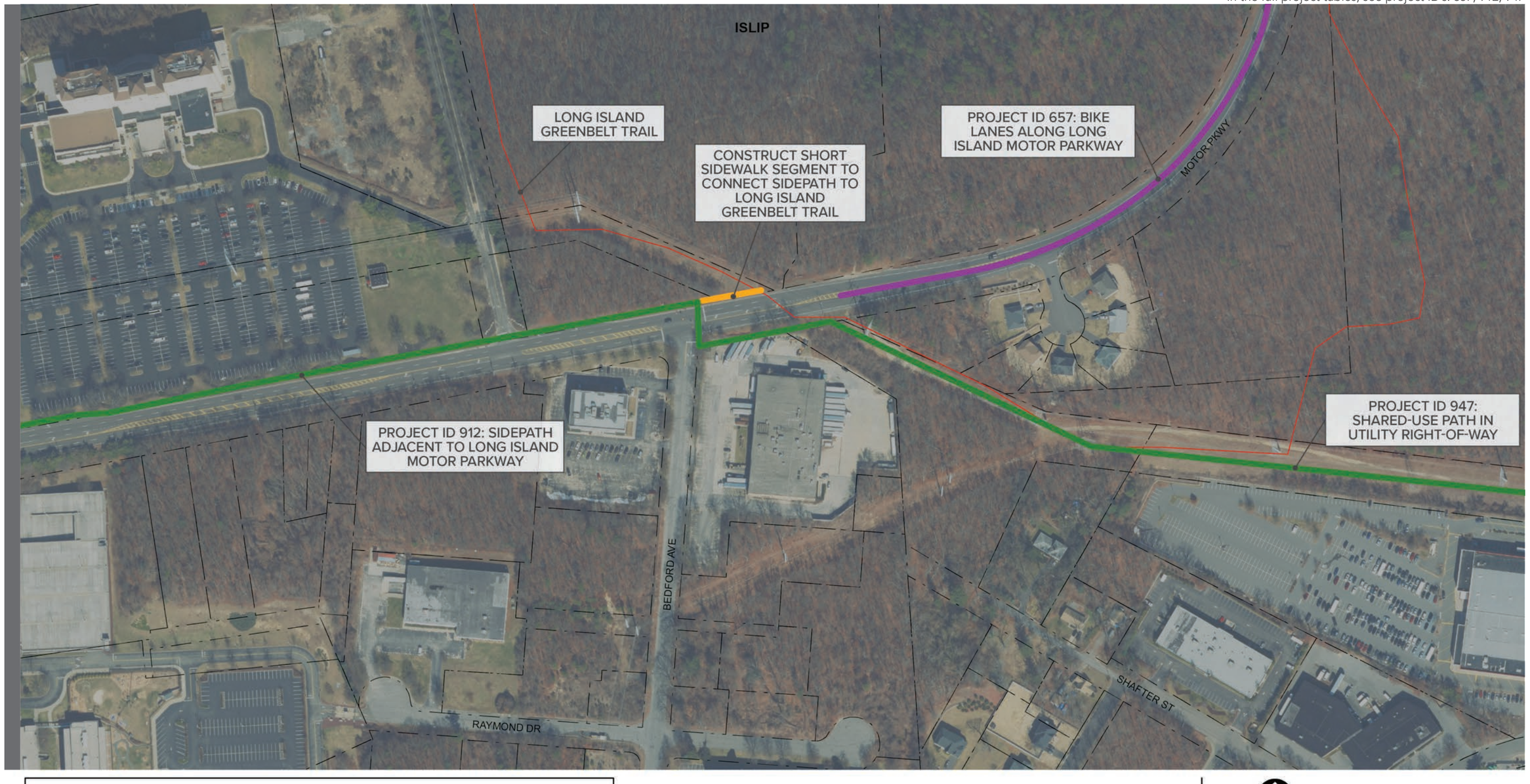
In the full project tables, see project ID's: 657, 912, 947

B

PROPOSED LINEAR PROJECT B: SHARED-USE PATH CROSSING

Long Island Motor Parkway, Islandia: This plan view diagram depicts a new shared-use path traveling along the utility corridor right-of-way and intersecting Long Island Motor Parkway at the existing crosswalk with South Bedford Ave. The proposed shared-use path crosses Long Island Motor Parkway and continues west along the roadway where it turns north near the intersection with Veterans Memorial Highway. The project utilizes a 5-lane to 3-lane road diet along a short stretch of L.I.M.P. that has excess roadway space and currently carries roughly 10,000 vehicles per day.

In the full project tables, see project ID's: 657, 912, 947



C

PROPOSED LINEAR PROJECT C: SEPARATED CYCLE TRACK

Hallock Ave, Port Jefferson Station: The sections at right depict existing conditions and the proposed reallocation of roadway space to accommodate a two-way separated cycle track along Hallock Avenue. There are three plan view diagrams on subsequent pages. Each shows how the proposed two-way separated cycle track would tie-in to the existing paths.

Figure 56: Existing conditions on Hallock Ave at Admiral St. Looking East.

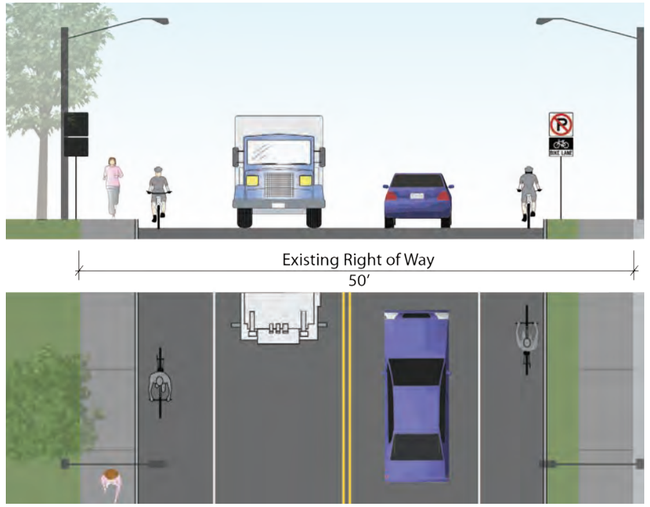
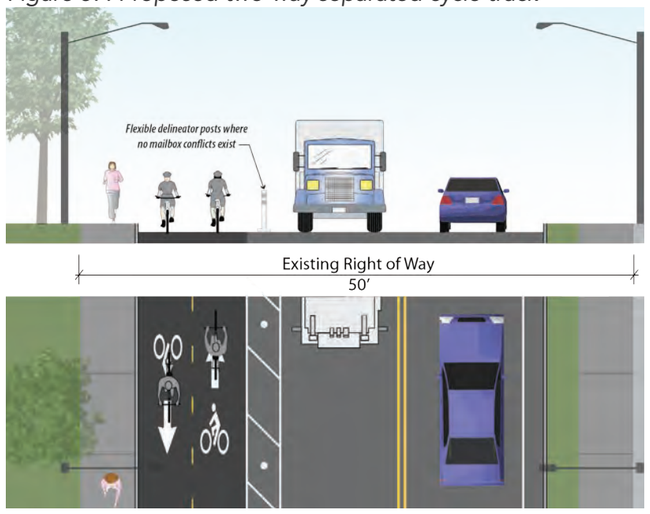


Figure 57: Proposed two-way separated cycle track



C

PROPOSED LINEAR PROJECT C: SEPARATED CYCLE TRACK

Hallock Ave, Port Jefferson Station: This plan view diagram depicts a new two-way separated cycle track connecting two existing paths. The proposed project includes re-allocating existing roadway space using striping to shift the travel lanes towards the south side of Hallock Avenue.

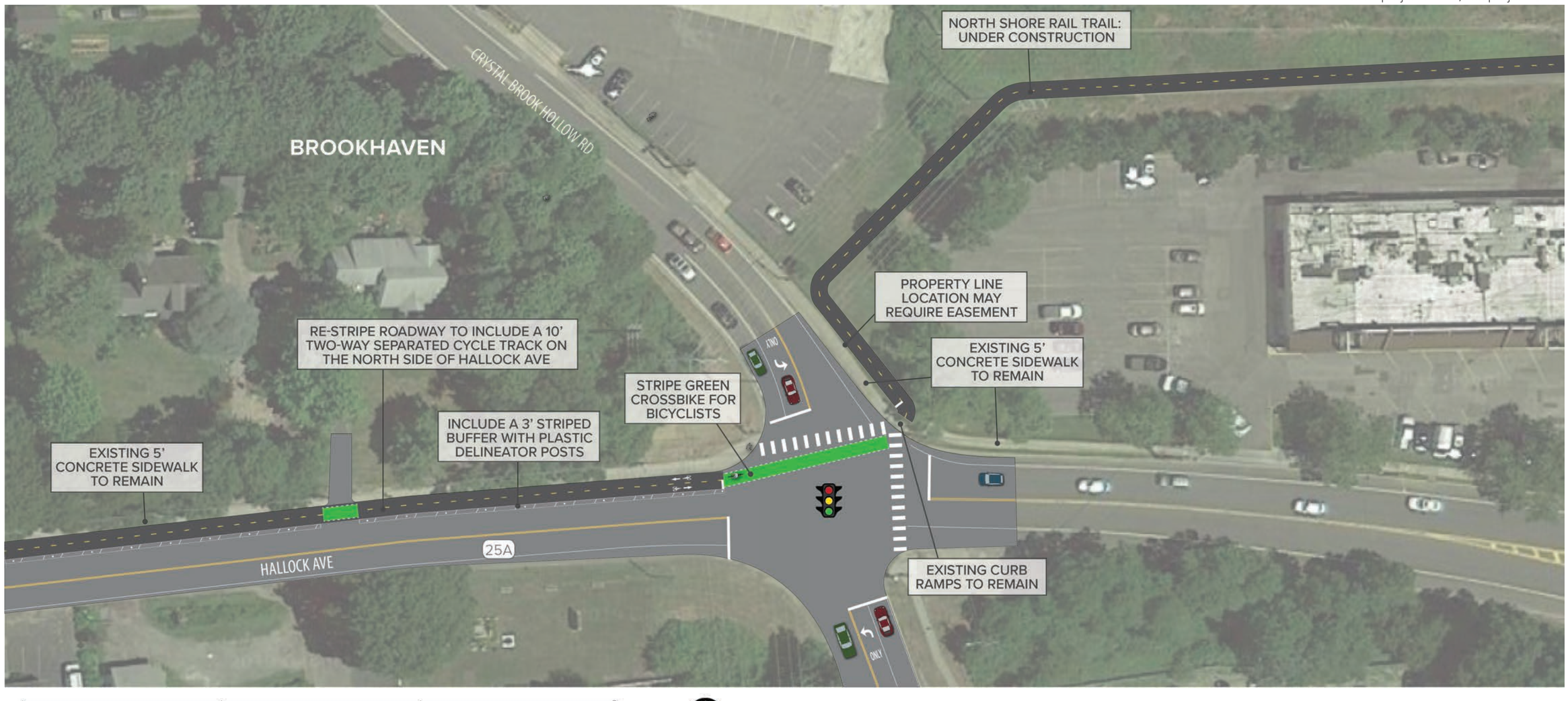
In the full project tables, see project ID: 23

C

PROPOSED LINEAR PROJECT C: SEPARATED CYCLE TRACK

Hallock Ave, Port Jefferson station: This plan view diagram includes details regarding how the proposed two-way separated cycle track connects to the North Shore Rail Trail currently under construction.

In the full project tables, see project ID: 23

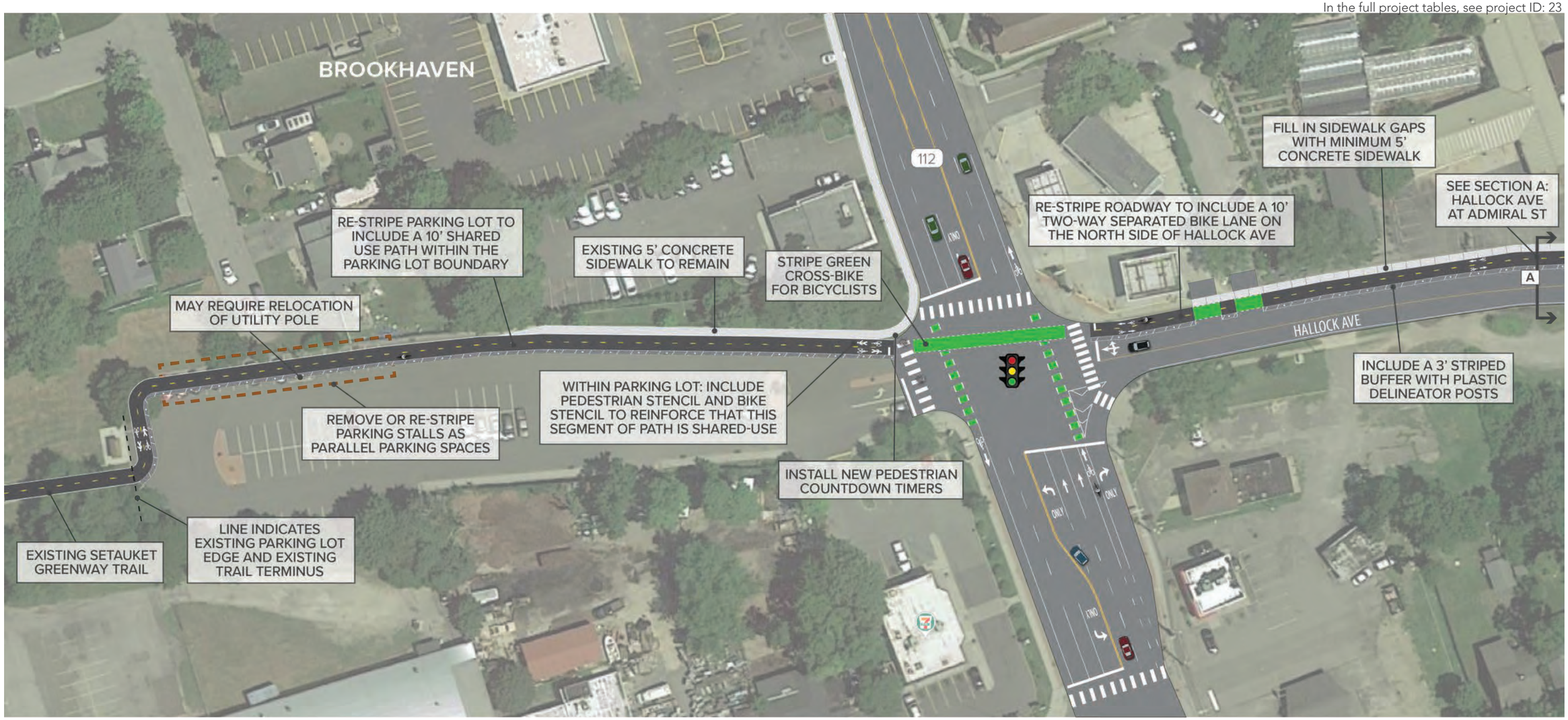


C

PROPOSED LINEAR PROJECT C: SEPARATED CYCLE TRACK

Hallock Ave, Port Jefferson Station: This plan view diagram includes best practices regarding how to comfortable transition from the two-way separated cycle track along Hallock to a path through the existing trailhead parking lot to connect to the existing Setauket Greenway Trail.

In the full project tables, see project ID: 23

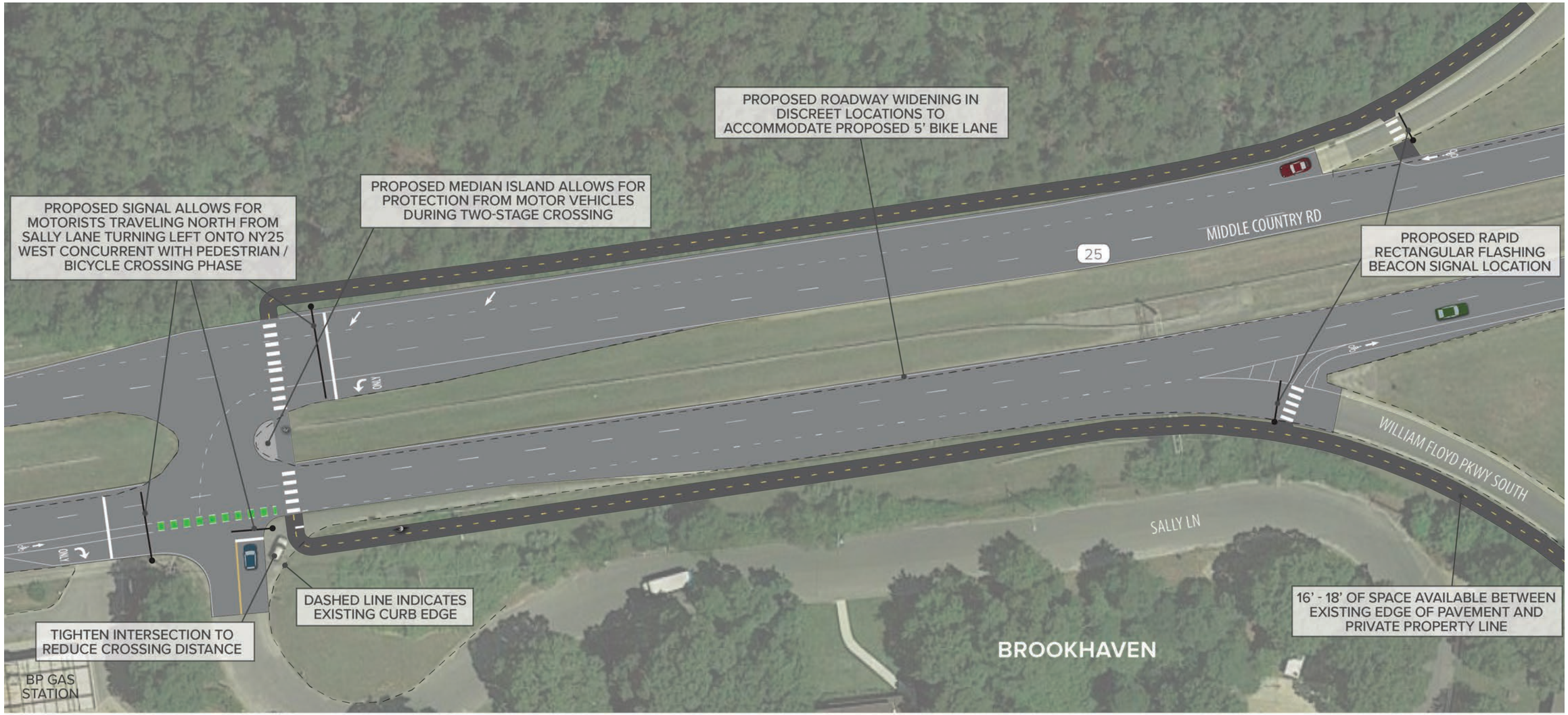


D

PROPOSED LINEAR PROJECT D: SHARED-USE PATH CROSSING

Sally Lane, Ridge: This plan view diagram depicts a proposed shared-use path crossing of NY-25 / Middle Country Rd. The shared-use path travels along the western edge of the right-of-way along William Floyd Parkway. Because William Floyd Parkway at NY-25 is grade-separated, the shared-use path crossing of NY-25 is pulled to the nearest road, where it makes sense to include a full traffic signal recommendation.

In the full project tables, see project ID's: 219, 968



E

PROPOSED LINEAR PROJECT E:

SHARED-USE PATH TRANSITION TO SEPARATED BIKE LANES

Kroemer Avenue, Riverhead: The following photo simulation depicts a new shared-use path traveling along the utility corridor right-of-way parallel to Kroemer Ave in Riverhead. The proposed shared-use path transitions to a sidepath in the Kroemer Ave right-of-way due to the active train track crossing along the utility corridor as near NY-25 / West Main St.

Figure 59: Existing conditions on Kroemer Ave in Riverhead

Figure 58: This photo simulation shows proposed improvements to Kroemer Ave in Riverhead

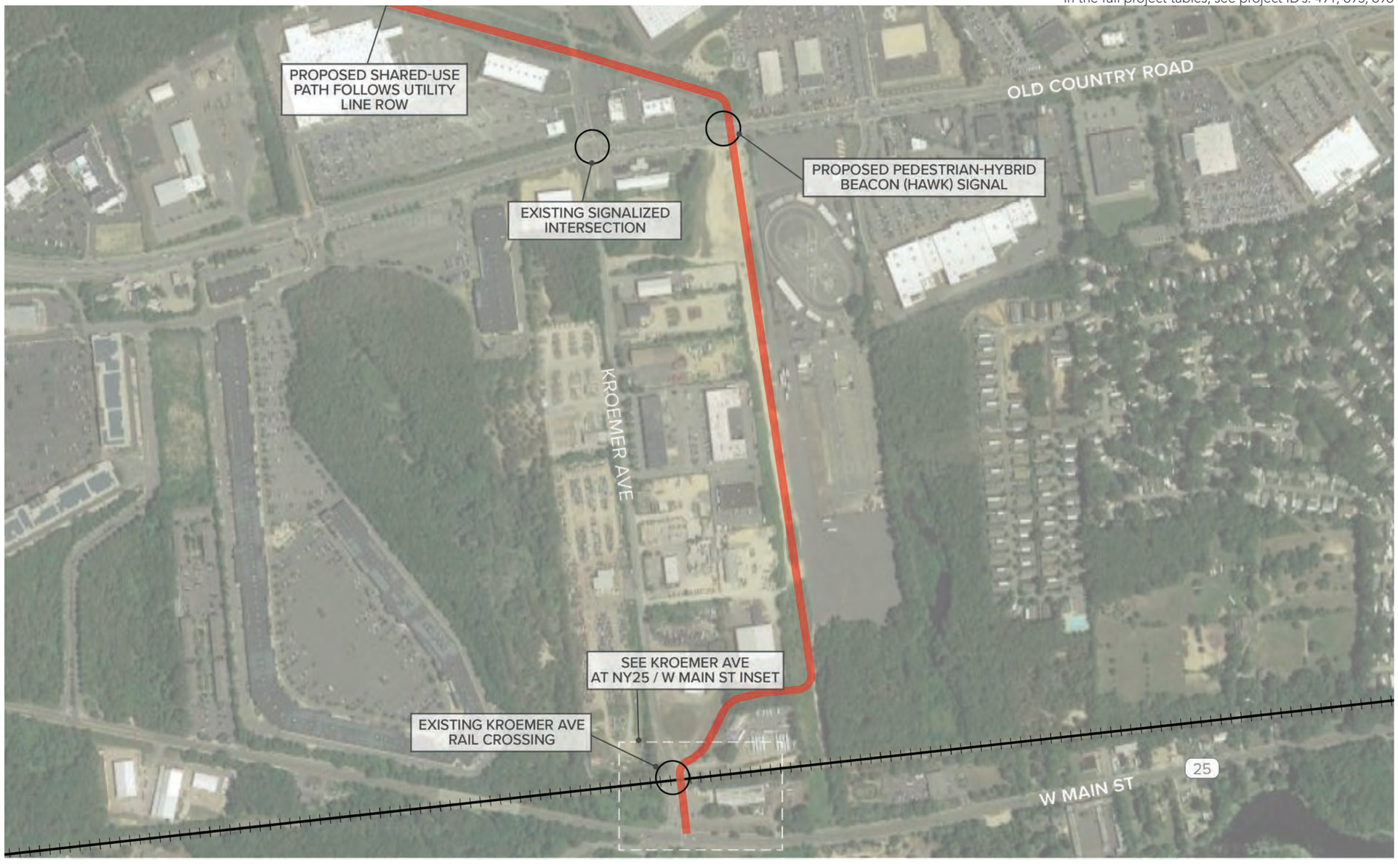
In the full project tables, see project ID's: 491, 695, 696

E

PROPOSED LINEAR PROJECT E: SHARED-USE PATH TRANSITION TO SEPARATED BIKE LANES

Kroemer Ave, Riverhead: This plan view diagram depicts a proposed shared-use path crossing Old County Road and continuing along a utility corridor right-of-way south towards NY-25 / West Main St. Before reaching NY25, the proposed shared-use path departs the utility right-of-way corridor and travels along Kroemer Ave right-of-way as a shared sidepath.

In the full project tables, see project ID's: 491, 695, 696

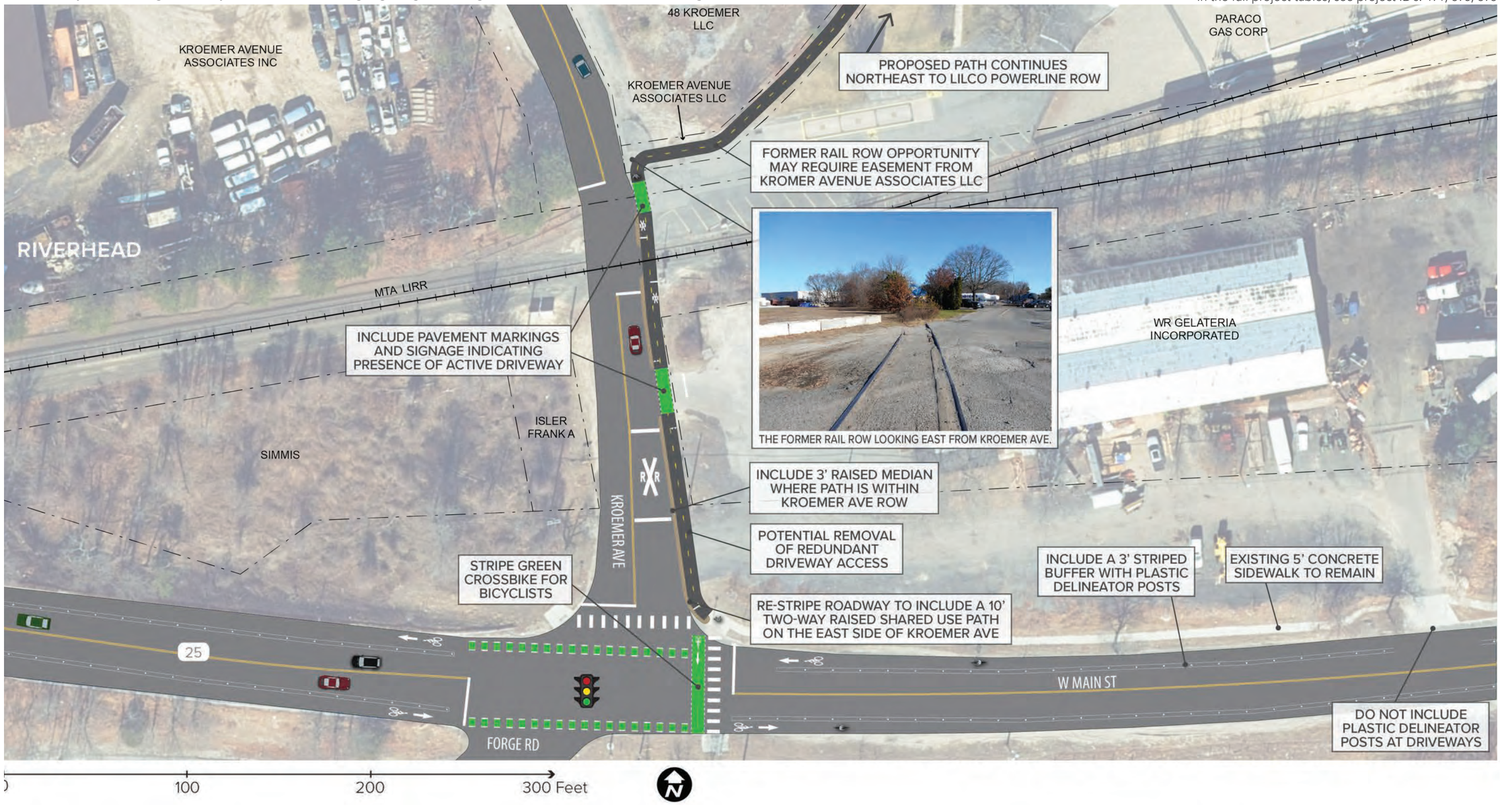


E

PROPOSED LINEAR PROJECT E: SHARED-USE PATH TRANSITION TO SEPARATED BIKE LANES

Kroemer Ave, Riverhead: This plan view diagram includes best practices regarding green striping at driveway conflicts, buffered bike lane striping and delineator post placement, and highlights a former rail right-of-way (unused) opportunity to connect the Kroemer Ave right-of-way to the utility corridor right-of-way. There is an existing signal gate along Kroemer Ave at the rail crossing.

In the full project tables, see project ID's: 491, 695, 696



4.4 PEDESTRIAN AND BICYCLE FACILITY DESIGN GUIDE

INTRODUCTION

This Design Guide is intended to be used as a toolkit for Suffolk County planning and engineering staff, along with municipal officials throughout the County. The goal of the Guide is to provide a quick reference toolkit to

1. Help local/county planners, engineers, and active transportation advocates improve the walkability and bikeability of roadways,
2. Create safer streets for users of all ages and abilities, and
3. To provide appropriate trail facilities for hikers, walkers, and mountain bikers.

Another goal is to help bring County wide consistency to the design of bicycle and pedestrian facilities that are likely to be incorporated into streets within urban, suburban, and rural areas. The Guide includes recommendations for a variety of linear corridors and point pedestrian and bicycle improvements.

The Guide is not intended to impose inflexible standards, but instead, to offer consistent guidance for roadways throughout suffolk County, on what can sometimes be challenging design and engineering options.

The following are **guiding principles** for the pedestrian and bicycle facility typologies -- both linear and point -- found in this toolkit:

- Whether in an urban, suburban, or rural context, the walking and bicycling environment should be safe, with minimal conflicts between users
- The pedestrian and bicycle network will be made accessible using sidewalks, shared-use paths, bike facilities and crosswalks enhancing the mobility of residents of all ages and abilities
- In aggregate, the facility typologies in this guide will help to calm traffic and promote safety for all users due to lower traffic speeds.

The typologies within the Guide are important because they represent the tools for creating walk/hike/bike-friendly, safe, accessible communities. The guidelines are not a substitute for a more thorough evaluation by landscape architects or engineers, however. They are general in nature and further analysis and professional engineering judgment will be required per local conditions (topography, cost, right of way constraints) and community concerns. Most importantly, the Guide is intended to complement other state and national design manuals that provide a higher-level of detail for the pedestrian and bicycle improvements developed for Suffolk County. Other manuals that County and local officials should reference include:

- Empire State Trail Design Manual (2017)
- FHWA Small Town and Rural Multimodal Network Guide (2016)
- The Federal Highway Administration (FHWA) Separated Bike Lane Planning and Design Guide (2015)
- NACTO Urban Streets Design Guide (2013)
- American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities (2012)
- The National Association of City Transportation Officials' (NACTO) Urban Bikeway Design Guide (2012)
- AASHTO Guide for the Planning, Design, and operations of Pedestrian Facilities (2004)
- Manual of Uniform Traffic Control Devices MUTCD (2009)

PEDESTRIAN FACILITIES - LINEAR

Sidewalk - Urban

Urban sidewalks should be minimum 5 feet wide, and preferably 8 feet wide in high volume zones. Urban sidewalks should be made of poured, brushed concrete with minimal spacing (joints) between slabs. A pedestrian-through zone (aka clear zone) of five feet must be maintained. A unit-paver or brick furniture zone should be minimum 3 feet wide, and can include mailboxes, benches, street lights, traffic signal masts, fire hydrants, and other urban street furniture.

Sidewalk - Suburban / Rural

Sidewalks in rural or suburban areas can be built using poured concrete or asphalt and should be minimum 5 feet wide, with up to 4 feet width in constrained locations. Rural or suburban sidewalks should include a landscaped buffer between the sidewalk and the street where space allows. The landscaped buffer acts as both a furniture zone -- similar to urban sidewalks -- as well as a buffer between pedestrians and motor vehicle traffic.

Paved Shoulders

Paved shoulders occur on the edge of roadways and, while not inherently considered a bicycle or pedestrian facility, they can be enhanced to serve as a functional space for bicyclists and pedestrians in the absence of other facilities. Paved shoulders utilize pavement striping to delineate the shoulder from motor vehicle travel lanes. Rumble strips can also be used to provide auditory separation (rumble strips should be designed to minimize impacts to bicyclists). These facilities often include signage and/or pavement markings that alert motorists to expect bicycle and pedestrian travel along the roadway.

Crossing Treatments

Crosswalks accommodate pedestrian access and mobility, and if well-designed and appropriately placed, they can increase pedestrian safety and comfort. Crosswalks should be installed at grade and across all legs of a signalized intersection, unless pedestrians are prohibited or where there are other extenuating circumstances. To increase accessibility, crosswalks should be paired with curb ramps, detectable warnings, and pedestrian countdown signals. Where crosswalks traverse multi-lane roads should be paired with a median refuge island that separates motor vehicle travel directions and shortens the crossing distance for pedestrians.

Raised Crosswalk

Raised crosswalks create a visual cue that forces drivers to slow down as they approach an intersection.

Pedestrian Countdown Signals

Pedestrian Countdown Signals, usually located at signalized intersections, indicate to pedestrians how much time remains for them to cross an intersection.

Lead Pedestrian Interval

A Lead Pedestrian Interval (LPI) is a 3-5 second interval prior to a green light so that pedestrians can begin their crossing movement before turning motor vehicles.

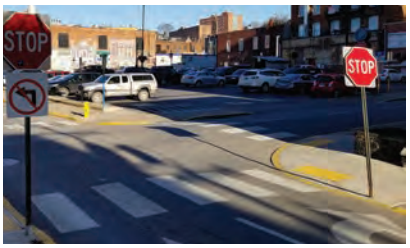
Curb Extensions

Curb extensions improve visibility and reduce pedestrian crossing distances. By reducing turning radius, bulb outs reduce vehicle speeds which increase the chance of survival for a pedestrian in the event of a collision.

Median Refuge Island

Median refuge islands are protected spaces placed in the center of the street to facilitate bicycle and pedestrian crossings. They are especially helpful when placed on wide roadways which may have long crossing times.

Curb Ramps



Curb ramps are needed to improve travel for all residents regardless of ability or age. Smooth transitions to the street with textured warning strips coupled with wide sidewalks provide direct, predictable, and accessible streetscapes.

Pedestrian Hybrid Beacon

Photo: www.news-leader.com

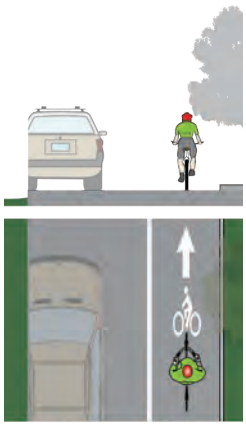
Pedestrian Hybrid Beacons are sometimes called HAWK signals, and are designed to accommodate pedestrian and bicycle crossing of busy or high-speed roadways at midblock crossing points or at uncontrolled intersections.

RRFB

Rectangular Rapid Flashing Beacons (RRFBs) are user-actuated warning beacons located at unsignalized intersections or mid-block crossings.

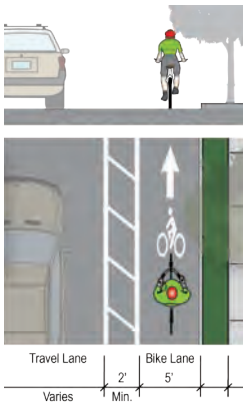
Standard Bicycle Lane

Bicycle lanes designate an exclusive space for bicycles through the use of roadway striping and signage. Occasionally, reducing travel lane width to 10' provides space for standard 5'-wide bicycle lanes. They may be added to roads with extra wide travel lanes or in replacement of a parking or a travel lane. The latter is typically part of a "road diet" project that is a viable option on four-lane roads with <20,000 daily vehicle trips. Where space is not available for bike lanes in both directions, a single "climbing lane" for bikes heading uphill with a downhill shared lane can be employed.



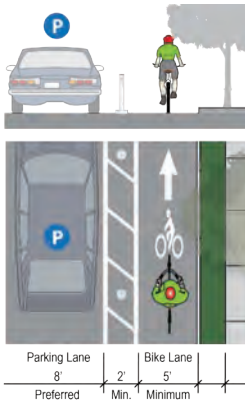
Buffered Bicycle Lane

Buffered bicycle lanes are conventional bicycle lanes paired with a striped buffer space separating the bicycle lane from adjacent travel or parking lane. The buffers provide an enhanced visual separation from passing traffic (see graphic at right) and/or protection from the opening of car doors (see photo at far right) in the adjacent motor vehicle parking aisle. Buffers are especially critical on roadways with a high volume of truck traffic or in business districts with high parking turnover.



Street-Level Separated Bicycle Lane

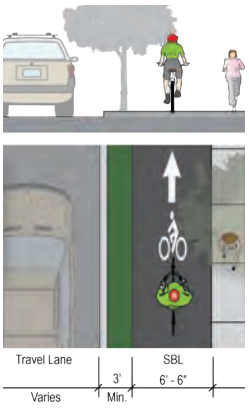
These bikeways are at street-level and use a variety of methods for physical separation from passing traffic. A striped buffer plus a motor vehicle parking aisle, flexible delineator posts, or other vertical elements provide the visual and/or physical separation from motor vehicle traffic. A separated bicycle lane treatment is one of the best ways to create an "all ages and abilities" bicycling environment on busy streets.



See the following pages for additional tools for implementing bicycle boulevards

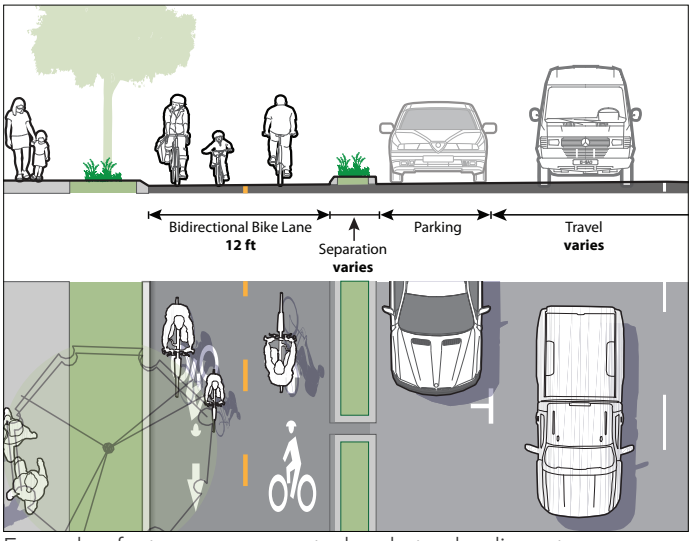
Sidewalk-Level Separated Bike Lane

These bikeways are vertically separated from motor vehicle traffic. Many are paired with a furnishing zone between the SBL and adjacent parking or travel lane. At intersections, the raised SBL can be dropped and merged onto the street or maintained at sidewalk level. Raised SBLs may be most beneficial along higher speed streets with few driveways and cross streets, along streets with multiple lanes, high speeds or volumes, or high parking turnover.



Two-Way Street Level Separated Cycle Track

Bidirectional separated cycle tracks are bicycle facilities that allow bicycle movement in both directions on one side of the road. These facilities are at-grade and within the roadway right of way, and physically separated by a vertical element. Two-way separated cycle tracks share some of the same design characteristics as one-way separated bicycle lanes, but may require additional considerations at driveway and side-street crossings. To simplify operational concerns, two-way separated cycle tracks function best on the left side of the street.



Example of a two-way separated cycle track adjacent to a sidewalk (Image: EST Design Guide)

Additional considerations include:

- Functions well to fill gaps in shared use path corridors.
- Functions well on streets with few conflicts such as driveways or cross-streets on one side of the street.
- Standard bidirectional separated bike lane width is 12 ft (FHWA Separated Bike Lane Guide 2015). Reduced width is 10 ft (NACTO Bike Guide 2012).
- Minimum separation width next to parking is 3 ft to accommodate opening doors (NACTO Bike Guide 2012).
- In constrained conditions for short segments, minimum width is 8 ft (AASHTO Bike Guide 2012).

A two-way, separated bicycle facility in Arkansas (Image: EST Design Guide)

BICYCLE FACILITIES - BIKE BOULEVARD

Towns throughout Suffolk County could designate a group of neighborhood streets as a Bicycle Boulevard. The goal is to create a low-stress bicycle route by reducing traffic volume and/or speed. Traffic calming elements that slow and divert through-traffic provide a more comfortable environment for a wider variety of bicyclists. A Bicycle Boulevard utilizes a range of context-sensitive bicycle improvements for streets that are typically residential with low traffic volumes/speeds and run parallel to a busier roadway, e.g. Bailey St / Barnum St / Seward St versus Little E Neck Rd / Belmont ave in Babylon.

MUTCD R4-11: These signs encourage motorists to defer to bicyclists on low volume streets

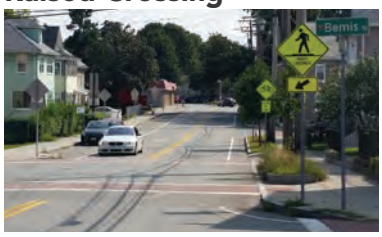
Horizontal + Vertical Deflection

Horizontal traffic calming devices cause drivers to slow down by constricting the roadway space or by requiring careful maneuvering. Speed humps can also be used to slow traffic, especially when paired with a crosswalk.

Branding

Roadway stencils and street sign toppers help to distinguish a Bike Boulevard and give it a strong brand.

Raised Crossing

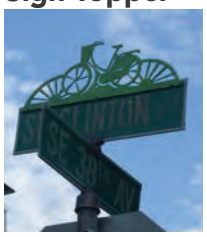


Raised crosswalks improve safety for all road users.

Chokers

Chokers create pinch-points that reduce speeds mid-block.

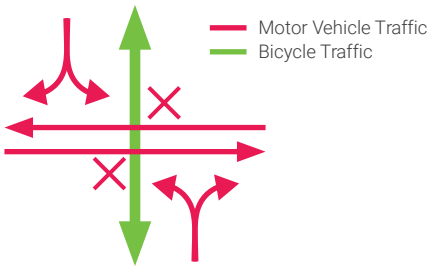
Sign Topper



Stencil

Volume Reduction Strategies

Maintaining motor vehicle volumes below 3,000 per day (1,000-1,500 is ideal) greatly improves bicyclists' comfort. To manage volume, physical or operational measures can be implemented on routes that have been identified as a bicycle boulevard.



Volume management tactics help to divert traffic away from neighborhood residential streets, improving bicyclists' comfort.

Traffic Restriction Signage

The most straight forward traffic volume reduction strategy are signs restricting motor vehicle through movement, including stop signs on side street approaches to favor bike boulevard traffic.

Median Traffic Diverters

Median traffic diverters restrict through motor vehicle movement while providing a refuge for bicyclists to cross the busier roadway in two stages.

Intersection Improvements*: Striping bicycle facilities at or through intersections can provide a more comfortable bicycling environment by providing bicyclists with guidance on where to wait for a signal to change or a well-marked route through the intersection to a continuation of the bikeway. By establishing a clear boundary, intersection lane markings effectively mark the paths of travel for through bicyclists and turning bicyclists, as well as through and turning motor vehicles. The use of green colored pavement raises awareness for all road users to potential conflict areas.

Bike Box

A bike box places riders in a designated area ahead of queuing traffic during the red signal phase, also helping to reduce right-hook conflicts. Ideal for two-lane roadways.

Two-Stage Turn Box

For bicyclists uncomfortable sharing lanes with turning traffic, a two-stage turn boxes offers a more comfortable left-turn option. Ideal for roadways with three or more lanes.

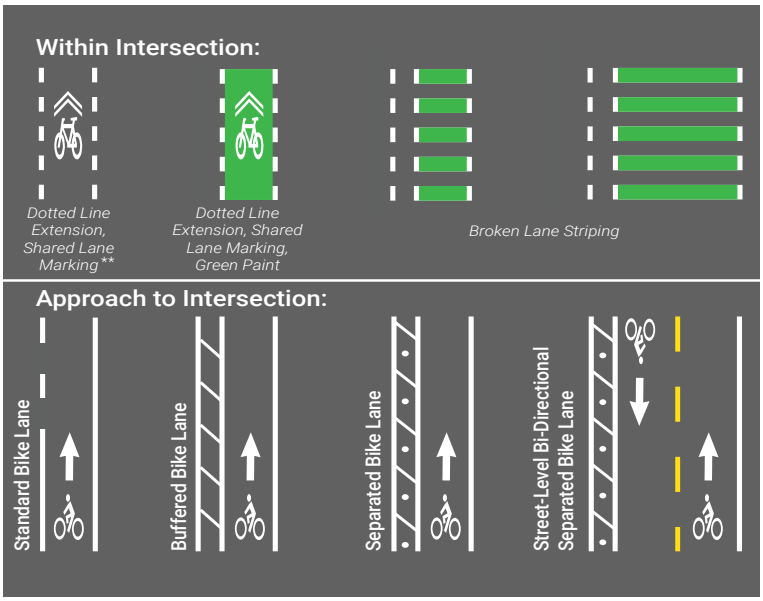
Bicycle Signal

Bicycle signals facilitate bicyclist crossings of roadways by clarifying when to enter and by restricting other movements during the bicycle phase.

*Potential treatments shown here have received Interim Approval from FHWA but are not yet formally incorporated into the Manual of Uniform Traffic Control Devices (MUTCD)

Intersection Crossing Markings

Intersection crossing markings are extended striped bicycle facilities through intersections, clarifying to motorists where to expect bicyclists. This can be especially important at wide and complex intersections.



**Use of SLM is considered an option in the NACTO Urban Bikeway Design Guide

Design Features

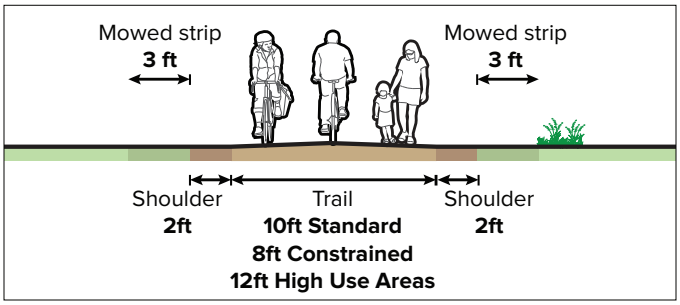
- Striping adjacent to motor vehicle travel lanes shall be 6" wide
- Broken lane lines should be 2 foot-long lines with 2' to 6' spacing
- Shared lane markings, chevrons, and helmeted rider stencils may be used to increase visibility and awareness of an approaching conflict area, and can be used across the entire intersection
- Crossing lane width should match

Shared-Use Path - Utility Corridor

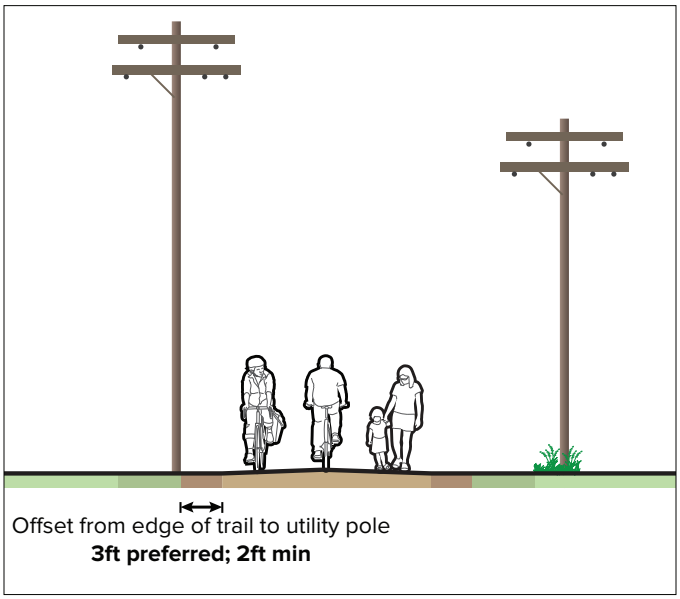
Typical shared-use path width along utility corridors is 10 feet, with an acceptable width of 8 feet allowed in constrained areas. In high-volume locations near densely populated areas, a width of 12 feet is more comfortable for the larger volume and cross section of trail users. Shoulders 2 feet in width should be provided on both sides of the trail. Shoulders should be graded as an extension of the trail surface, to allow trail users to recover if they depart from the trail. The shoulder treatment should be grass or stonedust, depending on local conditions. A mowed area three feet wide should be maintained on either side of the trail, extending out from the shoulders. The minimum preferred offset from the trail surface to utility poles and other equipment is 4 feet. When the trail crosses beneath overhead wires, a minimum clearance of 18 feet should be maintained. The trail should meet minimum requirements of the latest version of the AASHTO Guide for the Development of Bicycle Facilities.

Additional considerations include:

- Trail design should accommodate H-20 loads for emergency and maintenance vehicles. Bridges constructed for the trail will be designed to H-5 loading criteria and signed appropriately.
- Trail entrances will be designed to discourage vehicular access while allowing free entry to emergency and maintenance vehicles. Bollards or gates should be avoided.
- Signage and other amenities will be located outside the shoulders and in areas which minimize conflicts with utility maintenance access.
- While asphalt is the preferred design standard, stone dust can be utilized in



Example of 10 foot standard shred-use path cross section. (Image: EST Design Guide)



Example of 3 foot offset from edge of trail to utility pole. (Image: EST Design Guide)

Precedent Image: The Washington and Old Dominion Trail in Arlington, Fairfax, and Loudoun Counties, Virginia runs adjacent to a utility line corridor.

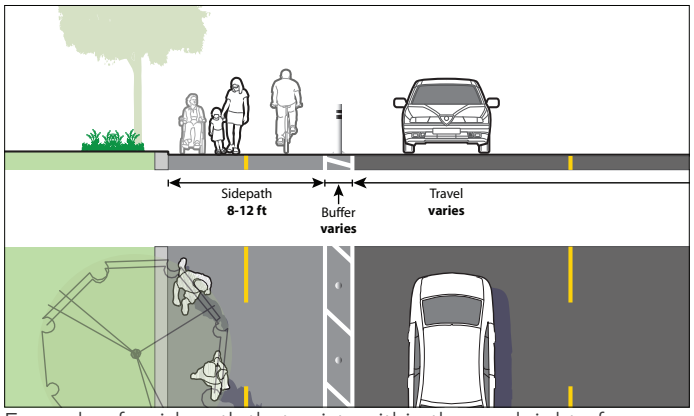
*Information adapted from the Empire State Trail Design Guide published July 2017

Paved Sidepath

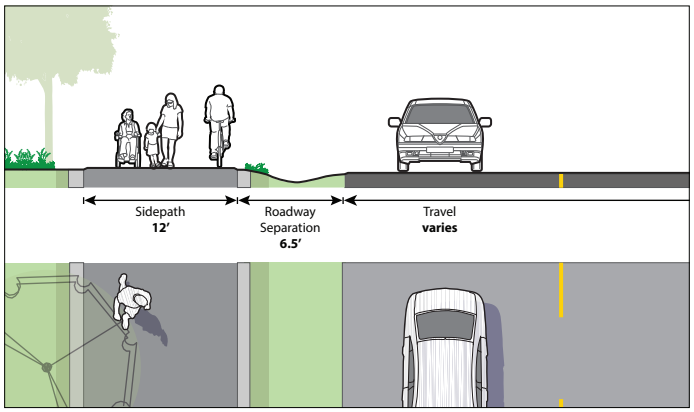
A sidepath is a bidirectional shared-use path located immediately adjacent and parallel to a roadway, typically within the roadway right of way. Sidepaths can offer a high-quality experience for users of all ages and abilities as compared to bicycle or pedestrian facilities within the roadway area. Sidepaths allow for reduced roadway crossing distances and provide comfortable walk connections for shorter distance pedestrian trips.

Additional considerations include:

- Standard sidepath width at locations with mixed pedestrian and bicycle traffic is 12 feet.
- In constrained areas, the sidepath width can be reduced to 10 feet.
- The preferred minimum roadway separation with is 6.5 feet, with a minimum recommended separation width of 5 feet. (There are rare exceptions where roadway separation of 3 feet is acceptable.)
- Where private property abuts the road right of way or other issues stand in the way of sidepath development outside the road right of way; a sidepath open to both bicyclists and pedestrians may be developed in the roadway right of way. Flexible delineator posts or other vertical separation should be used in these



Example of a sidepath that exists within the road right of way (Image: EST Design Guide)



Example of a sidepath that is separated from the road right of way by a landscaped median (Image: EST Design Guide)


Rue Drumond in Granby, Quebec features a typical sidepath, separated by a landscaped area. The sidepath has priority over driveways and minor intersections. Motorists must yield to pedestrians and bicyclists on the facility.

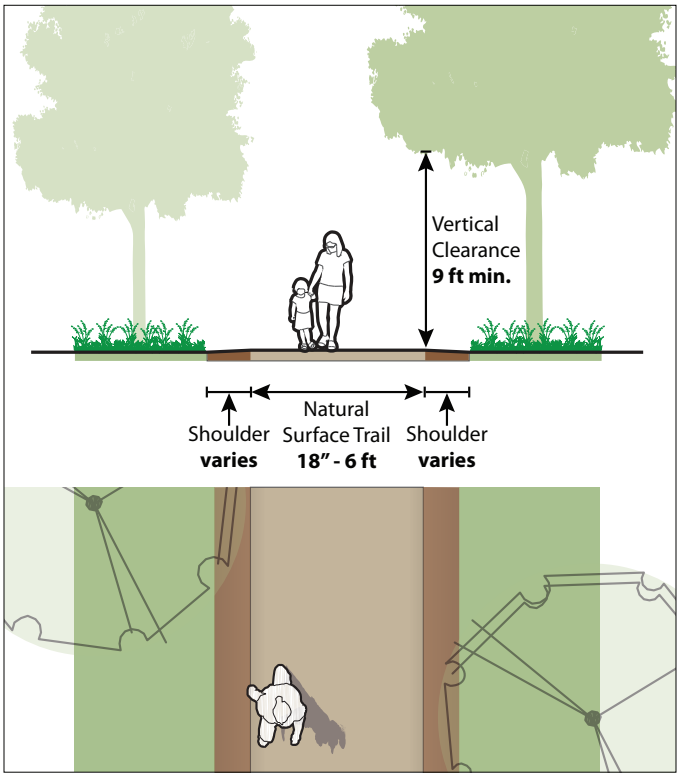
*Information adapted from the Empire State Trail Design Guide published July 2017

Hiking and Walking Trails

Sometimes referred to as footpaths or hiking trails, a natural surface trail is an important design consideration along corridors that are environmentally-sensitive but can support bare earth, wood chip, or boardwalk trails. Soft surface trails may be used as spur trails to connect cul-de-sacs, schools, or other destinations to a paved asphalt shared-use path. In some locations, a narrower natural surface trails may be a desirable amenity parallel to the primary, wider shared-use path. Natural surface trails are a low-impact solution and found in areas with limited development or where a more primitive experience is desired. These are not intended to be ADA compliant or accommodate all non-motorized users.

Additional considerations include:

- Trails can vary in width from 18 inches to 6 feet or greater.
- Vertical clearance should be maintained at 9 feet above grade.
- Base preparation varies from machine-worked surfaces to those worn only by usage.
- Trail surface can be made of dirt, rock, soil, forest litter, or other native materials. Some trails use crushed stone (aka crusher run) that contains about 4% fines by weight, and compacts with use.
- Provide positive drainage for trail head without extensive removal of existing vegetation; maximum slope is five percent (typical).



Example of typical natural surface trail cross section (Image: EST Design Guide

A natural surface trail in Cold Spring Harbor State Park

*Information adapted from the Empire State Trail Design Guide published July 2017

Mountain Bike Trails

Mountain bike trails offer challenge, fitness, fun, and risk to both novice and more advanced riders. Trail planning can incorporate a variety of features and grades tailored to different users. It's important to sign a particular trail in advance to alert users of whether it's single-use or shared-use some critical characteristics:

- Is the trail open to hikers? Or mountain bikers only?
- Is the trail open to two-way traffic? Or downhill riders only?

A variety of features can be included in mountain bike trails, including:

Natural Obstacles: Such as roots and rock, whose presence make the trail more technically challenging than the surrounding tread.

Berms: Prevailing slope to backslope ratio, for slopes >20%. Varies based on soil and vegetation, should approximate a natural angle of repose.

Corral/Anchor: Objects used to define the sides of the trail to reduce trail widening, control speed, prevent shortcutting, and/or emphasize upcoming trail features.

Filter: A high skill, low-consequence obstacle that demonstrates the difficulty of the upcoming trail or feature (aka qualifier obstacle.)

Fall Zone: Area below and/or adjacent to the trail cleared of obstacles to reduce consequences of falling in highly technical, often elevates features.

A critical aspect to trail planning and design is using proper signage and trail difficulty rating information. It's important that users find the experience they seek, including avoiding a trial that may be too difficult. Difficulty ratings should focus on four characteristics: trail width, tread surface, grade, and technical features.

Graphic depicts some of the features than can be included in mountain bike trail planning and design.

Berms provide fun and exhilaration for mountain bike trail users, and can include a flat area at the bottom of the slope on shared-use trails.

	Easiest White Circle	Easy Green Circle	More Difficult Blue Circle	Very Difficult Black Diamond	Extremely Difficult Dbl Black Diamond
Trail Width	72" or more	36" or more	24" or more	12" or more	6" or more
Trail Surface	Hardened or surfaced	Firm and stable	Mostly stable with some variability	Widely variable	Widely variable and unpredictable
Average Trail Grade	Less than 5%	5% or less	10% or less	15% or less	20% or more
Maximum Trail Grade	Max 10%	Max 15%	Max 15% or greater	Max 15% or greater	Max 15% or greater
Natural Obstacles and Technical Trail Features (TTF)	None	Unavoidable obstacles 2" tall or less Avoidable obstacles may be present Unavoidable bridges 36" or wider	Unavoidable obstacles 15" tall or less Avoidable obstacles may be present Unavoidable bridges 24" or wider TTF 2' high or less, width of deck is less than 1/2 the height Short sections may exceed criteria	Unavoidable obstacles 15" tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" or wider TTF 4' high or less, width of deck is less than 1/2 the height Short sections may exceed criteria	Unavoidable obstacles 15" tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" or narrower TTF 4' high or less, width of deck is unpredictable Many sections may exceed criteria

IMBA pioneered the mountain bike trail difficulty rating system and utilizes the well-known ski area symbols: green circle, blue square, black diamond, etc.

*Information and images: IMBA Guidelines for a Quality Trail Experience, June 2018. https://www.imba.com/sites/default/files/GQTE_Digital_Book_Rev_6.11.18_high_res.

WAYFINDING SIGNAGE*

Wayfinding

Wayfinding signage is critical in both urban and suburban/rural contexts. Wayfinding reassures bike facility users on circuitous network connections and in places with many possible destinations. There are three functional wayfinding signage types:

1) Confirmation Signs: Bike Route Guide (D11-1c) signs inform bicyclists that they are on a designated bikeway and remind motorists to be aware.

2) Turn Signs: A Bicycle Destination Sign (D1-1) with one or more destinations in a single direction indicates where a bike route turns from one street to another.

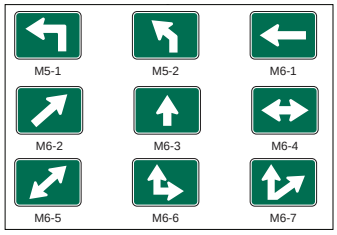
3) Decision Signs: Decision signs (D11-1c & D1-3a) mark the junction of two or more bikeways and inform bicyclists of the bike route to key destinations.

Additional wayfinding signage considerations include:

- Community character: the inclusion of unique colors, logos, or branding can enhance the look and feel when compared to generic wayfinding signage.
- Decorative sign posts and sign embellishments beyond the directional sign plaques.

(Image: EST Design Guide)

Temporary wayfinding signage along the LIGBT



Turn signs are a critical component of a successful wayfinding sign family

Existing bicyclist-oriented wayfinding in Holbrook

Existing pedestrian-scale wayfinding in Patchogue

*Information adapted from the Empire State Trail Design Guide published July 2017

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BICYCLE FACILITY SELECTION MATRIX

Selecting the appropriate bike facility typology for a particular roadway can be challenging due to the range of factors that influence bicyclist safety and comfort. When both motor vehicle traffic volumes and speeds are high, there is an elevated level of discomfort for most bicyclists. The bicycle facility selection matrix on the following page can be used as a guide to understand which facility will provide the greatest level of comfort to the greatest number of bicyclists based on motor vehicle speed and volume. To use the matrix, volume should be identified, and then the bike facility option that best fits the two factors should be located.

Other factors beyond speed and volume which affect facility selection in Suffolk County include the presence and volume of heavy trucks, the presence of on-street parking, intersection density, surrounding land use, topography, context and user needs (e.g., bicyclists commuting on a busy road versus middle school students riding to school on a residential street, etc.), and roadway sight distance. While the aforementioned factors are not included in the below, they should be considered when selecting the bicycle facility to be implemented.

Figure 60: Least Protected to Most Protected Bicycle Facilities

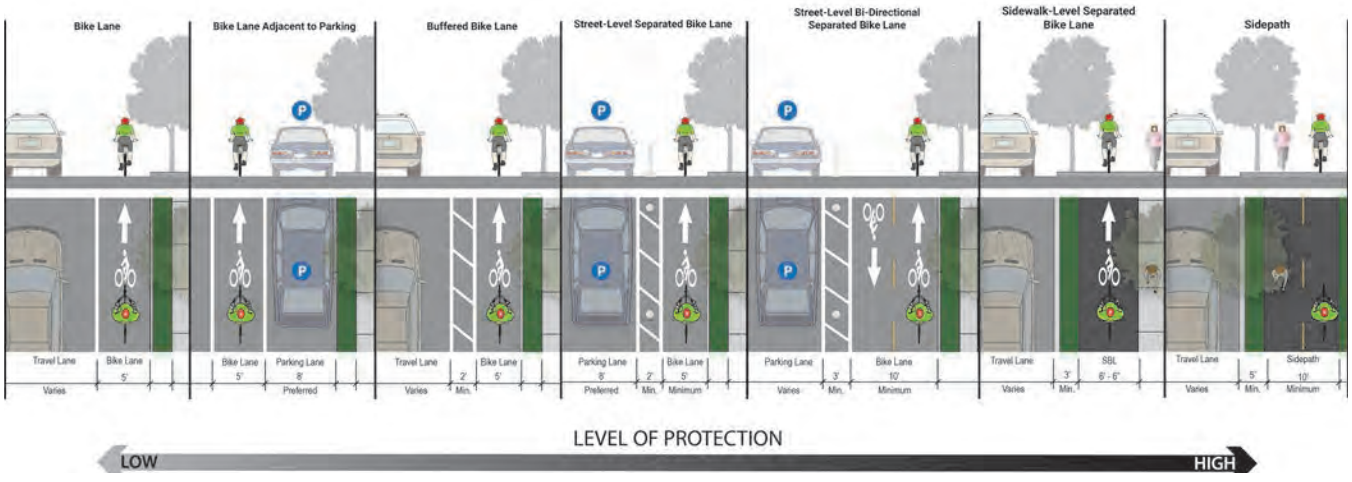
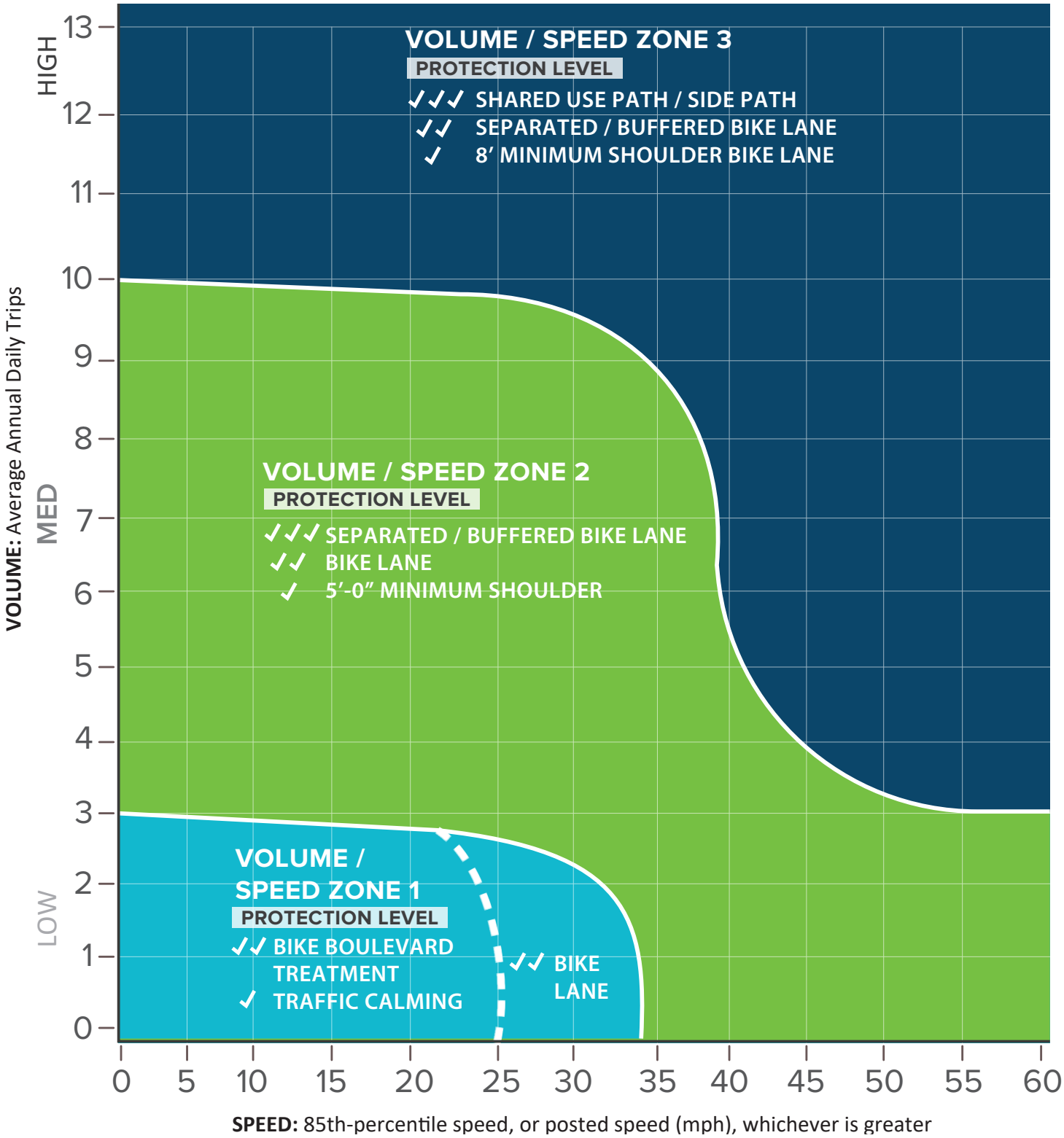


Figure 61: Active Transportation Facility Selection Matrix



4.5 POTENTIAL IMPLEMENTATION TIMELINE

The implementation timeline for the projects comprising the recommended hike and bike network was determined by combining the project impact score with the anticipated timeline for project design and construction. Project implementation timelines fall under four categories:

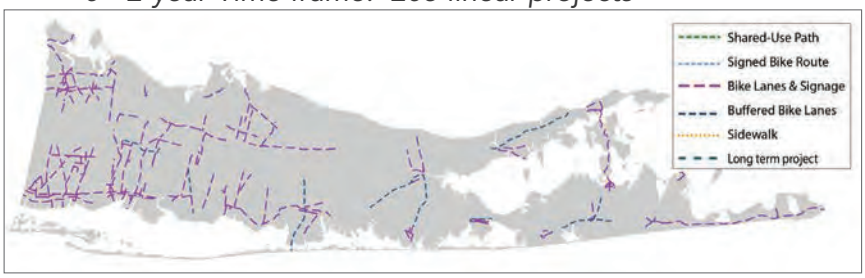
- 0 – 2 Years
- 3 – 5 Years
- 6 – 10 Years
- > 10 years.

Each linear project was placed into one of three "bins" based on its impact score (represented by the black circles with numbers in the table on the following page). The threshold used to determine the cut-off score for each bin was calculated by identifying an equal number of projects in each of the three bins. The table illustrates the bins into which each project fell, and the number of projects of that particular type within each bin. Additionally, the quantity of projects that fall within the respective implementation schedule is indicated as the number after each recommended facility type.

Appendix 6 includes a table of all projects organized by project score. The tables include the recommended implementation information. The map series below illustrates the various projects under each of the four implementation schedule time frames. The graphic encourages understanding of the growth of the hike and bike network over time. The projects are grouped into the prioritization and implementation bins

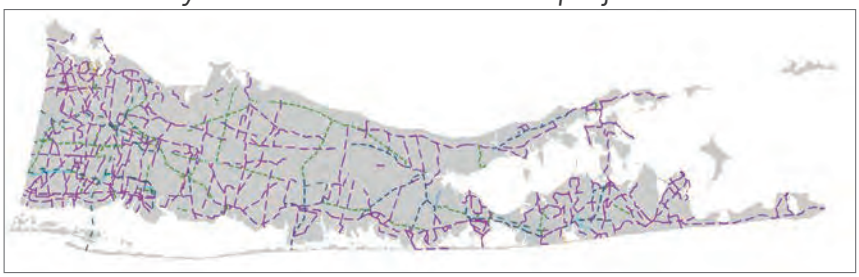
Figure 62: Potential Implementation Timeline Map Indicating Projects Proposed in the 0 - 2, 3 - 5, 6 – 10, and >10-year Time frame

0 - 2-year Time frame: 205 linear projects



3 - 5-year Time frame: 211 linear projects

6 - 10-year Time frame: 325 linear projects



> 10-year Time frame: 141 linear projects

based on their likely safety, connectivity, equity, health and economic development impacts, as well as the anticipated amount of time for project design and construction. The implementation schedule will provide guidance to the County and local municipalities to prioritize projects for implementation. Selection of the project for further implementation will depend on the project readiness and funding availability. Not all projects placed in the bins are intended to be implemented within that time period.

Figure 63: Potential Implementation Schedule

POTENTIAL IMPLEMENTATION SCHEDULE (YEARS)

PRIORITIZATION BINS	LINEAR PROJECT SCORES	0 - 2	3 - 5	6 - 10	> 10
		RECOMMENDED FACILITY TYPE (QUANTITY OF PROJECTS)			
1	> 56 *Highest ranking 1/3 of all projects*	• Bike Lanes & Signage* (194) • Buffered Bike Lanes* (11)	• Sidewalk (46) • Shared-Use Path (40)	• Long Term Project (8)	n/a
2	39 - 56 *Middle ranking 1/3 of all projects*	n/a	• Bike Boulevard (3) • Bike Lanes & Signage (158) • Buffered Bike Lanes (9)	• Sidewalk (42) • Shared-Use Path (50)	• Long Term Project (7)
3	< 39 *Lower ranking 1/3 of all projects*	n/a	• Signed Bike Route (1)	• Bike Boulevard (6) • Bike Lanes & Signage (214) • Buffered Bike Lanes (7)	• Long Term Project (3) • Sidewalk (102) • Shared-Use Path (29)
	POINT PROJECTS	*PROPOSED POINT PROJECT IMPROVEMENT*			
ALL	*Point projects were not scored*	• Missing crosswalk • Mid-Block Crossing Treatment • Pedestrian Signal • Wayfinding Signage	• Hiking Trail • Mountain Bike Trail • Rail Crossing • Trail Improvement	• Intersection Redesign • Trailhead Facilities	• Long Term Opportunity

**Bike Lanes and Buffered Bike Lane projects that require removal of parking to be located in the 3 - 5 year timeline*

(**Note:** this implementation schedule is an ideal scenario, and doesn't include project readiness, availability of funding, permitting challenges, and community support, as these factors tend to be project and locale specific. The implementation schedule should be used in conjunction with the above information to assess the project's implementation timeline.)

4.6 COST ESTIMATES AND FUNDING

ORDER OF MAGNITUDE COST ESTIMATES

Order-of-magnitude cost estimates are based on unit prices presented in the NYSDOT Quick Estimator Reference. NYSDOT[25] describes the Quick Estimator as "a tool that can be used to help establish appropriate funding levels for Federal-aid projects." For each option, the assumptions used to estimate various quantities, such as square footage of sidewalk pavement, linear footage of striping, number of pedestrian ramps, etc. are included in the attached summary table.

The NYSDOT Pay Item Catalog[26] was used to estimate costs associated with improvements not included in the Quick Estimator, such as bike lane pavement marking, and flexible bollards used as vertical delineators for separated bike lanes.

In addition, where the NYSDOT Pay Item Catalog did not provide sufficient data, the FHWA PedSafe[27] and BikeSafe[28] Countermeasures cost estimates were used, such as speed humps, midblock pedestrian signals, Rectangular Rapid-Flashing Beacons (RRFBs), and Pedestrian Hybrid Beacons/High-Intensity Activated Crosswalk (aka HAWK) Beacons. The FHWA cost estimate data is based on a review of bid sheets from 40 states for the years 2010-2012 and from targeted searches for the price of specific countermeasures. The FHWA notes that costs can vary widely based on numerous factors including state and/or municipality.

The costs presented in the summary tables found in Appendix 4 include a 30% contingency factor for Work Zone Traffic Control and Incidentals, Inflation and Contingencies. Design and Survey costs based on percentages of construction costs as well as Construction Inspection are not included, in addition to other specific exclusions cited in the summary table.

Additionally, dollar sign symbols are used in the project tables in Appendix 5 and apply to linear project costs as a quick reference to understand a particular projects' cost in relation to others. They are also used to represent the rough nature of the cost estimates used for each project.

- $ = <$10,000
- $$ = $10,000 - $50,000
- $$$ = $50,001 - $200,000
- $$$$ = $200,001 – $1,000,000
- $$$$$ = >$1,000,000

The following tables describe cost estimates for each of the six linear project types as well as five of the 11 point project types. Some point project improvements were not estimated due to their non-uniformity. While a summary of the unit costs is below, Appendix 5 includes the calculations for a detailed breakdown of each linear and point project cost estimates.

Table 25: Linear Project Cost Breakdown

PROJECT TYPE	DESCRIPTION	EXCLUSIONS	COST PER MILE
Bicycle route	Signs only, new posts	No overhead signs	$8,580
Bike Boulevard	Shared lane markings or shoulder stencils, signs and speed humps*	No shoulder or pavement work	$58,760
Bicycle Lanes	New linear paint	No shoulder or pavement work	$13,845
Separated Bicycle Lanes	New linear paint, 3'-0" buffer, with vertical delineators	No shoulder, pavement work or continuous barriers	$180,266
Shared-Use Path / Sidepath	New asphalt path, approximately 10'-0" wide with 1'-0" clear on each side, includes all prep of subgrade, saw-cutting and tack coat	No ROW acquisition, environmental impacts, bridge structures, retaining walls, drilling; minimal cut/fill. Doesn't include curbing, grading or turf establishment. NOTE: Prices have been volatile over the past 3 years.***	$631,488
Sidewalk on one side with trees planted every 30 feet between sidewalk and curb**	New concrete curb and approximately 5'-0" wide sidewalk, with 3'-0" landscaped buffer where space permits	No drainage work, ROW acquisition, environmental impacts, bridge structures, retaining walls, drilling; minimal cut/fill or adjustments to utilities	$1,462,032
Sidewalk on one side without trees	New concrete curb and approximately 5'-0" wide sidewalk	No drainage work, ROW acquisition, environmental impacts, bridge structures, retaining walls, drilling; minimal cut/fill or adjustments to utilities	$1,029,600

*Bike Boulevard cost estimate does not include additional optional traffic calming elements to enhance the comfort of a bike boulevard including curb extensions, chicanes, mini-roundabouts, and other features listed in the Design Guide.

** The high cost of sidewalk construction is partially attributable to general high construction costs in the New York City metro area in recent years because of the ongoing construction boom in the region. The laws of supply and demand have caused a cost bubble to occur, according to NYSDOT cost estimates. Suffolk County Department of Economic Planning and Development should work with County Department of Public Works and individual municipal Public Works Departments to determine how to share resources to cut costs and fill in the gaps in the sidewalk network.

***The North Shore Rail Trail currently under construction in Brookhaven has a higher cost per mile (nearly $1,000,000 / mile) than the amount displayed in this table due to the added expense of bridge structures and grading.

Table 26: Point Project Cost Estimates

PROJECT TYPE	DESCRIPTION	EXCLUSIONS	COST PER MILE
New midblock uncontrolled crosswalk	Includes signs in advance of the crosswalk and at the crosswalk location, double posted with bright sticks in two directions, across four lanes of traffic, includes two ADA ramps	No new sidewalks, no RRFB, signal or HAWK	$16,600
Pedestrian Signal Heads	Added to existing traffic signal, upgrade to ADA standards	No new span wire or mast arms; no traffic signal equipment / controller / detection upgrades, no new sidewalks	$108,000
New Midblock Pedestrian Signal	Manual actuation, controls two directions of traffic, four lane cross section, power nearby, includes two ADA ramps	No new sidewalk, no power runs	$128,750
Rectangular Rapid Flashing Beacons (RRFBs)	Manual actuation, solar powered, two directions of traffic, four lanes of traffic, includes two ADA ramps	No new sidewalks, no power tie-ins	$23,600
Pedestrian Hybrid Beacon (HAWK)	Manual actuation, controls two directions of traffic, four lane cross section, power nearby, includes two ADA ramps	No new sidewalks, no power runs	$84,680

Point projects that do not have cost estimate calculations include:

- Hiking trail opportunity
- Long term opportunity
- Mountain bike trail opportunity
- Rail crossing
- Road/intersection too wide
- Trailhead facilities needed
- Wayfinding signage needed

Those point projects were not included due to their non-uniformity, or unpredictable nature of each project. A hiking trail will vary in width and in what materials, if any, are used on the trail surface depending on the underlying geology of the area, the expected foot traffic / user types. Funding sources and levels of funding may dictate a vastly different trail design and corresponding construction cost estimate given fiscal constraints. Creating a more comfortable intersection that is currently uncomfortable to walk or bicycle through may require relocating drainage, moving utilities, curbs, constructing new sidewalks, signal changes, and a host of other changes that can only be determined on a case-by-case basis.

FUNDING

When considering possible funding sources for the hundreds of project recommendations within the Plan, it is important to note that it is not possible for all projects to be accomplished through a single—or even a few—funding sources. It will be necessary to consider several sources of funding. Pedestrian, bicycle and trail projects are typically funded through a combination of local, state, federal and private sources, many of which require a local match (typically 80% federal/state, 20% local). In some instances, communities have successfully leveraged grant money from private foundations or state programs as the designated "local" match. For trail projects, land donations or in-kind labor may be counted as the local match under some funding programs as well.

FEDERAL FUNDING

When developing the Transportation Improvement Program (TIP), Suffolk County should continue to seek federal and state funding to implement the recommendations in the Plan. It is also worth noting that funding for roadway projects can sometimes come more easily when the project includes a "complete streets" approach that highlights pedestrian and bicycle facilities. Within some grant contexts, the inclusion of sidewalks, new crossing treatments and/or bicycle lanes can make a more competitive project with a higher probability of success, depending on the grant program's criteria. Coordination with project recommendations in the Long Range Transportation Plan (LRTP) is one effective way to plan for both roadway improvements and for walking and bicycling. Funding sources that should continue to be explored by Suffolk County officials include:

- Federal Transportation Alternatives Program (TAP)
- Surface Transportation Program (STP)
- Community Development Block Grants (CDBG)
- Congestion Mitigation/Air Quality (CMAQ) funding via the Federal FAST Act
- Highway Safety Improvement Program (HSIP)
- Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grant Program
    - » Recent BUILD grant awards include a variety of shared-use paths, pedestrian bridges, sidewalks, and dedicated bicycling lanes.

TRAIL PROJECT FUNDING

For trail projects, the Recreation Trails Program (RTP) provides funds for states to distribute to local jurisdictions, to develop and maintain recreational trails and trail-related facilities. They are available for both paved and unpaved trails but may not be used for building roadway shoulders for bicycling or for sidewalks. In New York State, the RTP is administered by the Department of Transportation, with application reviewed and approved by the Recreational Trails Advisory Board. Additionally, a series of funding options can be found at:

- The Federal Highway Administration's web page at:
    - » https://www.fhwa.dot.gov/

Environment/recreational_trails/overview/benefits/

- The Rails to Trails Conservancy's web site includes opportunities for both the acquisition of trails at:
  - » https://www.railstotrails.org/build-trails/trail-building-toolbox/funding/acquisition-funding/
- And trail maintenance at:
  - » https://www.railstotrails.org/build-trails/trail-building-toolbox/funding/maintenance-funding/

NEW YORK STATE FUNDING

The New York State 10 Regional Economic Development Councils and the Consolidated Funding Application (CFA) were created in 2011. This provided local municipalities with a central resource and application for state funding of local projects. In 2019, 30 funding programs were available through the CFA, available through 10 state agencies. These included: Empire State Development; NYS Canal Corporation; NYS Energy Research and Development Authority; Environmental Facilities Corporation; Homes and Community Renewal; New York Power Authority; Office of Parks, Recreation and Historic Preservation; Department of State; Department of Environmental Conservation, and Council on the Arts.

Grants and requirements vary from year to year, as do available funds. The CFA is typically opened in early summer, applications due late summer, and awards announced in December. Below is a summary of grants that have been available for the last few years that have been used to fund trail or bike/ped related infrastructure projects. Available funds from 2019 are also listed.

EMPIRE STATE DEVELOPMENT: UP TO $242 MILLION

- **Up to $150 million for ESD Grant Funds**: These grant funds focus on capital improvements that promote economic development. This includes creating jobs, placemaking, and increasing quality of life to attract new businesses. Funding for bike/ped projects would typically fall under Strategic Community Development Investment, where "Applicants must demonstrate how the project will result in a benefit to the viability of the area it is located in and how it will lead to increased economic activity".
- **Up to $2 million for Strategic Planning and Feasibility Studies**: Grants are available up to $100,000 each for strategic development plans and feasibility studies that focus on economic development and community revitalization.
- **Up to $15 million for Market New York:** This grant is directed towards efforts that strengthen tourism in New York State. This includes capital/construction projects that promote destinations or attractions.

HOMES AND COMMUNITY RENEWAL: UP TO $26.2 MILLION

- **Up to $20 million for New York State Community Development Block Grant Program**: This program is federally funded and allocated by New York State – Office of Community Renewal (OCR). Funding can be used to address public infrastructure,

such as sidewalk improvements. Priority is given to projects the directly benefit low- and moderate- income households.

- **Up to $6.2 million for New York Main Street Program**: This Main Street program focuses on economic development and housing opportunities in downtown, mixed-use commercial districts. Improvements to public infrastructure, such as sidewalks, bicycle facilities, or street scape improvements are good ways to stimulate reinvestment and economic growth in a Main Street setting.

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION: UP TO $21.4 MILLION

- **Up to $19.5 million for Environmental Protection Fund Grants Program for Parks, Preservation and Heritage (EPF)**: Funding is available for land acquisition, planning, development, and improvement of parks, historic properties, and heritage areas. This includes trails designated as linear parks. This program requires a 50% match, or 25% match in high-poverty areas. Grants are typically capped at $600,000.
- **Up to $1.9 million for Recreational Trails Program**: This is a federal program administered by NYS Office of Parks, Recreation and Historic Preservation (OPRHP). This is an ideal funding source for trail construction or improvements projects. Note that there are requirements for a percentage of these funds to be used for trails that allow motorized use (snowmobiling for example) and that the project is required to follow both state and federal requirements.

DEPARTMENT OF STATE: UP TO $21 MILLION

- **Up to $15 million for the Local Waterfront Revitalization Program**: Funding is available to implement projects identified in a local waterfront revitalization program. This program covers areas located along coasts and designated inland waterways.
- **Up to $4 million for Local Government Efficiency Program**: This funding source could be used to develop inter-municipal agreements related to trail development and maintenance strategies or for implementing such an agreement. Funding for planning is limited to $12,500 per local municipality involved and up to $100,000.

New York State Energy Research and Development Authority: Up to $40 million

- **Up to $15 million for Net Zero Energy for Economic Development**: This program supports Brownfield Redevelopment, Age-Friendly Communities, and Downtown Revitalization, which can all directly relate to trail or bicycle and pedestrian projects. The program provides up to $250,000 of additional funding to support projects to clean up and develop brownfield sites, support wellness and high quality of life for aging in place communities, or additional funding to support Downtown Revitalization Initiative (DRI) communities.

Department of Environmental Conservation: Up to $85.7 million

- **Up to $11.7 million for the Climate Smart Communities Grant Program**: This grant requires that the infrastructure project will reduce vehicle miles traveled and/or reduce greenhouse gas (GHG)

emissions. Several bicycle and pedestrian projects have been funded through this grant program across the state since its creation.

Environmental Facilities

- **Up to $15 million for Green Innovation Grant Program**: While this funding source will not directly fund trail or bicycle and pedestrian projects, in can be used to provide additional funding to implement green infrastructure practices as part of the project.

LOCAL FUNDING

Finding local funding sources for pedestrian and bicycle facilities can be challenging at times, but opportunities should be explored regardless. Options may include:

JUMPSTART

JumpStart Suffolk County has awarded more than $11 million in funding to projects improve upon blighted areas, invest in infrastructure, and create downtowns that are more pedestrian friendly. Previous JumpStart grants have contributed to removal of curb cuts, sidewalk and curb improvements, and traffic calming measures in Smithtown; and a mixed-use, pedestrian-friendly, and transit-oriented development in Ronkonkoma, and bicycle network improvements in Riverhead and East Hampton.

SUFFOLK COUNTY DOWNTOWN REVITALIZATION GRANTS

This program offers partial funding of capital projects located in, or adjacent to, downtown areas on municipal-owned property. Since 1997, County has awarded over $12.5 million in funds for downtown revitalization initiatives. A pool of $500,000 was available for the 17th round of these grants in 2019. Past awards include projects like pubic parking facilities, curb and sidewalk construction, pedestrian walkways, street lighting, public restrooms, disabled accessibility, renovations to existing structures, and cultural facilities.

COMPLETE STREETS CAPITAL PROGRAM 3313

Suffolk County adopted a Complete Streets policy in 2012, that considers the needs of all users of all ages and abilities including pedestrian, bicyclists, public transportation users. The policy requires Suffolk County Department of Public Works (SCDPW) to evaluate feasibility of implementing the complete streets design features and recognize the needs of the users according to the context in the planning stage of each project.

Prior to commencing any Capital Project, as part of the preliminary project engineering analysis, SCDPW completes a 'Capital Projects Complete Streets Checklist' which helps to identify the need for additional pedestrian and bicycle facilities within the limits of each particular project. If it is determined there is a need for these facilities, every effort is made to try and accommodate them into the project, outside of potential budgetary and right-of-way limitations. Currently, an annual budget of $250,000 is allocated to Complete Streets Capital Program for 2020 in the County's Capital Improvement Plan. NOTE: Some Towns have also adopted Complete Streets policies beyond capital program 3313, which could represent a potential local funding source for Complete Streets funding. According to Smart Growth America, Babylon, Islip, Brookhaven, and East Hampton have Complete Streets policies.

DEVELOPMENT IMPACT FEES

This is especially for projects along corridors in need of new/repaired sidewalks, on-street bicycle facilities and/or within ½ mile of a trail access point.

CORPORATE SPONSORSHIP

Seek business/corporate sponsorship of trail improvements, allowing for modest and discrete branding along segments of the trail network.

4.7 OPERATIONS AND MAINTENANCE

Creating an effective operations and maintenance program requires:

- Understanding current and anticipated needs
- Assessing the capacity for the involved entities to accommodate those needs (both financially and operationally)
- Assigning responsibilities

The Suffolk County Hike + Bike Master Plan provides connecting segments both on and off road, operated by a variety of state entities, local governments, and non-profit organizations. As a general rule, ongoing trail operations and maintenance activities are undertaken by the entity that owns and/or operates each distinct segment of the larger trail network. However, establishing an operations and maintenance plan and protocol and documenting these responsibilities via written contract/agreement is essential to ensuring the long-term preservation of the trail network. For any sidewalk or on-street projects, operations and maintenance responsibilities should fall under the same ordinances or agreements that already exist. Off-road trail facilities may require new agreements for ongoing operations, and represent a great opportunity to involve existing or potentially new 'Friends Of' groups to conduct routine checks and maintenance. (See Appendix 10 for additional commentary and recommendations related to Operations and Maintenance.)

Trail **operations** involve implementing policies established prior to construction of the trail, e.g. establishing hours of operation, seasonal schedules, plant selection, and permitted uses and users. Operational tasks may include: updates to trail information provided at kiosks. or on websites and social media; collecting fees; managing trail parking areas; safety; and enforcement issues.

Trail **maintenance** includes daily, weekly, monthly and annual activities essential to keeping the trail and its amenities safe and usable. Maintenance activities include everything from resurfacing and mowing, to sign replacement and painting, to green landscaping and xeriscaping.

The section below provides suggested strategies and best practices.

INVENTORY AND MANAGE FEATURES AND ASSETS

Preparing a graphic (mapped) inventory of on- and off-road fixed assets along the trail corridor using GIS software facilitates general maintenance and tracking of issues that require immediate attention. The key is to determine the list of fixed assets in coordination with the various entities and clarify maintenance responsibilities as soon as possible.

Many trail providers have adopted mobile applications to capture user concerns and "real time" maintenance reporting (including reports of vandalism, trash, debris or road kill on the trail way). Mobile apps are a low-cost feedback loop, but also require nimble maintenance crews and a clear chain of responsibility.

ESTABLISHING TRAIL MAINTENANCE COSTS

LABOR COSTS

Labor can be the single greatest cost associated with trail maintenance. Whether using in-house or contracted labor, responsible entities should ensure trail management crews have the required training for routine on and off-road trail maintenance needs. Efficient and proper maintenance practices can significantly affect overall costs, particularly for the lifetime of trail surfaces (gravel, asphalt, etc.)

Labor cost saving options include partnerships with citizens groups, school and youth organizations, and trail organizations. Volunteer groups such as Long Island Greenbelt Trail (LIGBT), Concerned Long Island Mountain Bikers (CLIMB), or local Scouts troops can be called upon to provide trash and vegetation removal, safety patrols, educational outreach and, in some cases, trail restoration and/or construction.

SERVICE AND MATERIALS COSTS

When procuring materials and contracts for trail services, good research, and proper vetting are key to success. Responsible parties should confirm contractors have the relevant skills, certifications and insurance for the task. For trail segments that fall within the maintenance responsibility of the municipalities along the corridor, contractor and materials procurement should follow the same practice as any other municipal bid – including insurance and bonding requirements.

ESTABLISH MAINTENANCE RESPONSIBILITY, SCHEDULE AND AGREEMENTS

Local municipal or Suffolk County entities and New York State will likely be the primary operating agencies for the facilities recommended within the Suffolk County Hike + Bike Master Plan. These agencies are physically and functionally closest to the trails and are therefore the optimal entity to evaluate, maintain and operate them. Because the proposed trail also includes on and off-road segments that may be operated by a variety of state entities and non-profit organizations, coordination amongst agencies is essential to maintaining the quality of the overall system. All partners responsible for maintaining the County's trail system and their responsibilities and roles should be clearly defined and documented. For instance, to provide local police and fire vehicle access to a trail along a utility right-of-way, an access agreement between the utility company and the local municipality would be needed.

Preparing a detailed written trail maintenance plan and an accompanying responsibility matrix that lists the required maintenance needs and assigns responsibility ensures clarity in the process. Because funding availability and priorities change, responsible agencies should schedule an annual reorganization meeting to review maintenance plans and responsibility matrices

Figure 64: A vehicle specially designed to clear snow from bicycle facilities in Vancouver, British Columbia

to ensure requirements are met. Providing additional details include frequency for various maintenance responsibilities (mowing days/month; landscaping days/year) or replacement of amenities (benches every five or ten years) also assists with capital/budget planning. Where the trail alignment crosses on/off road, on local, Suffolk County, New York State and/or other lands, it may be useful to create "maintenance segments" and prepare responsibility matrices for each segment. Once overall responsibilities are assigned, it is advisable for the various entities to draft and enter into trail maintenance agreements to document delegated obligations.

FLEXIBLE POST MAINTENANCE

Flexible plastic delineator posts are an important part of toolkit when it comes to separating bike and pedestrian facilities from motor vehicle traffic. Flex posts typically fail in one of two ways: either the post can be bent over after multiple impacts -- or the base gets completely detached from the pavement.

Bent Posts: Typically, taller posts support more post weight, and are likely to bend after multiple impacts. The most cost effective way to repair bent flexposts is to cut them off above the bend with a utility knife or angle grinder, drill new holes in the base of the shortened post and reinstall. As noted shorter flexposts do a better job resisting bends, so as you shorten the post you should receive fewer maintenance calls.

Detached posts: This is a simple case of re-installation of the base. In particular for initial and re-installation, be mindful that the street is clear of grit to achieve maximum adhesion.

In either case it's important to **not** let damaged flexposts lay in the street as posts endure a lot more damage in the horizontal position than they do when upright. Developing internal policies to repair flexposts is a crucial piece of successful installations as missing, damaged and unsightly flexposts diminish the utility of the protected bike lane barrier and reflect poorly on the municipal authority tasked with maintaining them.

Figure 65: Hamilton, ON – Two-way cycle tracks in Hamilton are routinely cleared of snow using plows (Image: Norma Moore)

Figure 66: The plowing of the Minuteman Path in Arlington, MA is done by a private contractor with Town funds

4.8 PERFORMANCE MEASURES

Performance Measures are semi-annual or annual data-driven benchmarks intended to guide, track, and monitor the progress of the Suffolk County Hike + Bike Master Plan. The benchmarks will help gauge progress over time for goals and objectives related to expanding access points, building new bicycle and pedestrian facilities, improving safety, and increasing funding for bicycling programs and projects. They also outline the Plan's goals and the parties responsible for implementation and evaluation of each performance measure. While no one Performance Measure will define the success of the Suffolk County Hike + Bike Master Plan, the combined metrics will provide a road map for a safe and connected network of roadways, paths, trails, and transit connections for residents and visitors of all ages and abilities across the county.

Performance Measures also help various agencies communicate achievements and motivate community leaders, advocates, and local elected officials to take further action to implement the Plan through fundraising and public support. Progress on Implementation could be discussed at meetings hosted by Suffolk County with input from the HB-TAC, SCDPW, and SCEDP, among other stakeholder groups and agencies. The Performance Measures shown on the tables on the following pages should be used as an initial target. This will help County officials, local elected officials, advocates, and others understand where the County stands on its commitments to improving pedestrian and bicycle mobility and safety.

Table 27: Performance measures evaluation matrix

GOAL	PERFORMANCE MEASURE / METRICS	DATA SOURCE	EVALUATION FREQUENCY
1. Safety	Reduction in the pedestrian- and bicycle-involved crashes resulting in injuries and fatalities	Suffolk County Police Department, NYSDOT	Annual
	Number of intersections and mid-block crossings outfitted with pedestrian-safety improvements	SCEDP, SCDPW, Town Highway Departments	Annual
	Number of new sidewalk or traffic calming projects within one mile of a public or private K-12 school or a university	SCEDP, SCDPW, Town Highway Departments	Annual
	Increase in the percentage of law enforcement officers going through training programs related to pedestrian and bicyclist safety and traffic laws	Suffolk County Police Department, Individual Town Police Departments	Annual
2. Connectivity	Percentage increase in miles of hiking trails, sidewalks, shared-use paths, and on-street bicycle facilities	SCEDP, SCDPW, Town/ Village Highway and Planning Departments	Annual
	Number of new access points to existing trails/ shared-use paths from adjacent neighborhoods	Individual Town Planner Staff, SCEDP, SCDPW, Town/Village Highway Departments	Every 6 months
	Number of designated sidewalk gaps eliminated	SCDPW, Town/Village Highway and Planning Departments	Every 6 months

GOAL	PERFORMANCE MEASURE / METRICS	DATA SOURCE	EVALUATION FREQUENCY
3. Design	Miles of new sidewalks constructed	SCDPW, Town/Village Highway and Planning Departments	Annual
	Number of marked pedestrian crossings implemented on State, County, Village, and Town roadways	Town/Village Highway Departments, NYSDOT, SCDPW, HB-TAC Members	Annual
	Miles of constructed "all ages and abilities" bicycle facilities	Individual Town Planner Staff, SCDPW, Town/Village Highway Departments, HB-TAC Members	Annual
4. Policy	Percentage of capital and maintenance project funding that is dedicated to building and maintaining pedestrian and bicycle facilities	SCEDP, SCDPW, NYSDOT District 10 Ped-Bike Coordinator	Annual
	Number of County planning and engineering staff attending pedestrian and bicycle facility design trainings and workshops	SCDPW, SCEDP	Annual
	Percentage change in the number of walking and bicycle trips at established trail and roadway count locations	C.L.I.M.B., New York State Bicycling Coalition	Annual
	Gross number of bicycle parking racks at LIRR stations and bus hubs	LIRR Capital Planning Division	Annual
5. Equity	Percent of funded pedestrian and bicycle facility projects in traditionally underserved communities	NYSDOT Funding Requests, TAP Grants, STP Grants	Annual
	Percent increase of residents in traditionally underserved communities	American Community Survey	Annual
6. Economy	Increase in the number of new municipal policies and regulations explicitly formulated to promote hiking, walking, and biking	SCEDP	Annual
	Increase in the number of Suffolk County businesses designated as "Bicycle Friendly Businesses" by the League of American Bicyclists	Individual businesses reporting their application status to SCEDP, League of American Bicyclists	Annual
7. Education & Encouragement	Number of safety education programs/campaigns introduced	SCEDP	Annual
8. Health	Rate of physical activity/exercise reported in the State's Behavioral Risk Factor Surveillance System (BRFSS) Survey	NYS Department of Health	Annual
	Percent of County residents who walk, use transit, or bicycle to work	American Community Survey	Annual
	Percentage of residents within 2 miles of a designated trail, bikeway, or shared-use path	SCEDP	Annual

4.9 NEXT STEPS

Previous chapters of this Plan provided linear and point project recommendations to fill gaps in the existing walk, hike, and bike network in Suffolk County in addition to funding sources and maintenance coordination language and agreements. This section of the Plan offers advice regarding working collaboratively for approvals on the various proposed projects that cross municipal or private parcels. This section also outlines the near-term priorities that will begin Suffolk County's transition toward a more safe, convenient, and comfortable place for walking and bicycling. These priorities will require a consistent, coordinated effort by municipal planners, NYSDOT, and the many private partners, stakeholders, and advocates.

It's important to note that the Hike-Bike Master Plan is a guiding document that will aid in future decision making and is generally aspirational in nature. While not every single linear proposed project will be constructed in the next 15 years, this plan identified both high impact score projects AND Tier I corridors that would greatly enhance connectivity for Suffolk County residents. It is these High Impact Score and / or Tier I projects that individual Towns and the County should pursue first.

Any trail recommendations that border or go along or though utility lines, County Parks, or open space properties are required to engage in planning-level discussions and ultimately seek approval from both the primary land owner and the adjacent land owner.

THE NEED FOR OBTAINING ADDITIONAL RIGHT-OF-WAY

This Plan recommends that if available right-of-way or on-road parking requirements are barriers to implementing a highly-desired bike lane, sidewalk, separated bike lane, or shared-use path connection, that the County begin asking if they can obtain additional right-of-way from adjacent land owners or amend minimum on-road parking requirements in specific cases to implement safe and comfortable active transportation facilities.

Obtaining additional right-of-way involves many steps. First, reaching out to adjacent land-owners and scheduling a field meeting to discuss the proposed project. Second, which may require a licensed surveyor to determine the location of the property line, is to discuss with the land-owner if they would provide an easement to locate active transportation facilities on a portion of their land. An easement may result in not needing to purchase any additional segments.

Many property owners recognize the great value in adjacent sidewalks, trails, bike lanes, and shared-use paths, and may be amenable to working with the County to plan, design, and build bicycle and pedestrian transportation infrastructure.

INSTITUTIONAL COORDINATION

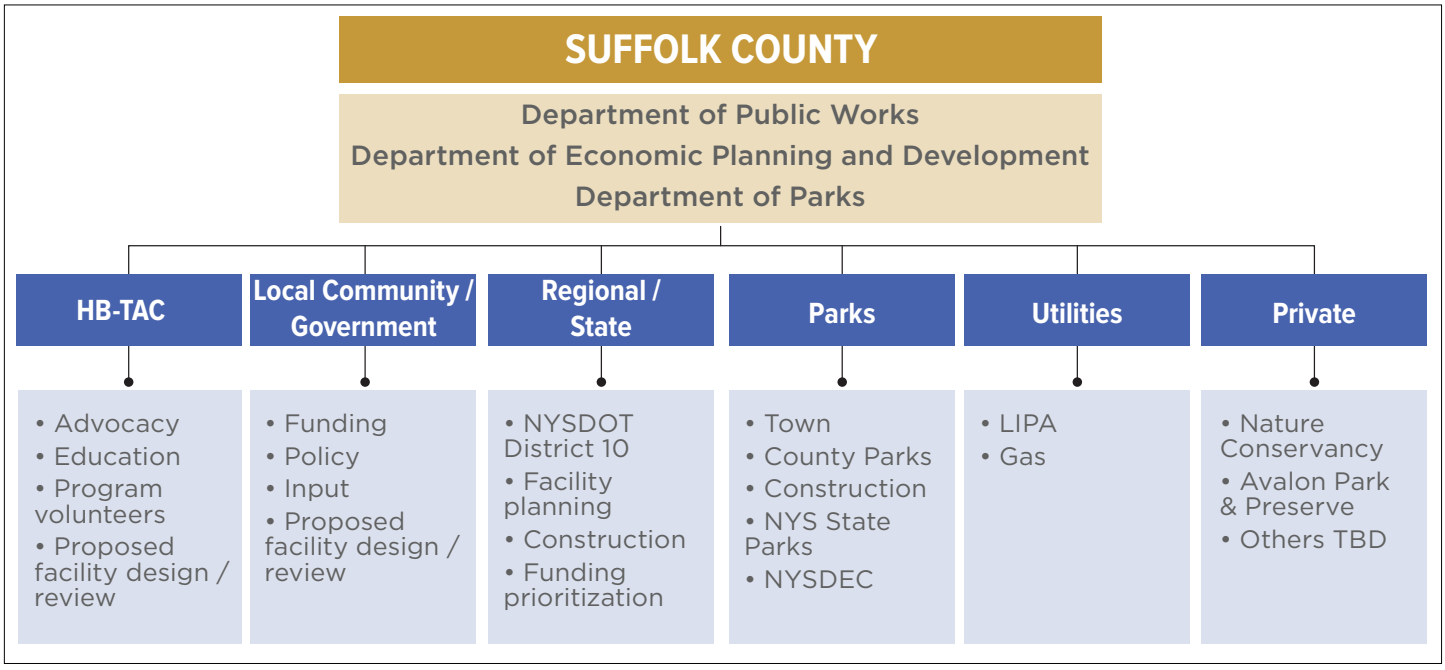
For any point or linear project on a Town-owned road segment, it's important to reach out to local Municipal Traffic and Safety Groups. Additionally, outreach should be conducted to local hike, walk, or bike advocacy groups. For any point or linear project proposed on State-owned land, coordination with NYSDOT Region 10 will be required for project planning, design, implementation, and funding. Suffolk County should open channels of communication with

individual Town Department of Public Works and/or highway Departments as well as NYSDOT and other pertinent groups as project readiness moves forward.

Suffolk County Department of Economic Development and Planning (SCEDP) will be the keeper of the new vision and master plan for the Hike and Bike Network within the County. SCEDP will work in close coordination with Suffolk County Department of Public Works (SCDPW) to implement and fund projects in the Plan. They will be responsible for securing funding, implementing the projects, regularly measuring progress during implementation, communicating success with stakeholders and the community, and gathering continued input and information on the trail network. SCEDP will also be responsible for ongoing coordination with other supporting partners that were integrally involved in development of the Plan, including State, County, and local Parks Departments; Utilities (LIPA, LIRR); NYSDOT; Municipal (Village and Town) Planning and Highway Departments; and Biking and Hiking Organizations / Advocate Groups. SCEDP will designate a 'Hike and Bike Coordinator' role within SCEDP staff. The Hike and Bike Coordinator will work closely with the supporting partners to ensure the Plan's implementation, review, and regular update. The coordinator would also serve as an integral member of the HB-TAC.

It is critical to coordinate a variety of grant and other funding souces outlined in Section 4.6. Particularly for projects that enhance the walkability, bikeability, comfort, or safety of streets.

Figure 67: Pedestrian and bike infrastructure project implementation organization chart



UTILITY CORRIDORS

Utility corridors represent a major opportunity for shared-use paths across Suffolk County, and are proposed frequently throughout this plan. The Long Island Power Authority (LIPA) owns a significant number of miles of linear rights for transmission lines. This linear network provides ample opportunity to include shared-use paths along key segments as recommended in this Plan. Building off the example of the North Shore Rail Trail, local municipalities and utilities can develop a model for allocation of responsibilities and liabilities to achieve the overwhelming public good of providing extremely safe, enjoyable off-road facilities. While each corridor has specific challenges and opportunities and come corridors may prove -- on further investigation -- to be unsuitable for shared-use paths, the potential presented by these permanently car-free areas should not be overlooked. SCEDP can offer guidance and play the lead role in facilitating discussions between utilities and local municipalities.

Following official adoption of the Plan by the County and other groups and stakeholders, the County should identify a list of project ID's it wants to pursue that exist across, along, or within utility corridors. Next, the County should more formally reach out to LIPA, LIRR, and other utility rights-of-way owners about locating a shared-use path across, along, or within certain segments. Breaking projects into logical segments and being able to discuss alternatives over a GIS parcels map will be extremely helpful. Additionally, speaking with utility officials, town/city planners, or local advocacy groups that contributed to the implementation of existing shared-use paths along, across, or within utility corridors should be contacted prior to reaching out to the utilities to learn about their technique and steps. Successful shared-use paths located along, across, or within utility rights-of-way include:

- Albertson Parkway Trail - San Jose, CA
- Washington and Old Dominion Trail - Arlington/Fairfax/Loudon Counties, VA
- Middle Township Bike Path - Cape May, NJ
- Albany Hudson Electric Trail - New York

POLICY RECOMMENDATIONS

The following bulleted list of high-level policy and program ideas should be carefully considered as they will help encourage more residents and visitors to feel comfortable using the active transportation facilities recommended in this report. These policy and program recommendations will help SCEDP evaluate and promote infrastructural project implementation and encourage and promote new users.

- **Targeted Enforcement**: Use ticketing to enforce some of the key issues related to on-road bicycle safety and comfort: no vehicle parking in dedicated bike lanes, motor vehicle drivers who run red lights, and speeding. Likewise, enforce pertinent pedestrian laws as well, such as crosswalk yielding compliance. Enforcement keeps roadways and other facilities safer for all users.
- **Complete Streets Encouragement**: Offer financial or other incentives for individual communities who enact Complete Streets legislation and then implement Complete Streets roadway improvements.

- **Measure Progress and Plan Update**: Dedicate funding to update this Plan every five years and dedicate staff time to inputing critical information into a matrix that contains the information outlined in Table 26.
- **Review On-street Parking Requirements and Require Bike Parking**: If existing on-street parking requirements stand in the way of safe and comfortable on-street active transportation facilities, then critically examine those requirements and discuss the possibility of an exemption or waiver for particular locations where bicyclists would benefit dramatically from the inclusion of bike lanes or a more protected on-road facility. Additionally, establish minimum bike parking requirements for new retail, commercial, and residential development.
- **Establish Funding for Dedicated Hike-Bike Coordinator On-Staff:** Utilize the strong momentum within the HB-TAC and others involved in this planning effort and recruit a qualified planner to act as liaison between the County and the State / Towns as the Hike-Bike Coordinator to champion and implement projects
- **Dedicate additional funding and staff time to**:
  - » Encouragement and Education Campaigns
  - » Hike/Bike Web Map and Resources available on County website

TOP PRIORITY PROJECTS

Although this planning effort includes 880 linear projects, the following broad priorities should be implemented as soon as possible to begin the build-out of a strong pedestrian and bicycle transportation network across Suffolk County:

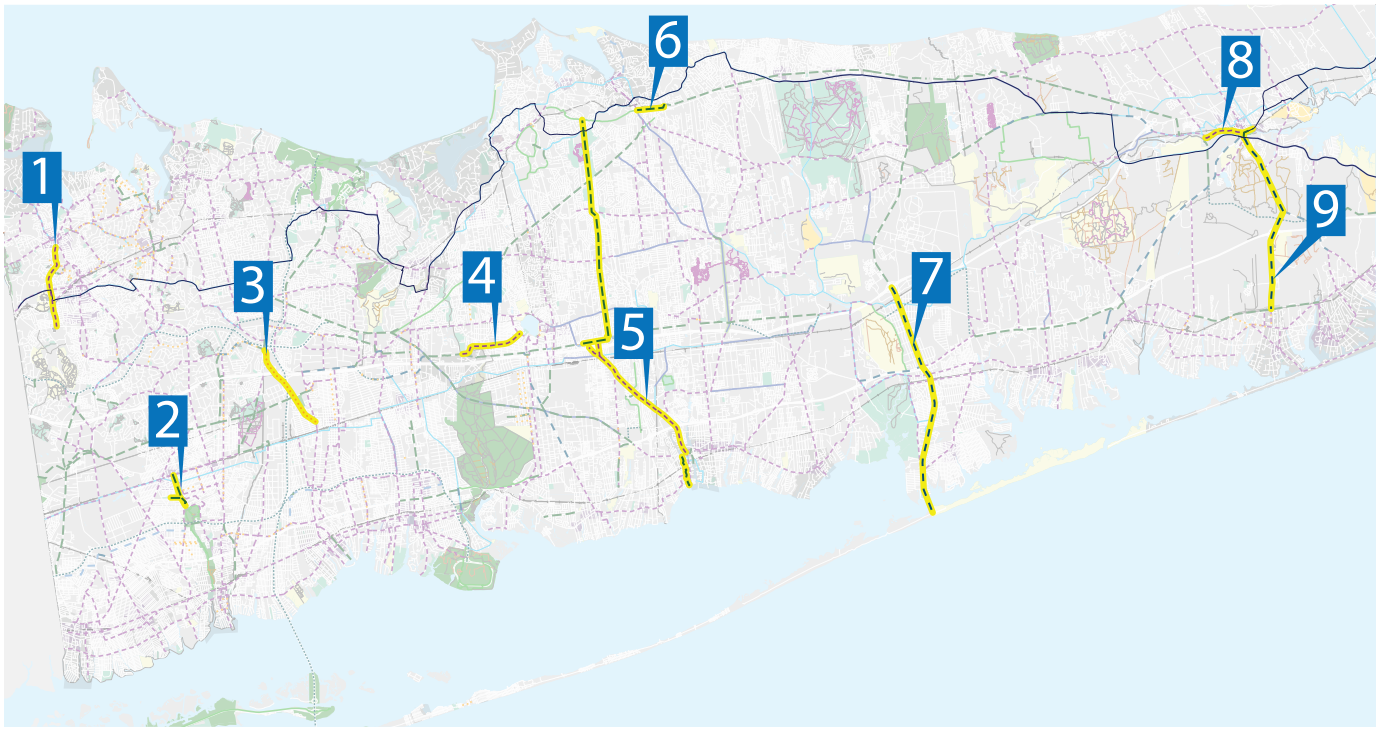
- All Tier I Projects
- Any project that connects to an existing shared-use path or bike lane, with moderate to high impact score;
- Any project that fills a gap between two regionally significant shared-use paths
- County-owned roadway projects that connect train stations, central business districts, or tie-in to existing shared-use paths, sidewalks, or on-road bicycle facilities;
- Any project that fills a gap between two regionally significant shared-use paths; and
- All north-south bike lane projects that tie in to the proposed Empire State Trail Long Island Greenway

In addition to the broad priorities above, the following short term projects have been identified that can be considered for immediate implementation:

1) BIKE LANES AND SIGNAGE

- Location: Oakwood Road
- Project ID: 297
- Description: About 3 miles of bike lanes and signage connecting Huntington downtown with Jericho Turnpike and the Route 25A signed bike route. Several

Figure 68: Top priority / short term projects



schools and parks with existing trails are located along the route, as well as employment centers. Project should feature buffered bike lanes to the maximum extent practicable; shared lane markings should be continued on to Main Street in Huntington, and intersection modifications at Jericho and Oakwood. The project cost is estimated to be approx. $70,000.

- Impact score: 74

2) FOOT TRAIL

- Location: Belmont Lake State Park to H Griem Park Pond (and potentially Wyandanch Park)
- Project ID: 966
- Description: Trail connecting Belmont Lake State Park and Geiger Park, along Carlls River. The thin strip of parcels is mostly owned by Suffolk County and Town of Babylon. A west leg (0.4 miles) could connect to Wyandanch Park as well. The foot trail also connects to the signed bike route on Grand Boulevard. The western leg that connects to Wyandanch Park and southern part of the foot trail on County-owned parcels is determined as a potential short-term project, and the remaining northern part of the trail connecting to Geiger Memorial Park is a long-term addition as the parcels become available. The project cost for the 0.8 mile foot trail is estimated to be approx. $50,000 (does not include ROW acquisition, environmental impacts, bridge and retaining structures, cut/fill, grading).
- Impact score: 87 (approximate)

3) SIDEWALK

- Location: Crooked Hill Road
- Project ID: 966

- Description: Improvements to establish about 3 miles of sidewalk connecting continuity commercial areas in Commack and Brentwood with SCCC Grant Campus, Brentwood State Park, and Family Service League's emergency housing center. There is a well-worn foot trail along this proposed route in places where sidewalk is absent. The project will include about 1.5 miles of new sidewalk and 10 crosswalk improvements, including pedestrian signal heads. Project should also include improvements to bus stop access at the Family Service League Center, including a mid-block RRFB crosswalk. The project cost is estimated to be approx. $3.0 Million.
- Impact score: 87

4) TRAILHEAD + BIKE LANES WITH SIGNAGE + PEDESTRIAN IMPROVEMENTS

- Location: Motor Parkway (Bedford Avenue to Lake Ronkonkoma Recreation Center)
- Project ID: 657
- Description: About 2.3 miles of bike lanes with signage (Project ID 657) on Motor Parkway from Bedford Avenue to Rosevale Avenue, and along Rosevale Avenue connecting to Lake Ronkonkoma Recreation Center, with intersection upgrades at Bedford Ave & Motor Parkway. This project would also include installation of trail head facilities and sidewalk connecting to Bedford Avenue intersection to improve access to the Long Island Greenbelt Trail. This will also include installation of a pedestrian signal head at the intersection of Bedford Avenue and Motor Parkway. The project cost for the bike lanes is estimated to be approx. $50,000, and $108,000 for addition of the pedestrian signal head. (Does not include overhead signs, no shoulder or pavement work.)
- Impact score: 37

5) CR-97 NICOLLS ROAD HIK-BIKE TRAIL

- Location: Nicolls Road
- Project ID: 57, 59, 344, 702, 860, 940, 929, 62
- Description: About 14.1 miles of shared use path consisting of both on-road and off-road (7.8miles) segments, that connects to Setauket Greenway Trail on the northern end and the Davis Park Ferry on the southern end. The project cost is estimated to be approx. $13.2 Million.
- Impact Score: 48 (average)

6) SEPARATED CYCLE TRACK

- Location: Hallock Avenue
- Project ID: 23
- Description: About 0.9 miles of separated two-way cycle track along Hallock Avenue (Project ID 23), between existing Setauket Greenway Trail Terminus parking lot and Crystal Brook Hollow Road. This proposed facility connects the existing Setauket Greenway Trail and the under construction North Shore Rail Trail. The project cost is estimated to be approx. $600,000.
- Impact score: 77

7) BUFFERED BIKE LANES

- Location: William Floyd Parkway (Route 495

EB to Fire Island Beach Road)

- Project ID: 202
- Description: About 8.5 miles of buffered bike lanes connecting the Industrial Park and the Boulevard at Yaphank with Shirley commercial center, Mastic-Shirley LIRR, Public library, Mastic Beach, and Smith Point County Park. Project should be continued just north to connect with BNL and Boulevard entrances; specific attention should be paid to intersections at Sunrise Highway, LIE, and Montauk Highway. The project cost is estimated to be approx. $1.5 Million.
- Impact score: 73

8) BIKE LANES WITH SIGNAGE

- Location: NY 25 (Mill Road to Ostrander Avenue)
- Project ID: 694 & 37
- Description: The proposed bike lanes connect to on-road bike route on Ostrander Avenue and Mill Road. The project cost is estimated to be approx. $45,000 (Does not include overhead signs, no shoulder or pavement work)
- Impact score: 88

9) BUFFERED BIKE LANES

- Location: County Road 104 / Old Riverhead Road
- Project ID: 26
- Description: About 6.4 miles of buffered bike lanes (where feasible) connecting Riverhead and Riverside with Gabreski Airport and Industrial Park, and Westhampton Beach LIRR, and involves principally restriping and pavement markings. Project should include slip ramps for bikes to enter and exit at the circle in Riverside, pavement markings at the Quogue-Riverhead/Old Riverhead Road Circle, and shared-use path from Old Riverhead Road to the Westhampton Beach LIRR station, with requisite crossing improvements. The project cost is estimated to be approx. $1.5 Million.
- Impact score: 87

As these short-term priority and other Plan recommendations come to fruition, walking, hiking, and bicycling in Suffolk County will become more safe and accessible and improve the quality of life for the County's 1.49 million residents.

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APPENDIX

APPENDIX 1: HIKE-BIKE TECHNICAL ADVISORY COMMITTEE AND MEETING ATTENDANCE

This planning project was overseen by the Suffolk County Economic Planning and Development Department (SCEDP) with the assistance of a Technical Advisory Committee set up by the County. The individuals on the committee include:

- Alex Wallach, Suffolk County Economic Development and Planning (SCEDP), Community Development and Planning Specialist
- Alexander Prego, Suffolk County Department of Public Works (SCDPW), Director of Traffic Engineering
- Andrew Freleng, SCEDP, Chief Planner
- Andy Drake, Town of East Hampton, Environmental Analyst
- Angel Carvajal, New York State Department of Transportation, Assistant Civil Engineer
- August Ruckdeschel, SCEDP, East End Projects Coordinator
- Brian Zitani, Town of Babylon
- Bruce Kagan, Digital Presentations
- Chris Joinnides, New York Bicycling Coalition (NYBC), Board Member
- Craig Lovallo, SCDPW, Traffic Engineer III
- Dai Dayton, Friends of the Long Pond Greenbelt, President
- Danny Gold, Trust for Public Land, Project Manager
- David Reisfeld, Long Island Greenbelt Trail Conference, President
- Deirdre Ryan, Town of Islip, Planner
- Denis Byrne, Long Island Greenways and Healthy Trails (LIGHT), Committee Chair
- Diana Lynch, Suffolk County Department of Parks, Senior Environmental Analyst
- Douglas Das, NYSDOT Environmental Engineer
- Duncan Kennedy, North Fork Promotion Council (NFPC), President
- Dylan Cary, Parks and Trails NY
- Edward Silsbe, The Greenleaf Trail
- Elissa Kyle, Vision Long Island, Sustainability Director
- Elyse Buchman, The Stony Brookside Bed and Bike Inn, Owner
- Emily Sweet, Town of Babylon, GIS Environmental Analyst
- Eva Moore, East Hampton Trails Preservation Society, President
- Hal Tarry, NYBC Member
- Heather Lanza, Town of Southold, Planning Director
- Imran Ansari, Discover Long Island
- Jane Fasulo, Long Island Sierra Club, LI Chair
- Janice Scherer, Town of Southampton, Assistant Town Planning Director
- Jeff Meyer, Suffolk Bike Riders Association, Vice President of Administration

- Jim Parker, Concerned Long Island Mountain Bikers (CLIMB), Vice President, Western Suffolk
- Joe Matzelle, Suffolk Bike Riders Association, Treasurer
- John Abernathy, Concerned Long Island Mountain Bikers, Member
- John Saraceno, Town of Babylon, Traffic Engineer
- John Sepenoski, Town of Southold, GIS
- Joseph Denny, Shelter Island Trail Club, Founder
- Julie Hargrave, The Central Pine Barrens Commission, Principal Environmental Planner
- Karen Roe, Suffolk Bike Riders Association, Member
- Karin Gluth, Town of Riverhead, Planner
- Kellie Woznick, Town of Islip, Planner
- Kevin Burke, CLIMB, Trail Ambassador
- Lanny Wexler, NYSDOT Region 10, Regional Bicycle and Pedestrian Coordinator
- Martin Buchman, The Stony Brookside Bed and Bike Inn, Owner
- Michael Vitti, CLIMB, President
- Mike Leiberman, Town of Southampton, Environmental Planner
- Mike Polansky, Greater Long Island Running Club (GLIRC), President
- Nicholas Palumbo, Suffolk County Community College, Executive Director of Sustainability Studies
- Nikki Theissen, Discover Long Island, Director of Partner and Visitor Relations
- Rebecca de la Cruz, Parks and Trails NY, Project Coordinator
- Robert Becker, CLIMB, Vice President, Eastern Suffolk
- Robert Muller, CLIMB, Board Member
- Rosemary Mascali, United States Green Building Council (USGBC), Long Island
- Scott Spittal, Town of Huntington, Director of Transportation and Traffic Safety
- Sharon Wohlgemuth, Town of Brookhaven, Planner
- Steve Kuhl, Riverhead Alternative Transportation Committee, Member
- Sylvia Silberger, Car-less Long Island, Chairperson
- Thomas Casey, Long Island Greenbelt Trail Conference, Vice President
- Todd Lieghley, CLIMB, Member
- Tyler Pritchett, The Nature Conservancy
- Vincent Gebbia, Big Cat Bicycles
- Will Bennett, CIIMB Member

Contact Name	Organization	Contact Title	1st HB-TAC	2nd HB-TAC	3rd HB-TAC	4th HB-TAC	5th HB-TAC
Alex Wallach	SC Economic Development & Planning	Community Development and Planning Specialist	1	1			1
Alexander Prego	SC Department of Public Works	Director of Traffic Engineering	1				
Andrew Freleng	SC Economic Development & Planning	Chief Planner	1				
Andy Drake	Town of East Hampton	Environmental Analyst	1	1	1		1
Angel Carvajal	NYSDOT	Assistant Civil Engineer					1
August Ruckdeschel	SC Economic Development & Planning	East End Projects Coordinator	1		1		
Brian Zitani	Town of Babylon			1	1	1	1
Bruce Kagan	Digital Presentations				1		1
Chris Joinnides	New York Bicycling Coalition (NYBC)	Board Member	1	1			
Craig Lovallo	SC Department of Public Works	Traffic Engineer III	1	1	1	1	1
Dai Dayton	Friends of the Long Pond Greenbelt	President					1
Danny Gold	Trust for Public Land	Project Manager	1	1		1	1
David Reisfield	Long Island Greenbelt Trail Conference	President	1				
Deirdre Ryan	Town of Islip	Planner - Trainee		1			
Denis Byrne	LI Greenways and Healthy Trails (LIGHT)	Committee Chair	1		1		1
Diana Lynch	SC Department of Parks	Senior Environmental Analyst		1		1	1
Douglas Das	NYSDOT	Engineer				1	
Duncan Kennedy	North Fork Promotion Council (NFPC)	President	1				
Dylan Carey	Parks and Trails NY			1			
Edward Silsbe	The Greenleaf Trail	Advocate for The Greenleaf Trail		1	1	1	
Elissa Kyle	Vision Long Island	Sustainability Director	1	1	1	1	1
Elyse Buchman	The Stony Brookside Bed & Bike Inn	Owner	1				1
Emily Sweet	Town of Babylon	GIS Environmental Analyst				1	1
Eva Moore	East Hampton Trails Preservation Society	President	1				
Hal Tarry	New York Bicycling Coalition (NYBC)	Member	1	1	1	1	1
Heather Lanza	Town of Southold	Planning Director				1	
Imran Ansari	Discover Long Island						1
Jane Fasulo	Long Island Sierra Club	LI Chair	1	1		1	
Janice Scherer	Town of Southampton	Assistant Town Planning Director	1	1			
Jeff Meyer	Suffolk Bike Riders Association	Vice President of Administration	1				
Jim Parker	Concerned Long Island Mountain Bikers (CLIMB)	Vice President, Western Suffolk	1				
Joe Matzelle	Suffolk Bike Riders Association	Treasurer			1		
John Abernethy	Concerned Long Island Mountain Bikers (CLIMB)	Member	1				
John Saraceno	Town of Babylon	Traffic Engineer					1
John Sepenoski	Town of Southold	Geographic Information Systems		1			
Joseph Denny	Shelter Island Trail Club	Founder		1			
Julie Hargrave	The Central Pine Barrens Commission	Principal Environmental Planner				1	
Karen Roe	Suffolk Bike Riders Association	Member			1		
Karin Gluth	Town of Riverhead	Planner			1		
Kellie Woznick	Town of Islip	Planner		1			
Kevin Burke	Concerned Long Island Mountain Bikers (CLIMB)	Trail Ambassador			1		
Lanny Wexler	NYSDOT Region 10	Regional Bicycle and Pedestrian Coordinator		1	1	1	1
Martin Buchman	The Stony Brookside Bed & Bike Inn	Owner		1	1	1	1

Contact Name	Organization	Contact Title	1st HB-TAC	2nd HB-TAC	3rd HB-TAC	4th HB-TAC	5th HB-TAC
Michael Vitti	Concerned Long Island Mountain Bikers (CLIMB)	President	1		1	1	1
Mike Lieberman	Town of Southampton	Environmental Planner	1	1		1	1
Mike Polansky	Greater Long Island Running Club (GLIRC)	President	1				
Nicholas Palumbo	Suffolk County Community College	Executive Director of Sustainability Studies	1				
Nikki Theissen	Discover Long Island	Director, Partner & Visitor Relations			1		
Rebecca De La Cruz	Parks and Trails NY	Project Coordinator				1	
Robert Becker	Concerned Long Island Mountain Bikers (CLIMB)	Vice President, Eastern Suffolk		1	1		1
Robert Muller	Concerned Long Island Mountain Bikers (CLIMB)	Board Member	1	1	1	1	1
Rosemary Mascali	USGBC-LI	Co-Chair, Sustainable Transportation Committee		1	1		1
Scott Spittal	Town of Huntington	Director of Transportation and Traffic Safety				1	
Sharon Wohlgemuth	Town of Brookhaven	Planner			1		
Steve Kuhl	Riverhead Alternative Transportation Committee	Member		1			1
Sylvia Silberger	Car-less Long Island	Chairperson		1			
Thomas Casey	Long Island Greenbelt Trail Conference	Vice President	1	1	1	1	1
Todd Lieghley	Concerned Long Island Mountain Bikers (CLIMB)	Member		1			
Tyler Prichett	The Nature Conservancy					1	1
Vincent Gebbia	Big Cat Bicycles	Bike Advocate				1	
Will Bennett	Concerned Long Island Mountain Bikers (CLIMB)	Member	1				

APPENDIX 2: STAKEHOLDER PARTICIPATION SUMMARY

HIKE-BIKE TECHNICAL ADVISORY COMMITTEE

The Hike-Bike Technical Advisory Committee (HB-TAC) is a group of Suffolk County residents that were invited by the Suffolk County Department of Economic Development and Planning to guide the Hike-Bike Plan. The members of the HB-TAC are planners, advocates, hiking and bicycling enthusiasts, DPW employees, representatives from the tourism industry, and others.

The **HB-TAC Kick-Off Meeting** was held on March 18, 2019 at the H. Lee Dennison Building in Hauppauge. Of approximately 60 invitees, 33 folks attended. The agenda for the kick-off meeting included introducing the project team, discussing the scope of work and schedule of deliverables, and introducing the public online input tool. The attendees also participated in a round-robin exercise where they were asked "what are your top goals for hiking, walking, and bicycling in Suffolk County?" The answers were recorded and translated into the Vision, Goals, and Objectives found in Chapter 1 of this report. The oft-repeated themes that emerged from the round robin exercise include:

- Hiking and biking should be a safe, attractive option for recreation and commuting
- Better maintenance of existing trails and on-road bike facilities, and future facilities
- Education and encouragement to promote knowledge of how to safely use facilities, and promotion of facilities so folks know what's out there

The kick-off meeting ended with HB-TAC members pointing out locations for trail and on-road hike and bike connections

- Trails should connect to retail destinations, residential neighborhoods, schools, parks, and public transit stations and stops
- Wayfinding and better signage so folks know where to go and what to expect
- Easier access to outdoor amenities, people should be able to access amenities without driving to them

The **HB-TAC Meeting #2** was held on May 23, 2019 at the Evans K. Griffing Building at the Suffolk County offices complex in Riverhead. There were roughly 30 people in attendance, with 13 having also attended the HB-TAC kick-o¬ff meeting. The agenda for Meeting # 2 included presenting the draft Vision, Goals, and Objectives that were developed following the round robin exercise at the kick-off meeting, and taking comments on and recommendations to fine-tune the Vision, Goals, and Objectives to guide the planning process.

The consultant team presented the assessment of existing conditions thus far, including miles and type of infrastructure on the ground today across the County. Additional items included presenting the demographic analysis and a summary of the three pop-up events.

HB-TAC Meeting #3 was held on July 15th, 2019 at the Patchogue Medford Library in Patchogue. There were roughly 20 people in attendance, with 9 folks having also attended HB-TAC # 2. The consultant team presented the final list of hike and bike nodes, AKA trip generators and destination points, as well as provided an update on the process used to score, or prioritize, each of the gap lines to inform the facility recommendation process. Feedback from the HB-TAC members included the need for both driver and bicyclist education to improve safe interactions on shared roadways. Additionally, there was a clear desire for bicycle facility separation from motor vehicle traffic.

HB-TAC Meeting #4 was held on October 22, 2019 at the Station Library Branch in Huntington. There were roughly 22 people in attendance. The consultant team presented the methodology and the findings from the impact analysis. The HB-TAC had the opportunity to view and comment on a table of scored, or prioritized, linear projects. Additional graphics were presented that discussed the geographic distribution of the medium and high-scoring projects across Suffolk County. The team took feedback on a small number of additional gaps to be added and discussed timeline for the delivery of the Technical Memorandum # 2 and the final report. The HB-TAC team also provided critical input regarding upcoming inset map locations. HB-TAC members were asked to take part in an exercise where they

HB-TAC Meeting # 2 included lively discussions regarding the preferred Vision, Goals, and Objectives and additional identification of gaps in the on-road and off-road active transportation network

HB-TAC Meeting # 3 included presentations and feedback regarding the likely recommended bike and pedestrian facility typologies to fill gaps in the on-road and off-road active transportation network

could use a rectangle to shade in areas on the poster maps indicating where they would like to see more detailed inset map deliverables as part of the final report. The shaded rectangles were tallied and the onces with the highest tallies were translated into inset map deliverables.

HB-TAC Meeting #5 was held on January 21, 2020 at the H. Lee Dennison Building in Hauppauge and had 26 attendees. The consultant team presented the final recommended linear walk, hike and bike network. The HB-TAC members had an opportunity to interact with printed poster sized maps of plan view inset maps in six different locations, printed photo simulations depicting what the future walk, hike, and bike network would look like at a particular location, and learn about the cost estimates for each linear project.

HB-TAC Meeting # 4 gave the HB-TAC members the opportunity to see the list of prioritized projects for the first time and provide input regarding the location of the six future inset maps

HB-TAC Meeting # 5 included an opportunity for Hb-TAC members to see the recommended walk, hike and bike network visually using photo simulations and plan view design diagrams

HB-TAC Meeting #1 on March 18, 2019 in Hauppauge | Map 1

HB-TAC Meeting #1 on March 18, 2019 in Hauppauge | Map 2

HB-TAC Meeting #2 on May 23, 2019 in Riverhead | Map 1

HB-TAC Meeting #2 on May 23, 2019 in Riverhead | Map 2

HB-TAC Meeting #3 on July 15, 2019 in Patchogue | Map 1

HB-TAC Meeting #3 on July 15, 2019 in Patchogue | Western Suffolk County Map

There were no mark-ups on the Eastern County Map

SUMMARY OF PUBLIC INPUT PROCESS

The Suffolk County Hike + Bike Master Plan project team hosted three pop-up events in April and May 2019. The pop-up events and locations included Earthstock at Stony Brook University, the 10th Annual Eco-Carnival at Seatuck Environmental Association (Islip), and the 15K to the Port Jeff Brewing Company run event. The pop-up events were held to give the public an opportunity to learn about the study, meet directly with the project team, and help determine the gaps in the existing hike and bike trail network. The locations of the event were selected to capture a diverse cross section of Suffolk County residents, including many hard to reach residents, such as students, kids, and parents.

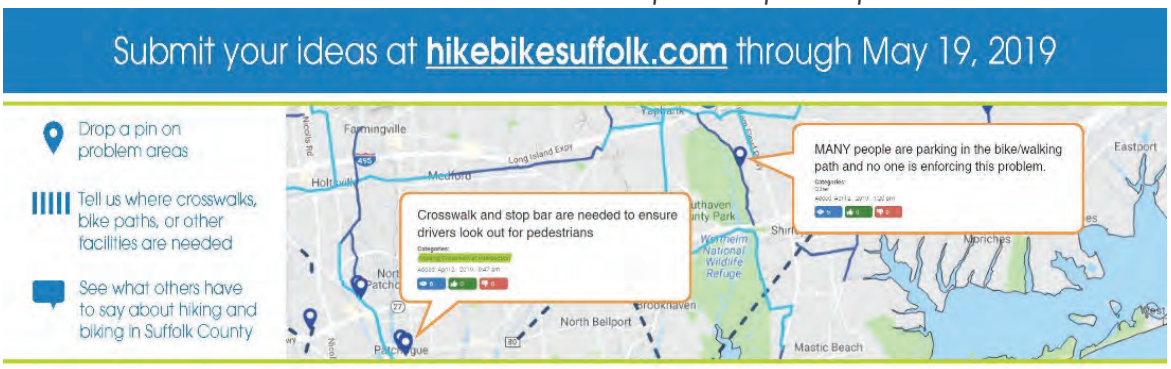
To attract participants to the table, the project team provided giveaways, such as candy, bookmarks, coupons to local businesses, and bicycle and pedestrian pins. Participants were encouraged to "Spin the Wheel," a fun activity where they could win many of these prizes while providing useful feedback on hiking and biking.

The bookmarks were instrumental in receiving critical input from folks who did not have time to use the iPads at each event or were more comfortable entering information from their home computer. The bookmarks were highly graphic, including both the URL for the online input tool as well as a mock-up of how the tool records hike and bike network gap information submitted by the public. In addition to hundreds of bookmarks handed out at the three pop-up events, bookmarks were distributed at 12 bike shops, 9 gyms, and a handful of vitamin/nutrition shops and sports clothing stores across Suffolk County.

Participants provided feedback in different ways. Project team members encouraged participants to draw hiking and biking connections or note infrastructure needs in their community. They could

Stonybrook students write where they would like to hike or bike to from campus

A screen shot of the online public input map



provide this feedback by drawing on a provided map or entering it via the online mapping tool. The online mapping tool was available on iPads at the event, but participants were encouraged to enter more feedback after the pop-up. Team members shared bookmarks with information about the online mapping tool to remind participants to enter their feedback. Moreover, the table featured a poster for participants to write where they currently like to hike or bike, as well as provide additional feedback.

EARTHSTOCK AT STONY BROOK UNIVERSITY - APRIL 19, 2019

More than 60 students, parents, faculty, staff, and community members stopped by the project table to discuss hiking and biking needs in Suffolk County. Although participants focused primarily on needs within the Stony Brook University Campus and adjacent neighborhoods, comments were collected on Sunken Meadow State Park, Wildwood State Park, and other locations throughout Suffolk County as well.

Participants shared enthusiastic support for expanding hiking and biking trails. Many shared how they would like to access existing trail networks without having to drive. Sunken

Bookmarks promoting the online public input map tool were created and distributed throughout the county

A Spin The Wheel game prompted event attendees to tell us about a specific hike, walk, or bike issue. Some just won candy!

A member of the consultant team points out parks and path connections to student about to mark up the paper maps

Meadows State Park and McAllister County Park were two examples provided. Participants also suggested a bike connection to downtown Port Jefferson would be helpful.

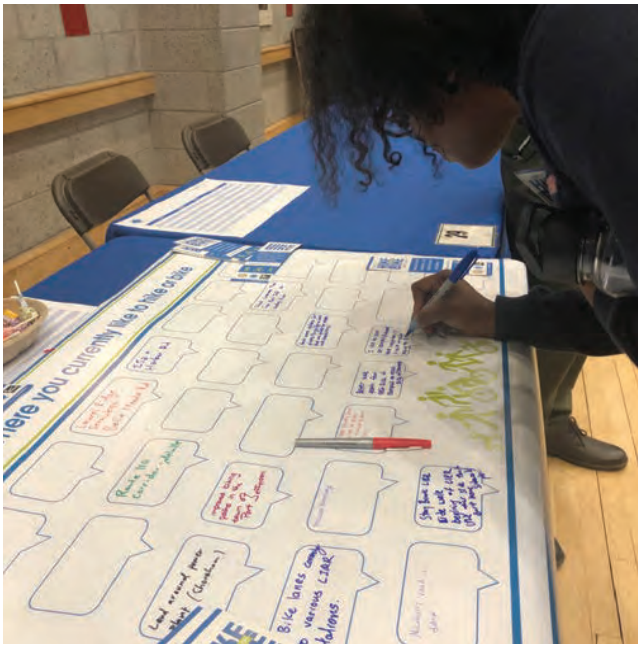
As for concerns, participants suggested that walking and biking around Stony Brook felt uncomfortable, and many suggested infrastructure enhancements such as pedestrian signals, sidewalks, or bike lanes in the vicinity of parks, Stony Brook University, and LIRR stations could help address existing gaps.

Much of the feedback provided was shared on the comment poster. Some of these comments included:

- The land around the powerplant in Shoreham could be used for trails.
- Better bike/pedestrian access to:
  - » LIRR Stations, especially Stony Brook's station
  - » West side of Stony Brook University's campus
  - » Stony Brook University Hospital
  - » Chapin Commons
- Bike parking is needed at parks, especially at McAllister County Park
- Extend greenway trail from Port Jefferson to Wading River
- Improved biking paths in Port Jefferson
- Emphasis on making trails ADA accessible

Comments left on the map recommended additional bicycling and running trails throughout the north shore, as well as improved walking connections across LIRR at Stony Brook Station.

An Earthstock attendee fills in a comment thought bubble about a desired walking destination near Port Jefferson



A member of the SCEDP team engages students at the Earthstock event

10TH ANNUAL ECO-CARNIVAL AT SEATUCK ENVIRONMENTAL ASSOCIATION (ISLIP) - APRIL 27, 2019

More than 100 participants stopped by the study table to share their input at the event. This event attracted families, resulting in many of the participants being children, parents, or grandparents. There were dozens of enthusiastic hikers and bicyclists who shared their wealth of knowledge about existing and proposed trails in Suffolk County.

The mapping activities drew a lot of feedback. Suggested trails included the following:

A member of the SCEDP team asks Seatuck pop-up attendees where they like to walk

Seatuck pop-up event attendees write their preferred hike and bike destinations

- East-west trails connecting:
  - » Islip to Montauk
  - » Robert Moses State Park to Water Island
  - » Islip Terrace to Baywood via the Southern State Parkway alignment
- • North-south trails connecting:
  - » Sunken Meadows State Park to Robert Moses State Park via the Robert Moses Causeway
  - » Shoreham to Fire Island
  - » Long Island Expressway to Stony Brook University Hospital (under the power lines)
- Caleb Smith Park to Stony Brook and East Setauket
- Robert Cushman Murphy County Park to Wildwood State Park

For the comment activity, participants shared their favorite places to hike, which included the following (among others):

- Avalon Park
- Sunken Meadow State Park
- Bayshore
- Shelter Island
- Heckscher Park
- Blydenburgh Park
- Gardiner County Park

Some additional notes provided by participants included:

- Not a lot of people know about Hallock State Park and the nearby North Fork County Preserve trails.
- There is interest in seeing a connected bike network within the communities of Patchogue, Islip, East Islip, and North Babylon
- Many people requested information about trails that exist today, including a request for a smart phone app. Two separate participants, who were local to the area, said they were unaware of the Belmont Lake State Park trails.

15K TO THE PORT JEFF BREWING COMPANY RACE - MAY 19, 2019

The 15K to the Port Jeff Brewing Company race attracted a regional crowd of adult runners and bicyclists, many from Nassau County and the New York City metro area.

More than 40 participants stopped by the study table to share their thoughts about existing and proposed trails in Suffolk County. The project team also walked through the crowd and distributed another 30 bookmarks and informed attendees about the online tool. Participants shared their favorite places to hike and bike, which included the following (among others):

- Caumsett State Park
- Sunken Meadow State Park
- Shelter Island
- City of Long Beach boardwalk and beach
- Babylon to Belmont Lakes Shared Use Path
- Port Jefferson to Setauket Shared Use Path
- Manorville
- Downtown Northport
- Calverton EPCAL (Enterprise Park)

The mapping activities drew considerable feedback. Suggested connections and trails improvements include:

- General:
  - » On-road bike facilities to Stonybrook University
- East-west:
  - » Extension of the Port Jefferson to Setauket Shared-use Path to the east
  - » Extension of the Port Jefferson to Setauket Shared-use Path to the west (from Route 25A lot in East Setauket, to the west, and around to Stony Brook University).

Members of the consultant tam prepare for the runners to arrive at the 15K to the Port Jeff Brewing Company

- North-south:
    - » On-road bike facilities between the Smithtown Bypass and Ronkonkoma

Some additional notes and comments by participants included:

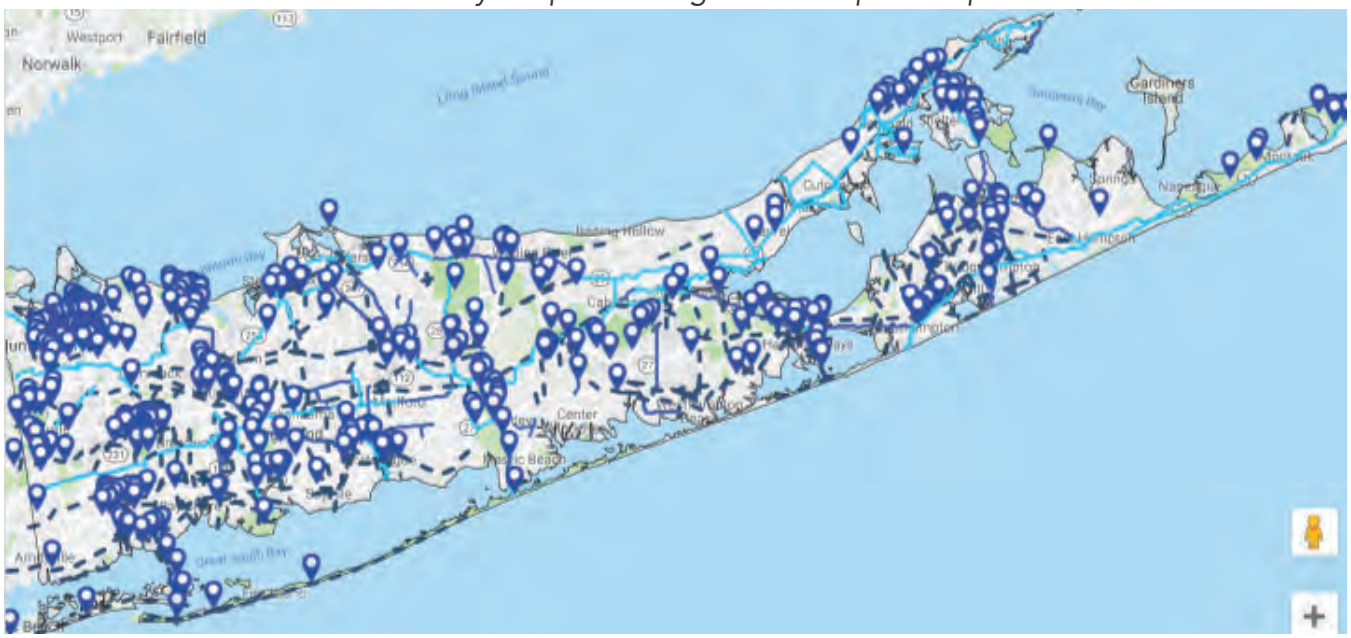
- Several attendees wanted to provide comments on bicycling in Nassau County.
- One attendee suggested focusing on the main roads for improvements in Suffolk County.
- Another attendee stated that it is nearly impossible to get around Long Island without a car.
- One bicyclist stated that he often rode around the Babylon/Bayshore Area. He cited that motorists are particularly aggressive towards bicyclists in this area, especially those riding alone.
- Many were impressed that the County created the online tool to collect information. Though it was difficult to use the iPad at the event because of the sunny (and windy!) weather, many took a bookmark with them and agreed to do the survey after the event.

ONLINE PUBLIC INPUT MAP

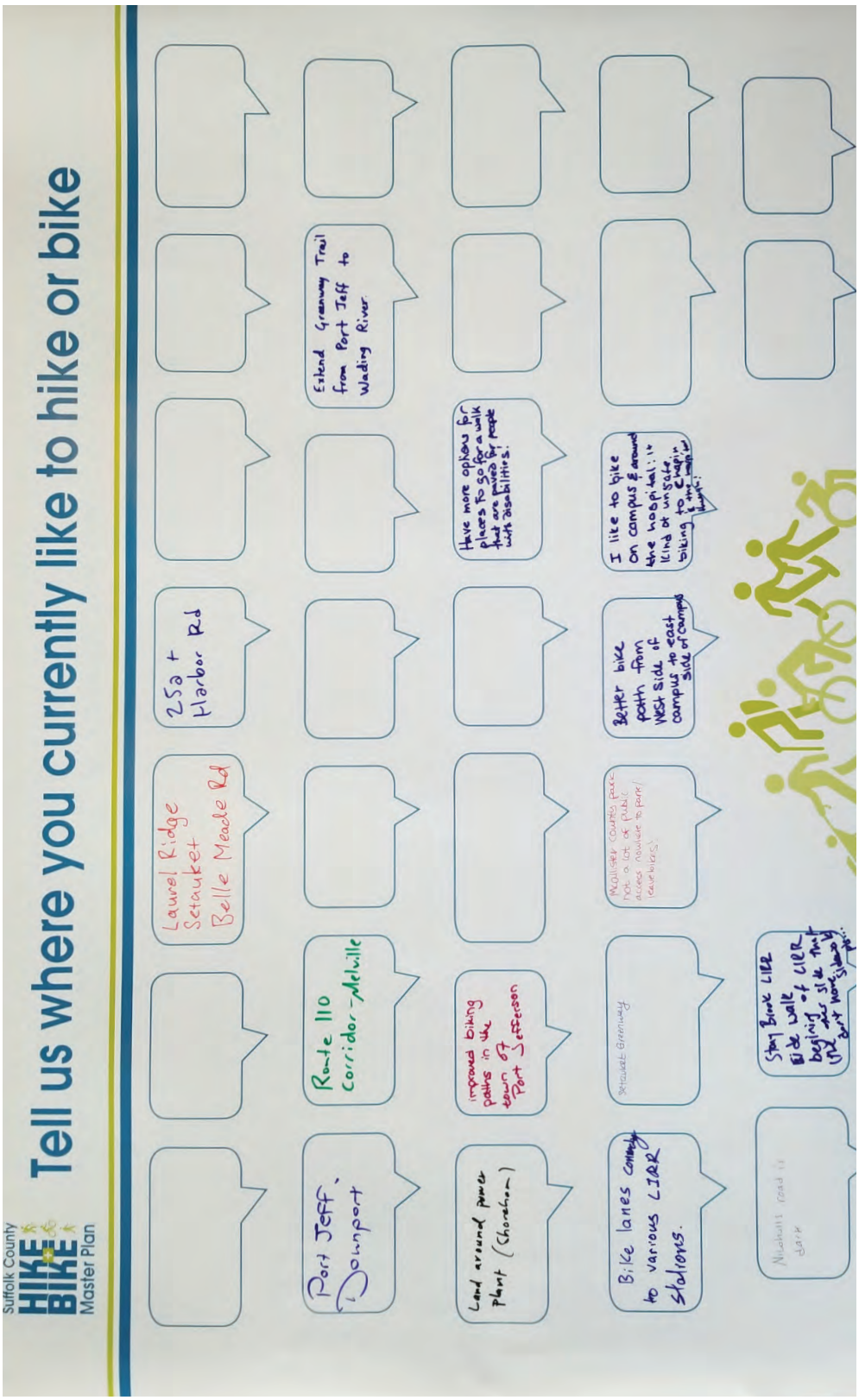
The online public input tool was instrumental in receiving public input from those who attended the three pop up events as well as many other folks who saw the bookmarks at local retail establishments or heard about the tool online. The screenshot below shows the final result of the lines drawn and points dropped using the online public input tool.

The following pages include photographs of each of the large format paper maps and comment boards that the public were invited to draw on at each of the three pop up events.

Points drawn by the public using the online public input tool

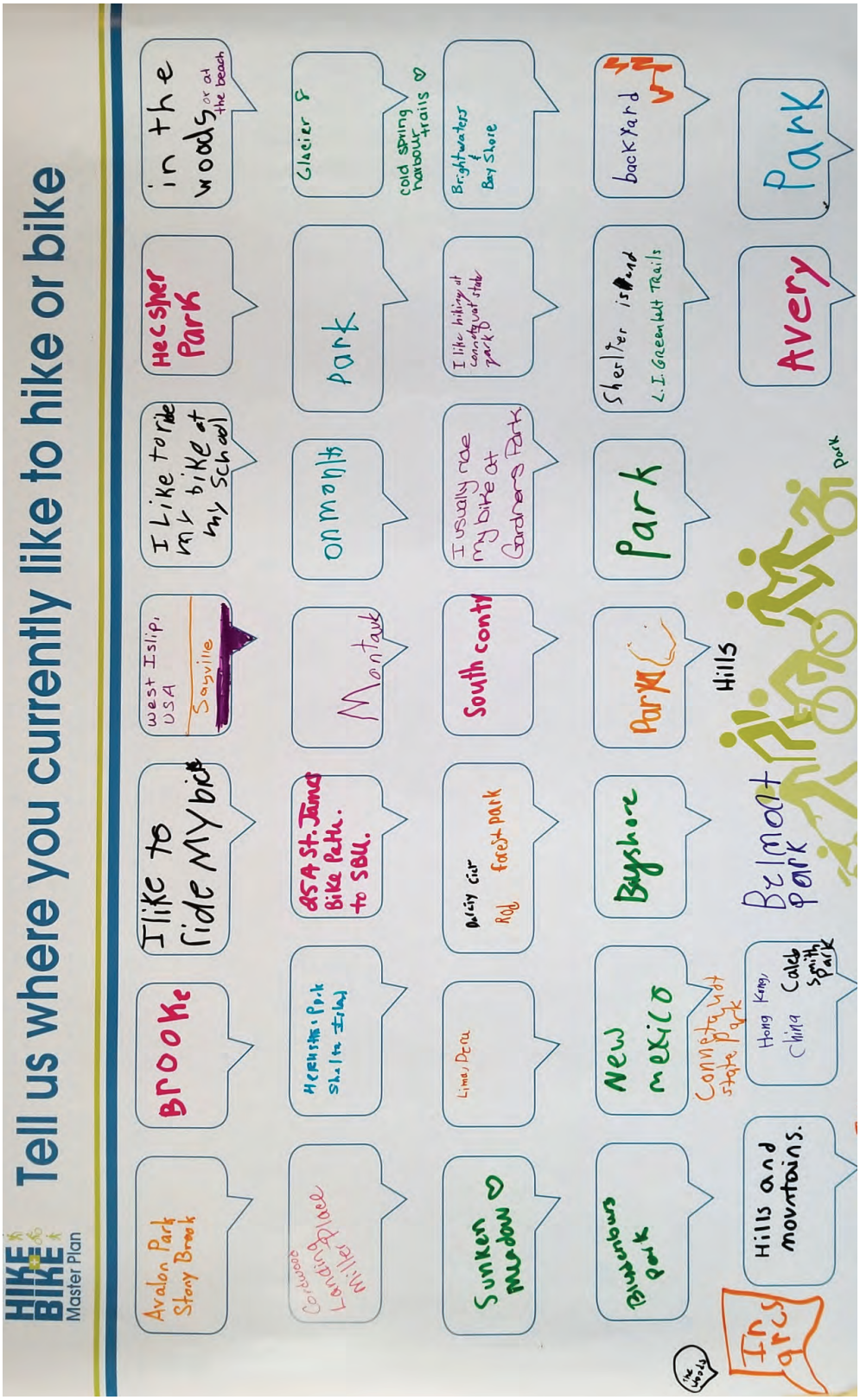


Pop-Up Event #1 | Stony Brook University Earthstock on April 19, 2019 | Comment Board

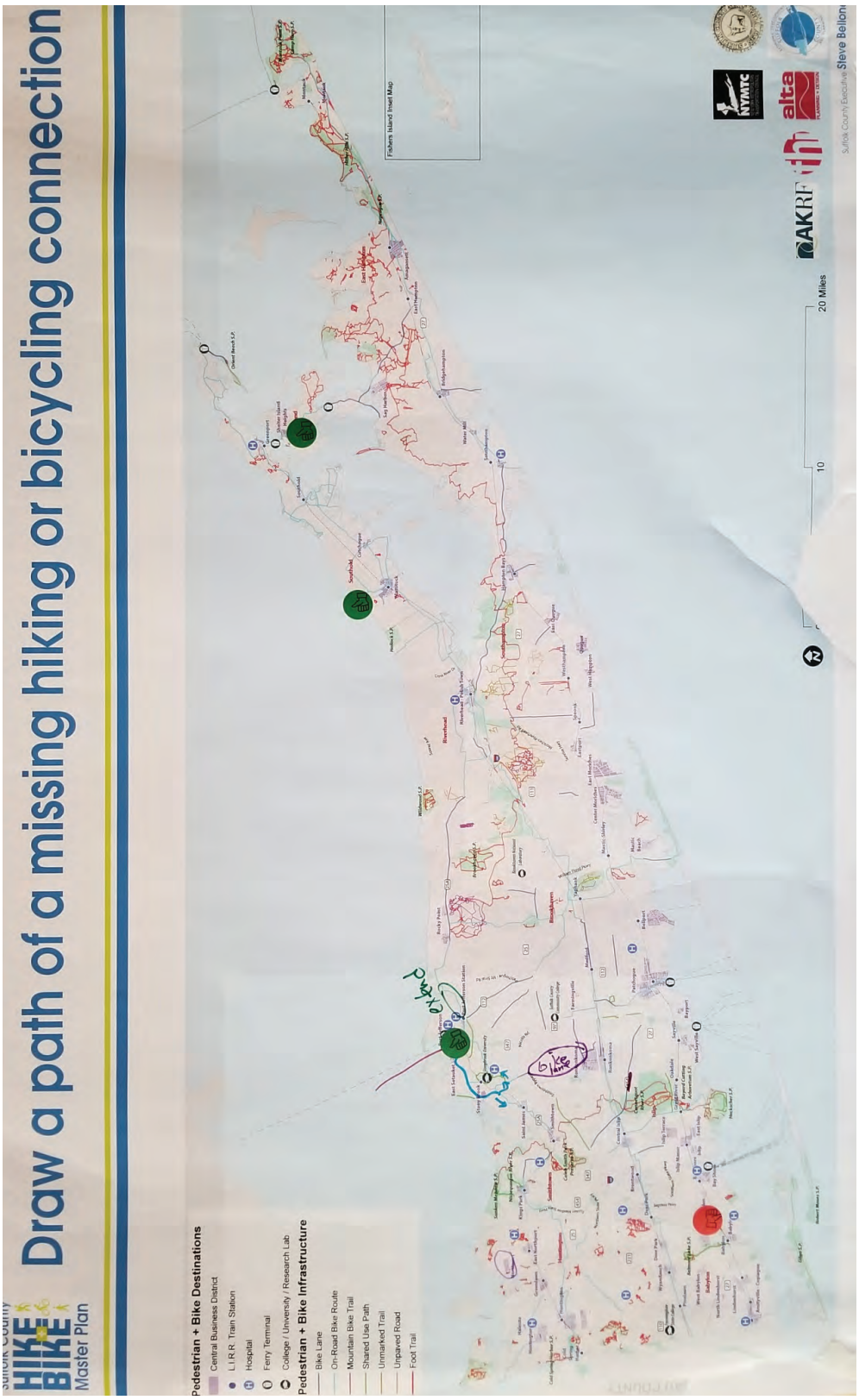


Pop-Up Event #2 | Eco-Carnival at Seatuck Environmental Center on April 27, 2019 | Map Mark Ups

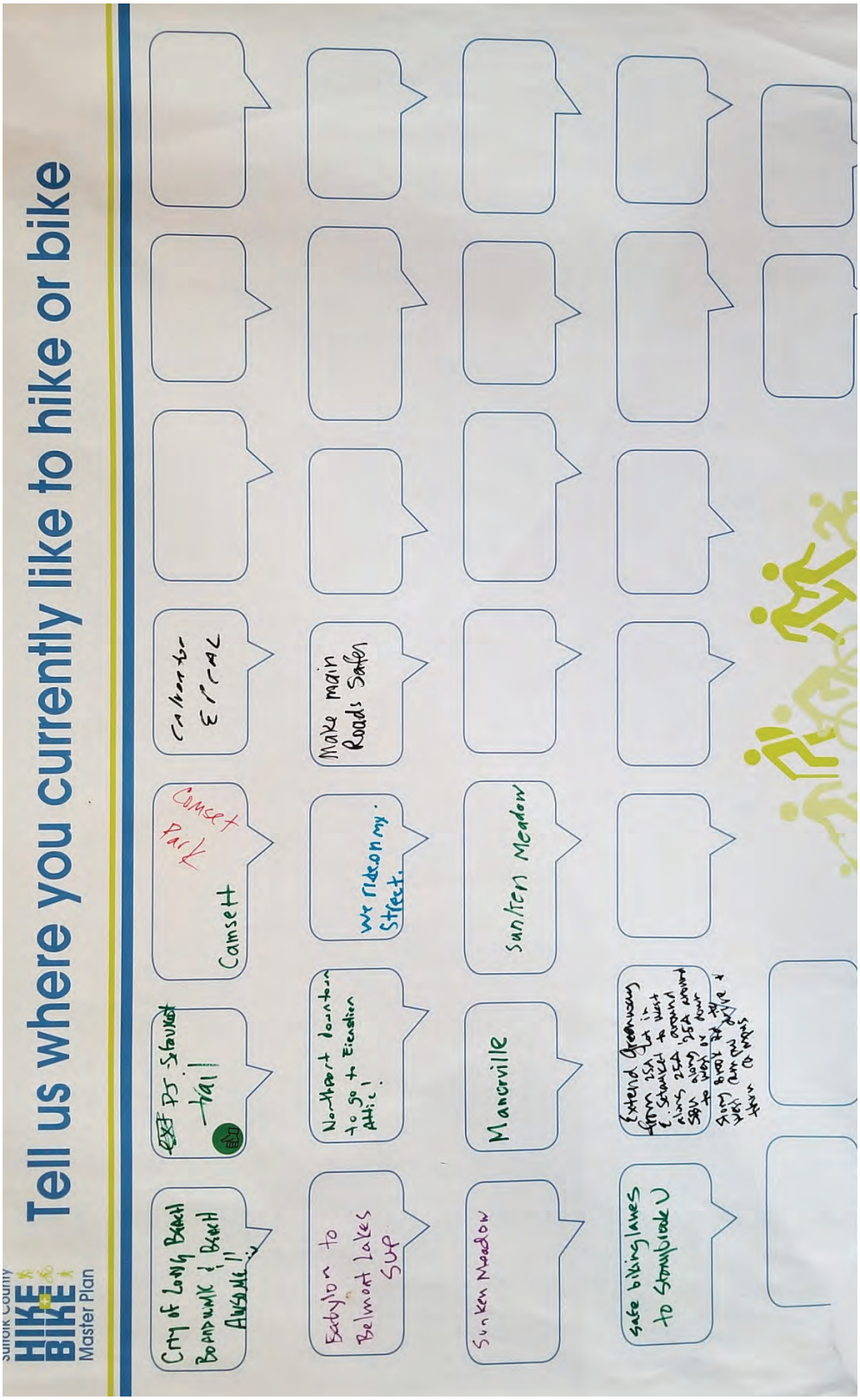
Pop-Up Event #2 | Eco-Carnival at Seatuck Environmental Center on April 27, 2019 | Comment Board



Pop-Up Event #3 | Port Jefferson 15K on May 19, 2019 in Port Jefferson | Map Mark Ups



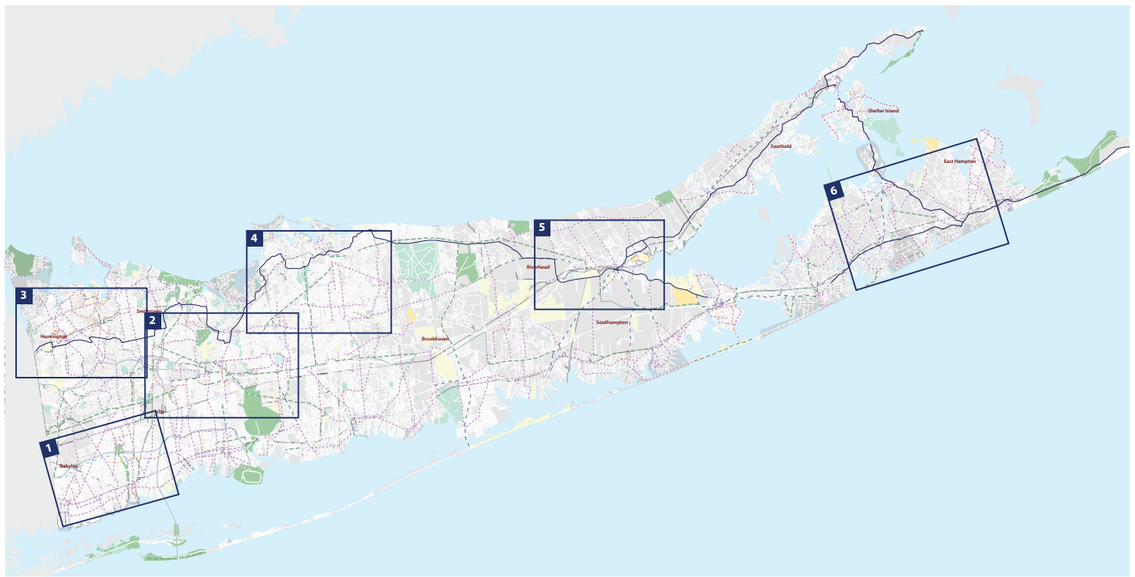
Pop-Up Event #3 | Port Jefferson 15K on May 19, 2019 in Port Jefferson | Comment Board



APPENDIX 3: PROJECT MAPS

- EXISTING CONDITIONS
  - » Eastern Suffolk County
  - » Western Suffolk County
- GAP ANALYSIS
  - » Eastern Suffolk County
  - » Western Suffolk County
- TIER I CORRIDORS
  - » Eastern Suffolk County
  - » Western Suffolk County
- INSET MAPS
  - » 1. Babylon Inset - Existing and Proposed
  - » 2. Smithtown / Islandia Inset - Existing and Proposed
  - » 3. Huntington Inset - Existing and Proposed
  - » 4. Port Jefferson Inset - Existing and Proposed
  - » 5. Riverhead Inset - Existing and Proposed
  - » 6. Sag Harbor Inset - Existing and Proposed

The locations of the six inset maps. The numbers in the map graphic correspond with the numbered map title list above.



WESTERN SUFFOLK COUNTY - EXISTING CONDITIONS

NASSAU COUNTY

Caumsett S.P.
Target Rock National Wildlife Refuge
Asharoken
Eloyd Harbor
Huntington Bay
Northport
Sunken Meadow S.P.
Nissequogue River S.P.
Nissequogue
Head of the Harbor
Old Field
Poquott
Belle Terre
Port Jefferson
Stony Brook University
Shoreham
Wildwood S.P.
Brookhaven S.P.
Riverhead
Rocky Point Pine Barrens
Cathedral Pines County Park
Long Island State Pine Barrens
David A. Sarnoff Preserve
Suffolk County Community College
Southampton
Smithtown
Cold Spring Harbor S.P.
Huntington
Caleb Smith S.P.
Village of the Branch
Lake Grove
Brookhaven
High-lighted NY112 bike lane segment to be constructed in 2020
Islandia
Brentwood S.P.
Suffolk County Community College
Islip
Connetquot River S.P.
Wertheim National Wildlife Refuge
Patchogue
Bellport
West Hampton Dunes
Fire Island National Seashore
Outlined Long Island Greenway Trail segment to be constructed in 2020
Belmont Lake S.P.
Babylon
Bayard Cutting Arboretum
Brightwaters
Lindenhurst
Amityville
Seatuck National Wildlife Refuge
Heckscher S.P.
Ocean Parkway shared-use path is under construction
Ocean Beach
Saltaire
Captree S.P.
Gilgo S.P.
Robert Moses S.P.
Match Line

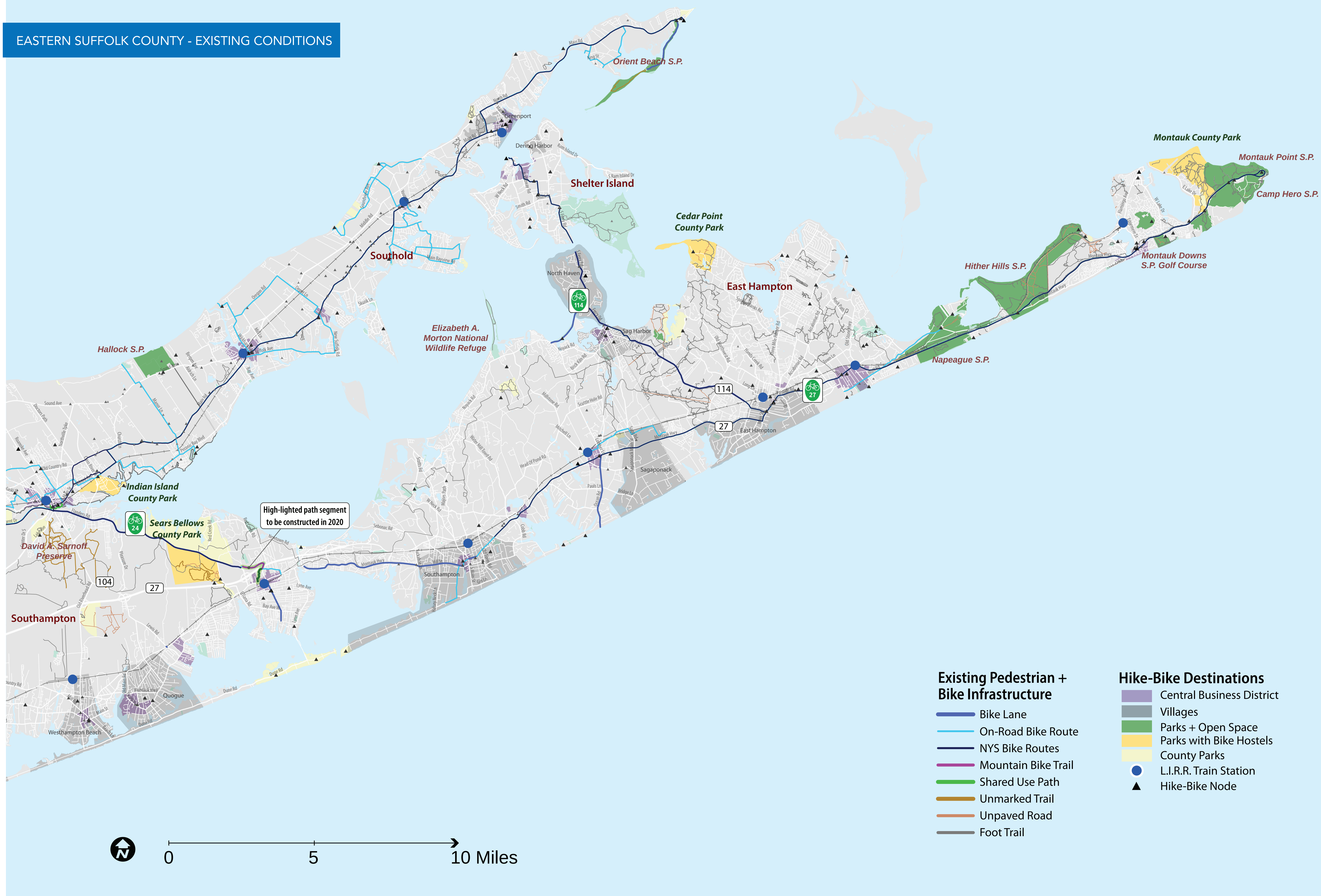
0 5 10 Miles

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node


EASTERN SUFFOLK COUNTY - EXISTING CONDITIONS
Orient Beach S.P.
Greenport
Dering Harbor
Shelter Island
Southold
Cedar Point
County Park
Montauk County Park
Montauk Point S.P.
Camp Hero S.P.
Montauk Downs
S.P. Golf Course
Hither Hills S.P.
East Hampton
North Haven
Sag Harbor
Elizabeth A.
Morton National
Wildlife Refuge
Hallock S.P.
Napeague S.P.
114
27
East Hampton
Sagaponack
Indian Island
County Park
Sears Bellows
County Park
High-lighted path segment
to be constructed in 2020
David A. Sarnoff
Preserve
24
104
Southampton
Southampton
Quogue
Westhampton Beach
Existing Pedestrian +
Bike Infrastructure
Bike Lane
On-Road Bike Route
NYS Bike Routes
Mountain Bike Trail
Shared Use Path
Unmarked Trail
Unpaved Road
Foot Trail
Hike-Bike Destinations
Central Business District
Villages
Parks + Open Space
Parks with Bike Hostels
County Parks
L.I.R.R. Train Station
Hike-Bike Node
0
5
10 Miles

WESTERN SUFFOLK COUNTY - GAPS ANALYSIS

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node

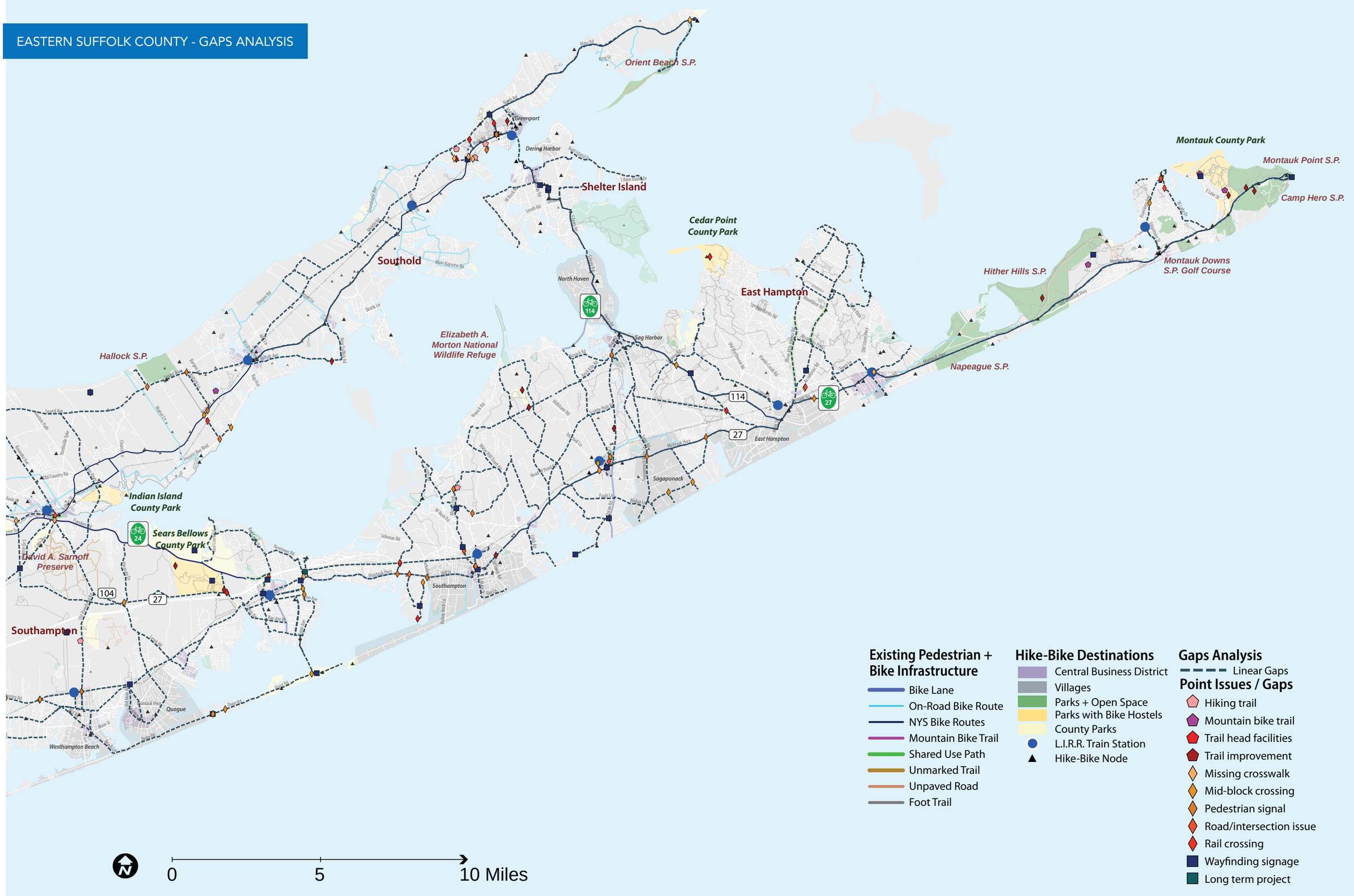
Gaps Analysis

- Linear Gaps

Point Issues / Gaps

- Hiking trail
- Mountain bike trail
- Trail head facilities
- Trail improvement
- Missing crosswalk
- Mid-block crossing
- Pedestrian signal
- Road/intersection issue
- Rail crossing
- Wayfinding signage
- Long term project

EASTERN SUFFOLK COUNTY - GAPS ANALYSIS



Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node

Gaps Analysis

- Linear Gaps

Point Issues / Gaps

- Hiking trail
- Mountain bike trail
- Trail head facilities
- Trail improvement
- Missing crosswalk
- Mid-block crossing
- Pedestrian signal
- Road/intersection issue
- Rail crossing
- Wayfinding signage
- Long term project

WESTERN SUFFOLK COUNTY - TIER I CORRIDORS

NASSAU COUNTY

Caumsett S.P.
Target Rock National Wildlife Refuge
Asharoken
Lloyd Harbor
Huntington Bay
Northport
Sunken Meadow S.P.
Nissequogue River S.P.
Nissequogue
Head of the Harbor
Old Field
Poquott
Belle Terre
Port Jefferson
Stony Brook University
Shoreham
Wildwood S.P.
Brookhaven S.P.
Riverhead
Rocky Point Pine Barrens
Cathedral Pines County Park
Long Island State Pine Barrens
David A. Sarnoff Preserve
Suffolk County Community College
Southampton
Smithtown
Cold Spring Harbor S.P.
Huntington
Caleb Smith S.P.
Village of the Branch
Lake Grove
Brookhaven
Islandia
Brentwood S.P.
Suffolk County Community College
Islip
Connetquot River S.P.
Wertheim National Wildlife Refuge
West Hampton Dunes
Patchogue
Bellport
Belmont Lake S.P.
Bayard Cutting Arboretum
Fire Island National Seashore
Babylon
Lindenhurst
Amityville
Seatuck National Wildlife Refuge
Heckscher S.P.
Ocean Beach
Saltaire
Captree S.P.
Gilgo S.P.
Robert Moses S.P.
Match Line

Outlined Long Island Greenway Trail segment to be constructed in 2020

High-lighted NY112 bike lane segment to be constructed in 2020

Ocean Parkway shared-use path is under construction

0 5 10 Miles

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes
- Buffered Bike Lanes
- Sidewalk
- Long Term Project
- **Tier I Corridors** *(Yellow Underlay)*

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node

EASTERN SUFFOLK COUNTY - TIER I CORRIDORS

Orient Beach S.P.
Greenport
Dering Harbor
Shelter Island
Southold
Cedar Point County Park
High-lighted segment to be completed in 2022
High-lighted segment to be completed in 2020
East Hampton
North Haven
Sag Harbor
Elizabeth A. Morton National Wildlife Refuge
Hallock S.P.
Hither Hills S.P.
Montauk County Park
Montauk Point S.P.
Camp Hero S.P.
Montauk Downs S.P. Golf Course
Napeague S.P.
Indian Island County Park
Sears Bellows County Park
David A. Sarnoff Preserve
High-lighted path segment to be constructed in 2020
Southampton
Sagaponack
Quogue
Westhampton Beach

0 5 10 Miles

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes
- Buffered Bike Lanes
- Sidewalk
- Long Term Project
- **Tier I Corridors** *(Yellow Underlay)*

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- County Parks
- L.I.R.R. Train Station
- Hike-Bike Node

Suffolk County Hike + Bike Master Plan

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Right of Way

- Utility Right of Way

Area Nodes

Node Icon	Score	Quantity
▲	1	2
▲	2	11
▲	3	5
▲	4	23
▲	5	5

NASSAU COUNTY

ISLIP

BABYLON

Wyandanch CBD

Wyandanch Station

Deer Park CBD

Deer Park Station

Nicolls Rd

Deer Park Ave

Commack Rd

Belmont Lake S.P.

Wellwood Ave

Straight Path

West Babylon CBD

Southern State Pkwy

W Bay Shore Rd

Sagtikos Pkwy

Broadway

New Hwy

North Lindenhurst CBD

109

County Line Rd

110

Great Neck Rd

Sunrise Hwy

27

North Babylon CBD

231

Bay Shore Rd

Udall Rd

Amityville Station

Dixon Ave

Amityville CBD

Amityville

Amityville South CBD

Copiague Station

Copiague CBD

W Hoffman Ave

Lindenhurst Station

Lindenhurst CBD

Lindenhurst

Montauk Hwy

Great East Neck Rd

Little East Neck Rd

Park Ave

Babylon

Babylon CBD

Babylon Station

E Main St

John St

Union Blvd

West Islip CBD

Higbie Ln

27A

Robert Moses Cswy

Bergen Ave

W Montauk Hwy

Brightwaters

Brightwaters CBD

Babylon Inset: Existing Conditions

0 0.5 1.0 1.5 Miles

DRAFT

Suffolk County Hike + Bike Master Plan

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Proposed Point Projects

TRAIL
- Hiking trail opportunity
- Mountain bike trail needed
- Trail head facilities needed
- Trail improvement needed

CROSSING
- Missing crosswalk at intersection
- Need mid-block crossing treatment
- Pedestrian signal needed
- Road/intersection too wide
- Rail crossing

OTHER
- Wayfinding signage needed
- Long term opportunity

Right of Way

- Utility Right of Way

Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes & Signage*
- Buffered Bike Lanes
- Sidewalk
- Long term project

**Where space allows, consider increasing the level of separation from motor vehicle traffic by constructing buffered bike lanes*

A — Additional graphics available in Final Report

5 Highest Scoring Projects

Project ID	Proposed Facility	On (Street)	To - From (Streets)	Score
371	Bike Lanes	Long Island Ave	Deer Park Ave - Straight Path	84
261	Bike Lanes	Straight Path	Long Island Ave - Bethpage Rd	85
131	Bike Lanes	Oak/Hoffman/Trolley Line/Railroad Ave	Ketchum Ave - Deer Park Ave	86
691	Bike Lanes	Dixon Ave	34th St - Broadway	87
151	Long Term Shared-Use Path	Southern State Parkway	Carmans Rd - Heckscher Pkwy	89

Area Nodes

Node Icon	Score	Quantity
▲	1	4
▲	2	16
▲	3	12
▲	4	61
▲	5	16

NASSAU COUNTY

ISLIP

Wyandanch CBD
Wyandanch Station
371 Long Island Ave
370 Acorn St / Long Island Ave
157 Long Island Ave
Deer Park CBD
Deer Park Station
Grand Blvd
758 Corbin Ave
408 W 10th St
996 Brook Ave
885 W 24th
405 Central Ave
406 W 10th St
395 Carlls Path
413 Oakland Ave
886 Westview Ave
410 Cherry Ave
203 Woods Rd
394 Carlls Path
731 Carlls Path
Belmont Lake S.P.
65 Existing Trail - Belmont Lake State Park
887 Victoria / Chyam
651 Deer Park Ave
Bay Shore Rd
882 August Rd
436 Udall Rd
Howells Rd
738 Wellwood Ave
259 Little East Neck Rd
151 Southern State Pkwy
442 Broadhollow Rd
31 Route 109
35 15th St / Bailey St / Barnum St / Seward St
261 Straight Path
BABYLON
West Babylon CBD
272 Belmont Ave
273 Belmont Ave
274 America Ave
276 Hubbards Path
17 Miller Ave / Phelps Ln
772 Hunter Ave
776 Hunter Ave
870 Hunter Ave
78 Fern Pl / Gardiner Dr
771 Howells Rd
464 Muncey Rd
469 Muncey Rd
177 Muncey Rd
16 Parkway Ave / Columbus Blvd / Center St / Walnut Rd / Albany Ave
891 Albany Ave
260 New Hwy
North Lindenhurst CBD
Sunrise Hwy
883 Belmont Ave
North Babylon CBD
278 Higbie Ln
279 Higbie Ln
280 Higbie Ln
178 Deer Park Ave
Route 231
863 Udall Rd
231
109
110
27
439 Albany Ave
690 Great Neck Rd
691 Dixon Ave
Amityville Station
Amityville CBD
Amityville
Amityville South CBD
Copiague Station
Copiague CBD
689 Brookside Ct
688 W Gates Ave
Lindenhurst Station
387 E Gates Ave
Lindenhurst
Lindenhurst CBD
892 N Wellwood Ave
890 Great East Neck Rd / Bergen Ave
131 Oak / Hoffman Trolley Line / Railroad
A
See Proposed Project A Graphics
Babylon
Babylon CBD
Babylon Station
884 Cooper / Willow / Shore / Robbins
521 Simon Street / John St
802 George St
West Islip CBD
52 Union Blvd
Brightwaters
Brightwaters CBD
27A
631 Montauk Hwy
630 W Montauk Hwy
4 Sunken Meadow Pkwy / Sagtikos Pkwy / Robert Moses Cswy
14 Fire Island Ave
626 Montauk Hwy
367 Bayview Ave

Babylon Inset - Proposed Network

0 — 0.5 — 1.0 — 1.5 Miles

DRAFT

Suffolk County Hike + Bike Master Plan

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Right of Way

- Utility Right of Way

Area Nodes

Node Icon	Score	Quantity
▲	1	2
▲	2	11
▲	3	5
▲	4	23
▲	5	5

25A
Indian Head Rd
N Country Rd
347
Middle Country Rd
Smithtown CBD
W Main St
E Main St
Smithtown Station
Village of the Branch
Lake Grove
BROOKHAVEN
Caleb Smith Park Preserve
SMITHTOWN
Jericho Tpke
HUNTINGTON
Sunken Meadow Pkwy
Terry Rd
111
Nesconset Hwy
Smithtown Blvd
Lake Shore Rd
Roosevale Ave
Townline Rd
Portion Rd
Lake Ronkonkoma
Veterans Memorial Hwy
Veterans Hwy
Wheeler Rd
Ocean Ave
Motor Pkwy
Vanderbilt Pkwy
Northern State Pkwy
Vanderbilt Motor Pkwy
Rabro Dr
Old Willets Path
495
Islandia
Ronkonkoma CBD
Ronkonkoma Station
Commack Rd
Crooked Hill Rd
ISLIP
College Rd
Brentwood S.P.
Wicks Rd
Joshuas Path
Central Islip CBD
E Suffolk Ave
Central Islip Station
454
Lakeland Ave
Connetquot River S.P.
Suffolk Ave
Brentwood CBD
Brentwood Station
Islip Ave
Carleton Ave
Sagtikos Pkwy
5th Ave
BABYLON
Deer Park Station

Smithtown / Islandia - Existing Conditions

0 0.5 1.0 1.5 2.0 Miles

Suffolk County Hike + Bike Master Plan

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Proposed Point Projects

TRAIL
- Hiking trail opportunity
- Mountain bike trail needed
- Trail head facilities needed
- Trail improvement needed

CROSSING
- Missing crosswalk at intersection
- Need mid-block crossing treatment
- Pedestrian signal needed
- Road/intersection too wide
- Rail crossing

OTHER
- Wayfinding signage needed
- Long term opportunity

Right of Way

- Utility Right of Way

Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes & Signage*
- Buffered Bike Lanes
- Sidewalk
- Long term project

*Where space allows, consider increasing the level of separation from motor vehicle traffic by constructing buffered bike lanes

B Additional graphics available in Final Report

5 Highest Scoring Projects

Project ID	Proposed Facility	On (Street)	To - From (Streets)	Score
166	Shared-use Path	Nesconset Hwy	Jayne Blvd - Middle Country Rd	86
596	Bike Lanes	Washington Ave	L.I. Motor Pkwy - Suffolk Ave	86
976	Long Term Shared-use Path	Motor Pkwy	Express Dr S - Wheeler Rd	87
966	Sidewalk	Crooked Hill Rd	Commack Rd - Wicks Rd	87
421	Sidewalk	Jefferson Ave	Arthur St - Suffolk Ave	91

Area Nodes

Node Icon	Score	Quantity
▲	1	4
▲	2	6
▲	3	14
▲	4	88
▲	5	21

B See Proposed Project B Graphics

Smithtown / Islandia - Proposed Network

0 0.5 1.0 1.5 2.0 Miles

Suffolk County Hike + Bike Master Plan

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Right of Way

- Utility Right of Way

Area Nodes

Node Icon	Score	Quantity
▲	1	2
▲	2	11
▲	3	5
▲	4	23
▲	5	5

Huntington Bay
Halesite CBD
Mill Dam Rd
E Main St
25A
Centerport Rd
Fort Salonga Rd
Northport
East Northport CBD
Northport Station
Prime Ave
Main St
W Main St
High St
Huntington CBD
Cold Spring Harbor CBD
Greenlawn CBD
Greenlawn Station
Pulaski Rd
Elwood Rd
Broadway
Cold Spring Harbor S.P.
New York Ave
Huntington Station CBD
Park Ave
Huntington Station
E Pulaski Rd
Trail View S.P.
Oakwood Rd
W Pulaski Rd
Harbor Rd
Woodbury Rd
Huntington Manor CBD
HUNTINGTON
NASSAU COUNTY
Cold Spring Harbor Station
Huntington Station South CBD
E Jericho Tpke
Jericho Tpke
25
W Jericho Tpke
Deer Park Rd
E Deer Park Rd
Northern State Pkwy
Deer Park Ave
Walt Whitman Rd
110
Vanderbilt Pkwy

Huntington - Existing Conditions

0 0.5 1.0 1.5 Miles

Suffolk County Hike + Bike Master Plan

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Proposed Point Projects

TRAIL
- Hiking trail opportunity
- Mountain bike trail needed
- Trail head facilities needed
- Trail improvement needed

CROSSING
- Missing crosswalk at intersection
- Need mid-block crossing treatment
- Pedestrian signal needed
- Road/intersection too wide
- Rail crossing

OTHER
- Wayfinding signage needed
- Long term opportunity

Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes & Signage*
- Buffered Bike Lanes
- Sidewalk
- Long term project

*Where space allows, consider increasing the level of separation from motor vehicle traffic by constructing buffered bike lanes

Right of Way

- Utility Right of Way

Area Nodes

Node Icon	Score	Quantity
▲	1	5
▲	2	10
▲	3	8
▲	4	34
▲	5	6

5 Highest Scoring Projects

Project ID | Proposed Facility | On (Street) | To - From (Streets) | Score
693 | Bike Lanes | Broadway | New York Ave - Park Ave | 80
287 | Sidewalk | Panorama Dr | Horizon Dr - Regal Dr | 86
267 | Bike Lanes | Lowndes Ave | New York Ave - Railroad St | 86
339 | Bike Lanes | Railroad St | W Rogues Path - New York Ave | 86
119 | Bike Lanes | New York Ave | Main St - Wolf Hill Rd | 86

Huntington - Proposed Network

0 0.5 1.0 1.5 Miles

Huntington Bay
Halesite CBD
Cold Spring Harbor CBD
Huntington CBD
Huntington Station CBD
Huntington Manor CBD
Huntington Station South CBD
Greenlawn CBD
Northport
East Northport CBD
Northport Station
Greenlawn Station
Huntington Station
Cold Spring Harbor Station
Cold Spring Harbor S.P.
Trail View S.P.
NASSAU COUNTY
HUNTINGTON
25A
25
110
646 Southdown Rd / Browns Rd / W Shore Rd / Mill Dam Rd
222 Cove Rd
233 Huntington Bay Rd
308 Flower Hill Rd
894 Washington Dr
Fleets Cove Rd
895
29 Washington Dr / Mill Dam Rd / Prospect Rd
319 Prospect Rd
988 Centershore Rd
317 Little Neck Rd
Woodbine Ave
888
709 Ocean Ave / Reservoir Ave
880 Vernon Valley Rd
320 Fort Salonga Rd
234 Main / E Main / Fort Salonga
336 Centershore Rd S
667 Centerport Rd
327 Centerport Rd
960 Old Field Rd
985 Old Field Rd
268 Greenlawn Rd
970 Greenlawn Rd
984 E Main St
11 New York Ave
493 W Neck Rd / Lloyd Harbor Rd / Target Rock Rd
647 W Main St
235 Goose Hill Rd
650 Harbor Rd
649 N Hempstead Tpke
648 Lawrence Hill Rd
329 Soundview Rd
294 Holdsworth Dr
295 Horizon Dr
287 Panorama Dr
986 Regal Dr
266 Tower St
267 Lowndes Ave
693 Broadway
298 Park Ave
222 Park Ave
339 Railroad St
119 New York Ave
813 E Pulaski Rd
167 Pulaski Rd
330 Frazer Dr
992 Butterfield Dr
325 Broadway
299 Tilden Ln
300 Dunlop Rd
301 Greenlawn Rd
302 Smith St
326 Broadway
991 Pulaski Rd
322 Pulaski Rd
935 Pulaski Rd
334 Manor Rd N
324 Cuba Hill Rd
347 Elwood Rd
Clay Pitts Rd
Cedar Rd
228 Larkfield Rd
Burr Rd
333 Little Plains Rd
242 Broadway
335 Manor Rd
365 W Pulaski Rd
297 Oakwood Rd
724 Woodbury Rd
265 Depot Rd
652 Park Ave
665 Dix Hills Rd
819 Pidgeon Hill Rd
262 Pidgeon Hill Rd
264 Pidgeon Hill Rd
579 Walt Whitman Rd
730 Scuttab Rd
501 Old Country Rd
653 Deer Park Rd
142 Northern State Pkwy
237 Deer Park Ave
391 Caledonia Rd
364 Daly Rd
449 Utility ROW
450 Utility ROW
723 Jericho Tpke
743 Vanderbilt Pkwy
918 Vanderbilt Pkwy
801 Vanderbilt Pkwy
403 Carll's Straight Path

Suffolk County Hike + Bike Master Plan

Port Jefferson - Existing Conditions

0 0.5 1.0 1.5 2.0 Miles

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Right of Way

- Utility Right of Way

Area Nodes

Node Icon	Score	Quantity
▲	1	2
▲	2	11
▲	3	5
▲	4	23
▲	5	5

Belle Terre
Poquott
East Setauket CBD
W Broadway
Port Jefferson
Port Jefferson CBD
Port Jefferson Station CBD
Hallock Ave
Patchogue Rd
Patchogue-Mount Sinai Rd
25A
347
112
BROOKHAVEN
Nesconset Hwy
Nicolls Rd
Middle Country Rd
25
Lake Grove
Stony Brook Station
Stony Brook CBD
Nissequogue
Head of the Harbor
Saint James Station
Saint James CBD
SMITHTOWN
N Country Rd
Smithtown CBD
E Main St
111

Suffolk County Hike + Bike Master Plan

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Proposed Point Projects

TRAIL
- Hiking trail opportunity
- Mountain bike trail needed
- Trail head facilities needed
- Trail improvement needed

CROSSING
- Missing crosswalk at intersection
- Need mid-block crossing treatment
- Pedestrian signal needed
- Road/intersection too wide
- Rail crossing

OTHER
- Wayfinding signage needed
- Long term opportunity

Right of Way

- Utility Right of Way

Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes & Signage*
- Buffered Bike Lanes
- Sidewalk
- Long term project

**Where space allows, consider increasing the level of separation from motor vehicle traffic by constructing buffered bike lanes*

C Additional graphics available in Final Report

Area Nodes

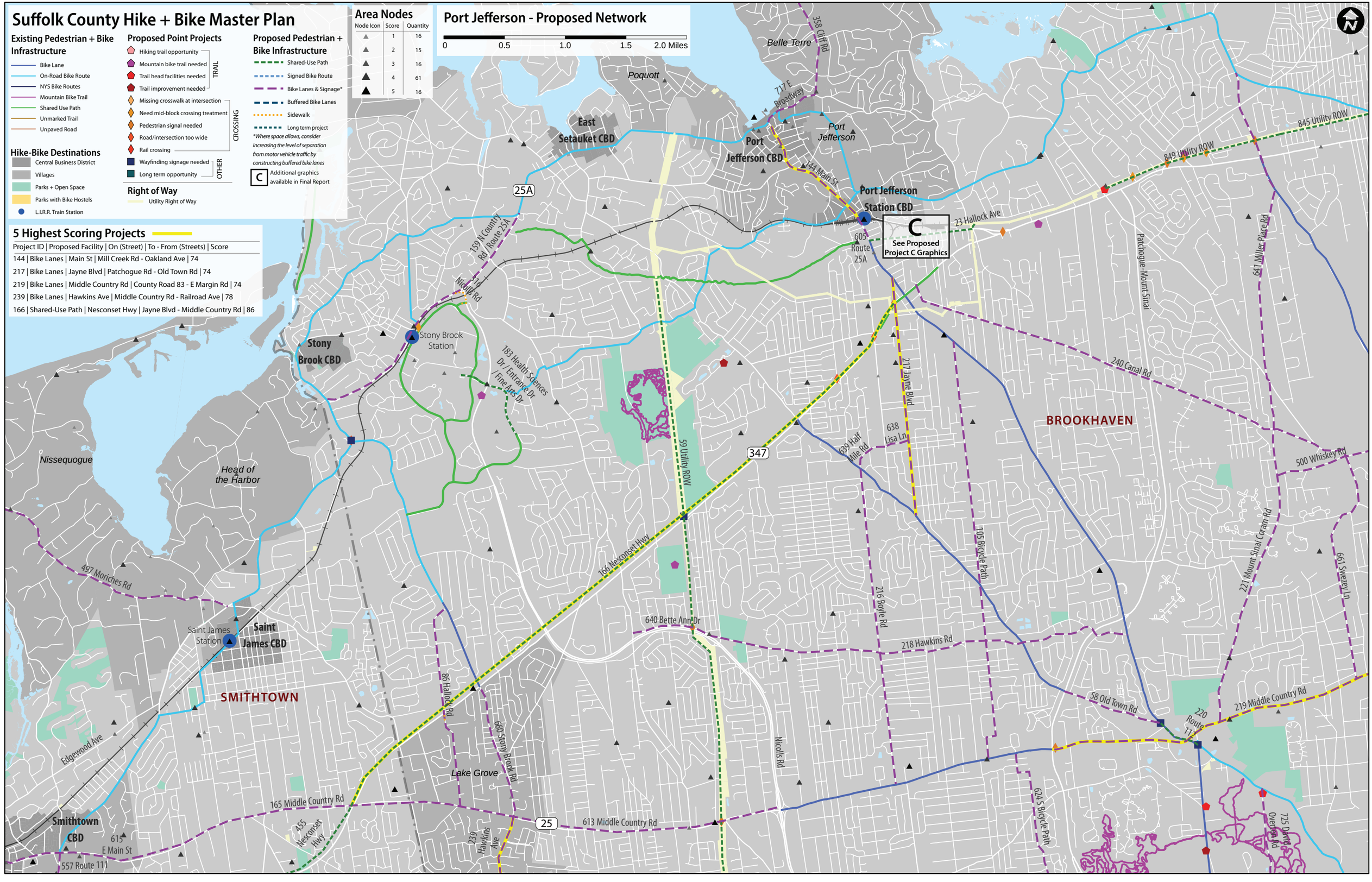
Node Icon	Score	Quantity
▲	1	16
▲	2	15
▲	3	16
▲	4	61
▲	5	16

Port Jefferson - Proposed Network

0 0.5 1.0 1.5 2.0 Miles

5 Highest Scoring Projects

Project ID | Proposed Facility | On (Street) | To - From (Streets) | Score
144 | Bike Lanes | Main St | Mill Creek Rd - Oakland Ave | 74
217 | Bike Lanes | Jayne Blvd | Patchogue Rd - Old Town Rd | 74
219 | Bike Lanes | Middle Country Rd | County Road 83 - E Margin Rd | 74
239 | Bike Lanes | Hawkins Ave | Middle Country Rd - Railroad Ave | 78
166 | Shared-Use Path | Nesconset Hwy | Jayne Blvd - Middle Country Rd | 86



Suffolk County Hike + Bike Master Plan

Riverhead - Existing Conditions

0 0.5 1.0 1.5 Miles

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Right of Way

- Utility Right of Way

Area Nodes

Node Icon	Score	Quantity
▲	1	2
▲	2	11
▲	3	5
▲	4	23
▲	5	5

RIVERHEAD

BROOKHAVEN

SOUTHAMPTON

Middle Country Rd

Old Country Rd

W Main St

Riverhead Station

Polish Town CBD

Riverhead CBD

Main Rd

Northville Trpke

Roanoke Ave

E Main St

Cross River Dr

Central Dr

Peconic Ave

Flanders Rd

Nugent Dr

Edwards Ave S

Center Dr S

Lake Ave

Quogue-Riverhead Rd

Moriches-Riverhead Rd

25

24

495

Suffolk County Hike + Bike Master Plan

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Proposed Point Projects

TRAIL
- Hiking trail opportunity
- Mountain bike trail needed
- Trail head facilities needed
- Trail improvement needed

CROSSING
- Missing crosswalk at intersection
- Need mid-block crossing treatment
- Pedestrian signal needed
- Road/intersection too wide
- Rail crossing

OTHER
- Wayfinding signage needed
- Long term opportunity

Right of Way

- Utility Right of Way

Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes & Signage*
- Buffered Bike Lanes
- Sidewalk
- Long term project

**Where space allows, consider increasing the level of separation from motor vehicle traffic by constructing buffered bike lanes*

E Additional graphics available in Final Report

Area Nodes

Node Icon	Score	Quantity
▲	1	16
▲	2	13
▲	3	6
▲	4	16
▲	5	5

Riverhead - Proposed Network

0 0.5 1.0 1.5 Miles

5 Highest Scoring Projects

Project ID | Proposed Facility | On (Street) | To - From (Streets) | Score
109 | Bike Lanes | Griffing Ave | Lincoln St - W Main St | 82
694 | Bike Lanes | W Main St | Middle Country Rd - Peconic Ave | 82
26 | Buffered Bike Lanes | Old Riverhead Rd | Flanders Rd - S Perimeter Rd | 87
833 | Bike Lanes | Roanoke Ave | Sound Ave - E Main St | 88
37 | Shared-Use Path | Peconic Ave | E Main St - Ostrander Ave | 92

E See Proposed Project E Graphics

RIVERHEAD
BROOKHAVEN
SOUTHAMPTON
Polish Town CBD
Riverhead CBD
Riverhead Station
Reeves Ave
681 Osborn Ave
833 Roanoke Ave
Northville Turnpike
349 Cross River Dr
Middle Rd
256 Mill Rd
257 Edwards Ave
491 Manor Rd / Utility ROW
342 Middle Country Rd
Old Country Rd
109 Griffing Ave
37 Peconic Ave / E Main St
694 W Main St
695 W Main St
696 W Main St
348 Center Dr
711 Cross River Dr
28 Pleasure Dr
26 Old Riverhead Rd
492 Utility ROW
460 CR 51 / Center Dr
49 Lake Ave
834 Utility ROW
490 River Rd
25
24
495

Suffolk County Hike + Bike Master Plan

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Right of Way

- Utility Right of Way

Area Nodes

Node Icon	Score	Quantity
▲	1	2
▲	2	11
▲	3	5
▲	4	23
▲	5	5

North Haven
Noyack-Long Beach Rd
Ferry Rd
Sag Harbor CBD
Bay St
Hampton St
Sag Harbor
SOUTHAMPTON
Bridgehampton Sag Harbor Tpke
EAST HAMPTON
Three Mile Harbor Rd
Springs Fireplace Rd
114
Bridgehampton Station
27
Montauk Hwy
Long Ln
East Hampton North CBD
N Main St
East Hampton Station
Buell Ln
Woods Ln
East Hampton CBD
Pantigo Rd
Amagansett CBD
Sagaponack
East Hampton

Sag Harbor - Existing Conditions

0 0.5 1.0 1.5 2.0 Miles

DRAFT

Suffolk County Hike + Bike Master Plan

Area Nodes

Node Icon	Score	Quantity
▲	1	2
▲	2	11
▲	3	5
▲	4	23
▲	5	5

5 Highest Scoring Projects

Project ID | Proposed Facility | On (Street) | To - From (Streets) | Score
933 | Buffered Bike Lanes | Montaul Hwy | Halsey Rd - Town Line Rd | 77
769 | Bike Lanes | Pantigo Rd | Main St - Skimhampton Rd | 78
814 | Bike Lanes | Newtown Ln | Long Ln - Montauk Hwy | 80
768 | Bike Lanes | Main St | Woods Ln - Newtown Ln | 81
24 | Shared-Use Path | Butter Ln | Maple Ln - Montauk Hwy | 86

Existing Pedestrian + Bike Infrastructure

- Bike Lane
- On-Road Bike Route
- NYS Bike Routes
- Mountain Bike Trail
- Shared Use Path
- Unmarked Trail
- Unpaved Road
- Foot Trail

Hike-Bike Destinations

- Central Business District
- Villages
- Parks + Open Space
- Parks with Bike Hostels
- L.I.R.R. Train Station

Proposed Point Projects

- Hiking trail opportunity
- Mountain bike trail needed
- Trail head facilities needed
- Trail improvement needed

TRAIL

- Missing crosswalk at intersection
- Need mid-block crossing treatment
- Pedestrian signal needed
- Road/intersection too wide
- Rail crossing

CROSSING

- Wayfinding signage needed
- Long term opportunity

OTHER

Right of Way

- Utility Right of Way

Proposed Pedestrian + Bike Infrastructure

- Shared-Use Path
- Signed Bike Route
- Bike Lanes & Signage*
- Buffered Bike Lanes
- Sidewalk
- Long term project

*Where space allows, consider increasing the level of separation from motor vehicle traffic by constructing buffered bike lanes

North Haven
Sag Harbor CBD
Sag Harbor
SOUTHAMPTON
EAST HAMPTON
Sagaponack
East Hampton
East Hampton North CBD
East Hampton CBD
East Hampton Station
Amagansett CBD
610 Noyack Rd
611 Millstone Rd
612 Deerfield Rd
150 Middle Line Hwy
153 Existing Trail
13 Stoney Hill Rd
10 Brick Kiln Rd
160 Noyack Rd
66 Little Noyak Path
161 Noyac Path
820 Cooks Ln
163 Scuttle Hole Rd
805 Narrow Ln
345 Lumber Ln
162 Bridgehampton Sag Harbor Tpke
454 Main St / Bridgehampton Sag Harbor Tpke
128 Toppings Path
67 Corwith Ave
24 Butter Ln
18 School St
22 Cooks Ln / Haygound Rd / Windmill Ln / Newlights Ln / Pauls Ln
933 Montauk Hwy
27
438 Montauk Hwy
117 Mecox Rd
114 Bridge Ln
34 Jobs Ln / Dune Rd
46 Sagaponack Main St
47 Daniels Ln
123 Gibson Ln
512 Peters Ln
18 Daniels Ln / Town Line Rd
107 Town Line Rd
526 Wainscott Main St
61 Wainscott Stone Rd
767 Woods Ln
768 Main St
769 Pantigo Rd
770 Montauk Hwy
114
362 Buckskill Rd
374 Long Ln
376 Long Ln
871 Newtown Ln
752 Kings Point Rd
429 Town Ln
380 Abrahams Path
432 Three Mile Harbor Rd
427 Springs Fireplace Rd
428 Cross Hwy
376 Indian Wells Hwy
754 Three Mile Harbor Hog Creek Rd
431 Gardiner Ave
747 Richardson Ave
750 Gann Rd
721 Phoebe Scoy Hwy
727 Two Holes of Water Rd
363 Swamp Rd
720 Merchants Path
149 Utility ROW / Existing Trail
462 Sag Harbor East Hampton Tpke
444 Sagg Rd
593 Widow Gavits Rd
592 Madison St
509 Main St
438 Madison St
836 Ferry Rd
764 Bay St
765 Hampton St

Sag Harbor - Proposed Network

0 0.5 1.0 1.5 2.0 Miles

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APPENDIX 4: TOP 25 SCORING PROJECT TABLES

Suffolk County Hike + Bike Master Plan | Top 25 Projects: BABYLON

ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	State Route	EST	*Prioritization Scoring Criteria*						TOTAL
											Safety	Connectivity	Economic Dev.	Equity	Design	Health	
151	Long term	17.34	2	Southern State Pkwy	Carmans Rd	Heckscher Pkwy	Babylon	0	908	N	21	17	17	9	18	7	**89**
691	Bike lanes and signage	1.51	2	Dixon Ave	34th St	Broadway	Babylon	2	0	N	21	16	15	20	11	4	**87**
131	Bike lanes and signage	5.45	1	Oak / Hoffman Trolley Line / Railroad	Ketcham Ave	Deer Park Ave	Babylon	0	0	N	21	17	17	14	11	6	**86**
261	Bike lanes and signage	4.67	2	Straight Path	Long Island Ave	Bethpage Rd	Babylon	2	0	N	21	15	16	16	11	5	**85**
371	Bike lanes and signage	1.69	2	Long Island Ave	Deer Park Ave	Straight Path	Babylon	0	0	N	20	16	15	17	11	6	**84**
370	Bike lanes and signage	2.69	2	Acorn St / Long Island Ave	Straight Path	Commack Rd	Babylon	0	0	N	21	16	15	16	11	6	**84**
283	Install sidewalk on one side	0.15	2	Prospect St	Existing Trail - 44-112 Prospect St	Shore Rd	Babylon	0	0	N	18	16	15	11	18	4	**83**
439	Bike lanes and signage	1.05	2	Albany Ave	Great Neck Rd	Dixon Ave	Babylon	0	0	N	20	16	11	20	11	3	**81**
139	Bike lanes and signage	1.57	2	Straight Path	Bruno Ln	Long Island Ave	Babylon	0	0	N	20	14	15	16	11	5	**80**
484	Bike lanes and signage	2.09	2	Long Island Ave	Grand Blvd	Wellwood Ave	Babylon	0	0	N	20	13	16	16	11	3	**80**
442	Shared-use path	6.28	2	Broadhollow Rd	Northern State Pkwy	Southern State Pkwy	Babylon	0	110	N	20	16	11	10	18	4	**79**
690	Bike lanes and signage	1.80	2	Great Neck Rd	Albany Ave	Brookside Ct	Babylon	47	0	N	21	13	11	19	11	4	**79**
281	Install sidewalk on one side	0.34	2	Shore Rd	Prospect St	Robbins Ave	Babylon	0	0	N	15	16	15	9	18	5	**78**
626	Bike lanes and signage	6.19	1	Montauk Hwy	Nassau County Border	Islip Border	Babylon	0	27	N	21	17	16	6	11	6	**77**
651	Bike lanes and signage	2.90	1	Deer Park Ave	Huntington Border - Rutland St	August Rd	Babylon	0	231	N	21	14	15	9	11	7	**77**
731	Bike lanes and signage	2.52	1	Carlls Path	Old Country Rd	W 1st St	Babylon	0	0	N	19	13	15	11	11	7	**76**
178	Bike lanes and signage	3.15	1	Deer Park Ave	August Rd	Robbins Ave	Babylon	0	0	N	20	17	16	4	11	7	**76**
157	Shared-use path	1.68	2	Long Island Ave	Commack Rd	Deer Park	Babylon	0	0	N	18	11	11	13	18	3	**75**
259	Bike lanes and signage	4.82	2	Little East Neck Rd	Colonial Spring Rd	Route 109	Babylon	0	0	N	20	16	11	11	11	5	**74**
688	Bike lanes and signage	0.96	2	W Gates Ave	S Wellwood Ave	S Strong Ave	Babylon	0	0	N	19	15	15	13	11	3	**74**
413	Bike lanes and signage	1.40	2	Oakland Ave	W 24th St	Carlls Path	Babylon	0	0	N	15	13	11	17	11	7	**73**
687	Bike lanes and signage	0.54	2	E Gates Ave	E Hoffman Ave	S Wellwood Ave	Babylon	0	0	N	19	15	15	13	11	1	**73**
883	Bike lanes and signage	2.23	1	Belmont Ave	Wyandanch Ave	Southern State Pkwy	Babylon	0	0	N	19	13	11	13	11	6	**73**
9	Shared-use path	2.00	1	Route 231	Southern State Pkwy	John St	Babylon	0	231	N	19	15	11	3	18	6	**72**
394	Install sidewalk on one side	0.22	2	Carlls Path	Deer Park	Bay Shore Rd	Babylon	0	0	N	18	6	11	15	18	5	**72**

Suffolk County Hike + Bike Master Plan | Top 25 Projects: BROOKHAVEN

											Prioritization Scoring Criteria						
ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	State Route	EST	Safety	Connectivity	Economic Dev.	Equity	Design	Health	TOTAL
209	Shared-use path	0.31	2	Existing Trail	Millie Ct	Patchogue Ferry Terminal	Brookhaven	0	0	N	17	16	16	19	18	4	**90**
147	Shared-use path	0.20	2	Existing Trail	225 West Main St	South St	Brookhaven	0	0	N	17	16	16	19	18	4	**90**
458	Bike lanes and signage	1.12	1	W Main St	Waterworks Rd	Medford Ave	Brookhaven	0	0	N	20	16	16	18	11	5	**86**
166	Shared-use path	6.46	1	Nesconset Hwy	Jayne Blvd	Middle Country Rd	Brookhaven	0	347	Y	20	16	16	12	18	4	**86**
457	Bike lanes and signage	0.41	2	S Ocean Ave	E Main St	Cedar Ave	Brookhaven	0	0	N	19	16	16	19	11	4	**85**
702	Bike lanes and signage	1.81	2	Waverly Ave	Patchogue Holbrook Rd	W Main St	Brookhaven	19	0	N	17	16	17	16	11	5	**82**
761	Bike lanes and signage	0.70	1	E Main St	Medford Ave	S Country Rd	Brookhaven	80	0	N	19	15	15	19	11	2	**81**
461	Bike lanes and signage	6.09	1	Montauk Hwy	S Country Rd	Frowein Rd	Brookhaven	80	0	N	20	14	15	15	11	4	**79**
350	Bike lanes and signage	1.11	2	River Ave	W Main St	Sunset Ln	Brookhaven	65	0	N	16	16	16	14	11	5	**78**
239	Bike lanes and signage	3.65	1	Hawkins Ave	Middle Country Rd	Railroad Ave	Brookhaven	0	0	N	20	16	17	8	11	6	**78**
248	Bike lanes and signage	3.96	2	Station Rd	Horseblock Rd	Bellport Ln	Brookhaven	0	0	N	19	16	11	17	11	2	**76**
625	Bike lanes and signage	1.59	1	Medford Ave	Old Medford Ave	E Main St	Brookhaven	0	112	N	20	16	16	10	11	3	**76**
460	Buffered bike lanes	6.87	1	CR 51 / Center Dr	Flanders Rd	Montauk Hwy	Brookhaven	51	0	Y	15	17	16	11	11	5	**75**
219	Bike lanes and signage	9.51	1	Middle Country Rd	County Road 83	E Margin Rd	Brookhaven	0	25	N	21	14	15	11	11	3	**74**
217	Bike lanes and signage	2.06	2	Jayne Blvd	Patchogue Rd	Old Town Rd	Brookhaven	0	0	N	18	15	15	12	11	3	**74**
144	Bike lanes and signage	1.61	1	Main St	Mill Creek Rd	Oakland Ave	Brookhaven	0	25	N	20	17	11	14	11	1	**74**
373	Bike lanes and signage	1.47	2	Patchogue Ave	Floyd Rd N	Riviera Dr	Brookhaven	0	0	N	18	11	15	16	11	2	**73**
202	Buffered bike lanes	7.98	1	William Floyd Pkwy SB / NB	Route 495 EB	Fire Island Beach Rd	Brookhaven	0	0	N	21	15	15	8	11	3	**73**
23	Shared-use path	1.18	1	Hallock Ave	Patchogue Rd	Nesconset Hwy	Brookhaven	0	25	Y	19	13	11	9	18	2	**73**
726	Bike lanes and signage	1.04	2	Northern Blvd	Smith Rd	Floyd Rd N	Brookhaven	0	0	N	19	11	15	15	11	2	**73**
220	Shared-use path	0.39	1	Route 112	Old Town Rd	Grant Smith Rd	Brookhaven	0	0	N	18	6	11	18	18	1	**72**
900	Bike lanes and signage	2.02	1	Sunrise Highway Service Rd	Barnes Rd	William Floyd Pkwy	Brookhaven	0	27	N	15	9	15	18	11	3	**70**
569	Bike lanes and signage	1.33	2	Ronkonkoma Ave	Portion Rd	Johnson Ave	Brookhaven	0	0	N	19	11	16	6	11	7	**70**
613	Bike lanes and signage	3.21	1	Middle Country Rd	Brookhaven Border	Nicolls Rd SB	Brookhaven	0	25	N	20	13	15	8	11	3	**70**
59	Shared-use path	8.80	1	Utility ROW	W Broadway	5th St	Brookhaven	0	0	N	16	16	11	4	18	4	**70**

Suffolk County Hike + Bike Master Plan | Top 25 Projects: EAST HAMPTON

											Prioritization Scoring Criteria						
ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	State Route	EST	Safety	Connectivity	Economic Dev.	Equity	Design	Health	TOTAL
768	Bike lanes and signage	0.89	1	Main St	Woods Ln	Newtown Ln	East Hampton	0	27	N	19	15	15	19	11	3	**81**
814	Bike lanes and signage	0.77	2	Newtown Ln	Long Ln	Montauk Hwy	East Hampton	0	0	Y	18	15	15	18	11	4	**80**
769	Bike lanes and signage	1.20	1	Pantigo Rd	Main St	Skimhampton Rd	East Hampton	0	27	Y	18	15	15	16	11	3	**77**
752	Bike lanes and signage	2.31	2	Kings Point Rd	Three Mile Harbor Hog Creek Rd	Clearwater Beach	East Hampton	0	0	N	18	13	15	13	11	4	**74**
463	Bike lanes and signage	16.33	1	Montauk Hwy	Montauk Light	Abrahams Landing Rd	East Hampton	0	27	Y	19	17	15	8	11	1	**70**
827	Install sidewalk on one side	0.82	2	Edgemere St	Manor Rd	Stone Lion Inn	East Hampton	49	0	N	10	15	15	10	18	1	**69**
770	Bike lanes and signage	1.85	1	Montauk Hwy	Skimhampton Rd	Abrahams Landing Rd	East Hampton	0	27	Y	15	13	11	17	11	1	**69**
547	Bike lanes and signage	1.14	2	Edgemere St	Manor Rd	Carl Fisher Plz	East Hampton	49	0	N	13	15	15	7	11	1	**62**
804	Bike lanes and signage	0.30	1	Jermain Ave	Hampton St	Division St	East Hampton	0	0	N	9	13	11	11	11	3	**58**
764	Bike lanes and signage	0.70	2	Bay St	Main St	Hempstead St	East Hampton	0	0	N	15	14	11	3	11	3	**57**
377	Install sidewalk on one side	0.04	2	Abrahams Landing Rd	Montauk Hwy	21 Abrahams Landing Rd	East Hampton	0	0	N	4	6	11	18	18	0	**57**
376	Install sidewalk on one side	0.21	2	Indian Wells Hwy	Montauk Hwy	Further Ln	East Hampton	0	0	N	11	6	0	21	18	0	**56**
375	Install sidewalk on one side	0.65	2	Long Ln	Roberts Ln	Newtown Ln	East Hampton	59	0	Y	0	9	11	15	18	2	**55**
767	Bike lanes and signage	2.97	1	Woods Ln	Toilsome Ln	Main St	East Hampton	0	27	N	18	6	0	18	11	2	**55**
745	Bike lanes and signage	0.87	2	Atlantic Ave	Montauk Hwy	Atlantic Avenue Beach	East Hampton	0	0	N	4	13	11	15	11	0	**55**
374	Bike lanes and signage	1.28	2	Long Ln	Stephen Hands Path	Newtown Ln	East Hampton	59	0	Y	0	11	11	13	11	3	**49**
746	Bike lanes and signage	0.65	2	Deep Ln	Town Ln	Montauk Hwy	East Hampton	0	0	N	4	9	11	13	11	0	**48**
427	Bike lanes and signage	3.18	2	Springs Fireplace Rd	Parsons Close	N Main St	East Hampton	41	0	N	13	3	0	17	11	4	**47**
430	Bike lanes and signage	1.06	2	Fort Pond Blvd	Three Mile Harbor Hog Creek Rd	Springs Fireplace Rd	East Hampton	0	0	N	6	9	0	17	11	4	**47**
362	Bike lanes and signage	1.97	1	Buckskill Rd	Sag Harbor East Hampton Tpke	Montauk Hwy	East Hampton	0	0	N	14	3	0	16	11	1	**45**
438	Install sidewalk on one side	0.73	1	Montauk Hwy	White Horse Tpke	Wainscott NW Rd	East Hampton	0	27	N	8	0	0	18	18	0	**44**
379	Bike lanes and signage	1.72	2	Abrahams Landing Rd	Montauk Hwy	Napeague Bay	East Hampton	0	0	N	4	9	11	6	11	0	**41**
828	Install sidewalk on one side	0.02	2	Fort Pond Rd	Flamingo Ave	Montauk Train Station	East Hampton	49	0	N	0	6	11	4	18	0	**40**
149	Shared-use path	2.36	1	Utility ROW / Existing Trail	Town Line Rd	Buckskill Rd	East Hampton	0	0	Y	0	3	0	18	18	1	**40**
74	Bike lanes and signage	2.04	2	Flamingo ave	Major Rd	W Lake Dr	East Hampton	49	0	N	4	11	11	1	11	1	**39**

Suffolk County Hike + Bike Master Plan | Top 25 Projects: HUNTINGTON

ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	State Route	EST	*Prioritization Scoring Criteria*						TOTAL
											Safety	Connectivity	Economic Dev.	Equity	Design	Health	
119	Bike lanes and signage	4.3	2	New York Ave	Main St	Wolf Hill Rd	Huntington	0	110	N	21	17	16	15	11	7	**86**
339	Bike lanes and signage	1.1	2	Railroad St	W Rogues Path	New York Ave	Huntington	0	0	N	20	13	15	20	11	7	**86**
267	Bike lanes and signage	0.5	2	Lowndes Ave	New York Ave	Railroad St	Huntington	0	0	N	20	13	15	20	11	7	**86**
287	Install sidewalk on one side	0.4	2	Panorama Dr	Horizon Dr	Regal Dr	Huntington	0	0	N	15	13	15	19	18	7	**86**
693	Bike lanes and signage	0.9	2	Broadway	New York Ave	Park Ave	Huntington	0	0	N	20	11	15	18	11	6	**80**
322	Shared-use path	0.9	2	Pulaski Rd	Bartel Dr	Hasty Ln	Huntington	0	0	N	17	11	11	17	18	6	**80**
266	Install sidewalk on one side	0.1	2	Tower St	Winding St	Columbia St	Huntington	0	0	N	9	11	15	20	18	6	**80**
986	Install sidewalk on one side	0.1	2	Regal Dr	Panorama Dr	Terrace Dr	Huntington	0	0	N	8	13	15	20	18	6	**79**
265	Bike lanes and signage	1.7	2	Depot Rd	New York Ave	E Jericho Tpke	Huntington	0	0	N	21	9	15	17	11	6	**78**
935	Bike lanes and signage	2.3	2	Pulaski Rd	Larkfield Rd	Broadway	Huntington	0	0	N	18	14	15	12	11	7	**77**
987	Install sidewalk on one side	0.0	2	Terrace Dr	Regal Dr	Columbia Street Park	Huntington	0	0	N	12	9	11	20	18	6	**77**
328	Install sidewalk on one side	0.7	2	Broadway	Folsom Ave	Park Ave	Huntington	0	0	N	9	11	15	16	18	6	**75**
297	Bike lanes and signage	2.8	2	Oakwood Rd	High St	W Jericho Tpke	Huntington	92	0	N	20	16	11	9	11	7	**74**
365	Bike lanes and signage	2.3	2	W Pulaski Rd	W Rogues Path	E Pulaski Rd	Huntington	11	0	N	21	9	15	13	11	6	**74**
326	Shared-use path	0.7	2	Broadway	E Sanders St	Pulaski Rd	Huntington	0	0	N	13	11	11	12	18	7	**73**
242	Bike lanes and signage	2.8	2	Broadway	E Sanders Rd	E Jericho Tpke	Huntington	86	0	N	18	11	11	15	11	7	**72**
288	Install sidewalk on one side	0.3	2	Horizon Dr	Existing Trail	Mckay Rd	Huntington	0	0	N	11	9	11	17	18	6	**72**
323	Shared-use path	0.3	2	Taylor Ave	Long Island Railroad	Pulaski Rd	Huntington	0	0	N	10	11	11	16	18	6	**72**
234	Bike lanes and signage	4.7	1	Main / E Main / Fort Salonga	Woodbury Rd	Woodbine Ave	Huntington	0	25	N	20	17	11	5	11	7	**71**
813	Bike lanes and signage	1.2	2	E Pulaski Rd	New York Ave	Park Ave	Huntington	11	0	N	21	6	11	17	11	6	**71**
325	Install sidewalk on one side	0.2	2	Broadway	Pulaski Rd	Cuba Hill Rd	Huntington	86	0	N	12	9	11	15	18	7	**71**
991	Install sidewalk on one side	0.2	2	Pulaski Rd	Cuba Hill Rd	Broadway	Huntington	11	0	N	12	9	11	13	18	7	**70**
289	Shared-use path	0.1	2	Existing Trail	188 Oakwood Rd	Horizon Dr	Huntington	0	0	N	6	9	11	17	18	6	**68**
294	Bike lanes and signage	0.4	2	Holdsworth Dr	Oakwood Rd	New York Ave	Huntington	0	0	N	15	9	11	15	11	7	**67**
295	Bike lanes and signage	0.4	2	Horizon Dr	Holdsworth Dr	Mckay Rd	Huntington	0	0	N	14	9	11	16	11	7	**67**

Suffolk County Hike + Bike Master Plan | Top 25 Projects: ISLIP

											Prioritization Scoring Criteria						
ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	State Route	EST	Safety	Connectivity	Economic Dev.	Equity	Design	Health	TOTAL
546	Shared-use path	0.4	2	4th Ave	Railroad Plaza	W Main St	Islip	0	0	N	20	16	15	19	18	5	**93**
421	Install sidewalk on one side	1.7	2	Jefferson Ave	Arthur St	Suffolk Ave	Islip	0	0	N	21	15	11	20	18	7	**91**
966	Install sidewalk on one side	3.0	2	Crooked Hill Rd	Commack Rd	Wicks Rd	Islip	0	0	N	20	15	11	16	18	7	**87**
976	Long term	1.2	2	Motor Pkwy	Express Dr S	Wheeler Rd	Islip	0	0	N	17	13	15	17	18	7	**87**
596	Bike lanes and signage	1.8	1	Washington Ave	Islip Border	Suffolk Ave	Islip	0	0	N	21	15	15	19	11	7	**87**
628	Bike lanes and signage	1.3	1	E Main St	Maple Ave	Degnon Blvd	Islip	0	27	N	20	17	16	17	11	6	**86**
132	Bike lanes and signage	3.8	1	Brentwood Rd	Suffolk Ave	E Main St	Islip	0	0	N	21	16	11	20	11	7	**86**
541	Bike lanes and signage	0.5	2	4th Ave	Roosevelt St	Railroad Plaza	Islip	0	0	N	20	16	15	19	11	5	**85**
197	Bike lanes and signage	0.1	2	Railroad Plaza	4th Ave	Park Ave	Islip	0	0	N	19	16	15	20	11	5	**84**
124	Bike lanes and signage	3.6	2	5th Ave	Suffolk Ave	N Clinton Ave	Islip	13	0	N	21	16	11	18	11	7	**83**
155	Shared-use path	1.8	1	Carleton Ave	Smith St	Spur Dr S	Islip	0	0	N	17	15	11	18	18	4	**83**
68	Shared-use path	9.1	1	Veterans Memorial Hwy	Nesconset Hwy	Sunrise Hwy	Islip	0	454	N	21	16	16	5	18	7	**83**
872	Shared-use path	0.7	1	College Rd / G Rd	Wicks Rd	Utility ROW - G Rd	Islip	0	0	Y	17	13	11	17	18	7	**83**
94	Bike lanes and signage	4.0	1	Islip Ave	Suffolk Ave	Main St	Islip	0	111	N	21	15	16	14	11	6	**83**
815	Bike lanes and signage	0.2	2	3rd Ave	Brentwood Rd	8th St	Islip	0	0	N	19	15	11	21	11	5	**83**
583	Bike lanes and signage	0.6	2	N Clinton Ave	5th Ave	W Main St	Islip	0	0	N	17	16	15	18	11	5	**82**
456	Bike lanes and signage	0.3	2	8th St	3rd Ave	Leroy Ave	Islip	0	0	N	20	15	11	21	11	4	**82**
4	Long term	13.9	2	Sunken Meadow Pkwy / Sagtikos Pkwy / Robert Moses Cswy	Northern State Pkwy	Robert Moses State Park	Islip	0	27	N	20	16	16	3	18	7	**80**
101	Bike lanes and signage	3.0	2	Crooked Hill Rd	Commack Rd	Wicks Rd	Islip	13	0	N	20	15	11	16	11	7	**80**
72	Shared-use path	0.7	2	Maple Ave	W Main St	Islip Border	Islip	0	0	N	13	16	15	14	18	4	**80**
52	Bike lanes and signage	8.3	1	Union Blvd	Islip Border	Montauk Hwy	Islip	50	0	N	21	17	17	7	11	7	**80**
205	Bike lanes and signage	0.8	1	W Main St	Windsor Ave	4th Ave	Islip	0	27	N	16	16	15	17	11	5	**80**
195	Install sidewalk on one side	0.1	2	Duffy Ct	2nd Ave	3rd Ave	Islip	0	0	N	19	9	11	21	18	1	**79**
113	Bike lanes and signage	0.7	1	Audwin Rd	William St	Smith St	Islip	0	0	N	20	13	11	21	11	2	**77**
627	Bike lanes and signage	1.2	1	Main St	E Main St	W Main St	Islip	0	27	N	19	15	15	11	11	6	**77**

Suffolk County Hike + Bike Master Plan | Top 25 Projects: RIVERHEAD

											Prioritization Scoring Criteria						
ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	State Route	EST	Safety	Connectivity	Economic Dev.	Equity	Design	Health	TOTAL
833	Bike lanes and signage	4.0	1	Roanoke Ave	Sound Ave	E Main St	Riverhead	0	0	Y	20	17	17	20	11	3	**88**
694	Bike lanes and signage	1.4	1	W Main St	Middle Country Rd	Pecnonic Ave	Riverhead	0	25	Y	20	17	16	15	11	4	**83**
109	Bike lanes and signage	0.4	1	Griffing Ave	Lincoln St	W Main St	Riverhead	0	0	N	18	17	16	18	11	3	**82**
491	Shared-use path	2.9	1	Manor Rd	Edwards Ave	W Main St	Riverhead	0	0	Y	17	13	11	20	18	2	**82**
710	Bike lanes and signage	0.0	2	Center Dr	W Main St	Riverhead Border	Riverhead	0	0	Y	15	17	16	15	11	3	**77**
256	Bike lanes and signage	1.9	2	Mill Rd	Osborn Ave	JT Blvd	Riverhead	0	0	N	12	11	11	20	11	1	**67**
683	Bike lanes and signage	5.5	1	Sound Ave	Dune Dr	Roanoke Ave	Riverhead	0	0	Y	10	14	0	19	11	1	**55**
342	Buffered bike lanes	5.7	1	Middle Country Rd	Kay Rd	I-495	Riverhead	0	25	N	12	9	0	20	11	2	**54**
695	Bike lanes and signage	0.9	1	W Main St	River Rd	Kroemer Ave	Riverhead	0	25	N	13	9	0	19	11	1	**52**
847	Shared-use path	5.6	1	Utility ROW	Dogwood Dr	Edwards Ave	Riverhead	0	0	Y	11	3	0	17	18	2	**52**
682	Bike lanes and signage	6.7	1	Sound Ave	Route 25A	Roanoke Ave	Riverhead	0	0	Y	6	13	0	16	11	2	**49**
349	Bike lanes and signage	3.9	1	Cross River Dr	Sound Ave	Southampton Border	Riverhead	105	0	N	8	11	0	18	11	0	**48**
257	Bike lanes and signage	2.2	2	Edwards Ave	Sound Ave	Middle Country Rd	Riverhead	0	0	N	6	6	0	19	11	1	**43**
490	Bike lanes and signage	1.0	2	River Rd	EPCAL Trail	Edwards Ave	Riverhead	0	0	N	10	3	0	19	11	0	**42**
489	Bike lanes and signage	3.4	2	Wading River Manor Rd	Route 25A	Schultz Rd	Riverhead	0	0	N	11	6	0	13	11	1	**42**
696	Bike lanes and signage	0.9	1	W Main St	Utility ROW - 1631-1401 NY-25	Middle Country Rd	Riverhead	0	25	Y	10	3	0	16	11	3	**42**
681	Bike lanes and signage	1.5	2	Osborn Ave	Sound Ave	Mill Rd	Riverhead	0	0	N	4	9	0	17	11	0	**41**
635	Bike lanes and signage	1.1	1	Sound Ave	Dune Dr	Southold Border	Riverhead	0	0	Y	4	14	0	10	11	1	**40**
27	Shared-use path	1.8	1	Middle Country Rd	Brookhaven Trail	Calverton Pines Yellow Trail	Riverhead	0	25	N	6	0	0	12	18	1	**38**
664	Bike lanes and signage	0.2	2	Wildwood Rd	N Wading River Rd	15th St	Riverhead	54	0	N	14	3	0	8	11	1	**38**
663	Bike lanes and signage	0.2	2	N Wading River Rd	Wildwood Rd	Wildwood State Park	Riverhead	0	0	N	14	3	0	6	11	1	**35**
662	Bike lanes and signage	0.9	2	Hulse Landing Rd	Wildwood Rd	Sound Ave	Riverhead	54	0	N	4	3	0	13	11	2	**33**
779	Bike lanes and signage	1.4	2	Schultz Rd	Wading River Manor Rd	Riverhead Border	Riverhead	0	0	N	0	0	0	21	11	1	**32**
241	Bike lanes and signage	1.0	2	Hulse Landing Rd	Wildwood Rd	Route 25A	Riverhead	0	0	N	0	0	0	15	11	1	**27**
634	Shared-use path	0.8	2	Dune Dr	Big Pond Ln	Sound Ave	Riverhead	0	0	N	0	3	0	5	18	0	**27**

Suffolk County Hike + Bike Master Plan | Top 25 Projects: SHELTER ISLAND

											Prioritization Scoring Criteria						
ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	State Route	EST	Safety	Connectivity	Economic Dev.	Equity	Design	Health	TOTAL
836	Bike lanes and signage	10.0	1	Ferry Rd	Front St	Milton Ave	Shelter Island	0	114	Y	19	17	17	4	11	6	**75**
958	Install sidewalk on one side	0.4	2	St Marys Rd	Burns Rd	N Ferry Rd	Shelter Island	0	0	N	6	11	0	9	18	4	**49**
962	Install sidewalk on one side	0.4	2	N Ferry Rd	School St	Saint Marys Rd	Shelter Island	0	114	N	6	9	0	10	18	2	**46**
961	Bike lanes and signage	0.4	2	Saint Marys Rd	Burns Rd	N Ferry Rd	Shelter Island	0	0	N	6	11	0	9	11	3	**41**
440	Install sidewalk on one side	0.8	2	Burns Rd	Saint Marys Rd	Coecles Harbor	Shelter Island	0	0	N	6	6	0	2	18	4	**36**
957	Bike lanes and signage	0.8	2	Burns Rd	St Marys Rd	Coecles Harbor	Shelter Island	0	0	N	6	6	0	2	11	3	**28**
782	Bike lanes and signage	0.6	2	W Neck Rd	Shore Rd	N Ferry Rd	Shelter Island	115	0	N	4	3	0	4	11	3	**25**
789	Bike lanes and signage	0.5	2	Winthrop Rd	N Jeffrey Rd	Cobbetts Ln	Shelter Island	0	0	N	0	3	0	2	11	2	**18**
787	Bike lanes and signage	1.0	2	Cobbetts Ln	Winthrop Rd	Ram Island Rd	Shelter Island	0	0	N	0	3	0	1	11	3	**18**
786	Bike lanes and signage	2.1	2	Ram Island Dr	Cobbetts Ln	N Ram Island Dr	Shelter Island	0	0	N	0	3	0	0	11	1	**15**
783	Bike lanes and signage	1.2	2	Shore Rd	Rocky Point Ave	W Neck Rd	Shelter Island	42	0	N	0	0	0	1	11	1	**13**
785	Bike lanes and signage	1.0	2	Nostrand Pkwy	Rocky Point Ave	W Neck Rd	Shelter Island	0	0	N	0	0	0	0	11	1	**12**
502	Bike lanes and signage	1.2	2	Brander Pkwy	W Neck Rd	Shelter Island Border	Shelter Island	0	0	N	0	0	0	1	11	0	**12**
784	Bike lanes and signage	0.2	2	Rocky Point Ave	Nostrand Pkwy	Shore Rd	Shelter Island	0	0	N	0	0	0	0	11	0	**11**
503	Bike lanes and signage	1.0	2	N Ram Island Dr	S Ram Island Dr	Tuthill Dr	Shelter Island	0	0	N	0	0	0	0	11	0	**11**

Suffolk County Hike + Bike Master Plan | Top 25 Projects: SMITHTOWN

											Prioritization Scoring Criteria						
ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	State Route	EST	Safety	Connectivity	Economic Dev.	Equity	Design	Health	TOTAL
84	Shared-use path	4.5	1	Veterans Memorial Hwy	Jericho Tpke	Nesconset Hwy	Smithtown	0	454	N	18	16	16	5	18	7	**80**
388	Shared-use path	3.1	2	Indian Head Rd	Meadow Rd	Jericho Tpke	Smithtown	0	0	N	18	14	15	4	18	4	**74**
447	Long term	1.9	2	Sunken Meadow Pkwy	Jericho Tpke	Northern State Pkwy	Smithtown	0	908	N	16	13	11	8	18	6	**73**
557	Bike lanes and signage	1.9	1	Route 111	E Main St	Nesconset Hwy	Smithtown	0	111	N	18	16	15	9	11	3	**71**
615	Bike lanes and signage	1.1	1	E Main St	Elm Ave	John Jones Ln	Smithtown	0	25	N	18	16	16	9	11	0	**71**
614	Bike lanes and signage	0.9	1	W Main St	Route 25A	Elm Ave	Smithtown	0	25	N	18	16	16	7	11	1	**69**
983	Shared-use path	0.3	2	Old Willets Path	Rabro Dr	Kennedy Dr	Smithtown	0	0	Y	11	6	11	16	18	6	**68**
555	Bike lanes and signage	1.9	1	Jericho Tpke	Smithtown Border	Wyandanch Blvd	Smithtown	0	25	N	19	13	15	4	11	5	**67**
448	Long term	5.1	2	Sunken Meadow Pkwy	Sunken Meadow State Park	Jericho Tpke	Smithtown	0	908	N	14	14	11	4	18	3	**65**
45	Bike lanes and signage	0.4	2	Main St	Park Ave	Church St	Smithtown	0	25	N	19	13	11	8	11	1	**63**
511	Bike lanes and signage	0.3	2	Meadow Rd W	1st Ave	Indian Head Rd	Smithtown	0	0	N	19	11	11	9	11	1	**62**
238	Bike lanes and signage	2.7	2	Old Willets Path	W Jericho Tpke	Rabro Dr	Smithtown	0	0	N	14	14	11	5	11	6	**62**
644	Bike lanes and signage	0.7	2	W Main St	Sunken Meadow Pkwy	Park Ave	Smithtown	0	25	N	16	11	11	10	11	1	**60**
165	Bike lanes and signage	2.4	1	Middle Country Rd	John Jones Ln	Smithtown Border	Smithtown	0	25	N	15	11	11	9	11	2	**60**
567	Bike lanes and signage	2.7	2	Townline Rd	Lincoln Blvd	Nichols Rd	Smithtown	76	0	N	14	13	11	6	11	5	**59**
510	Bike lanes and signage	0.1	2	Indian Head Rd	Main St	Meadow Rd	Smithtown	0	0	N	16	11	11	8	11	1	**59**
926	Shared-use path	0.8	1	Commack Rd	New Hwy	Vanderbilt Pkwy	Smithtown	4	0	N	13	6	0	15	18	6	**58**
917	Install sidewalk on one side	0.5	1	New Hwy	Utility ROW - 57-15 New Hwy	61 New Hwy - Harned Sawmill	Smithtown	0	0	N	14	6	0	13	18	6	**57**
776	Bike lanes and signage	0.2	2	Rabro Dr	Old Willets Path	Smithtown Border	Smithtown	0	0	N	10	6	11	13	11	6	**57**
560	Bike lanes and signage	0.4	1	Route 111	Nesconset Hwy	Townline Rd	Smithtown	0	111	Y	9	13	11	8	11	4	**56**
455	Shared-use path	0.9	1	Nesconset Hwy	Gibbs Pond Rd	Middle Country Rd	Smithtown	0	347	Y	13	6	11	7	18	0	**56**
389	Install sidewalk on one side	0.4	1	Harned Rd	Jericho Tpke	Veterans Memorial Hwy	Smithtown	0	0	N	9	9	11	4	18	4	**54**
390	Bike lanes and signage	1.8	1	Harned Rd	Veterans Memorial Hwy	Vanderbilt Pkwy	Smithtown	0	0	N	9	9	11	8	11	6	**54**
497	Bike lanes and signage	2.7	2	Moriches Rd	Horse Race Ln	N Country Rd	Smithtown	0	0	N	6	15	15	3	11	0	**51**
993	Long term	0.4	2	Utility ROW	Commack Rd	Utility Facility	Smithtown	0	0	N	4	6	0	15	18	5	**48**

Suffolk County Hike + Bike Master Plan | Top 25 Projects: SOUTHAMPTON

											Prioritization Scoring Criteria						
ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	State Route	EST	Safety	Connectivity	Economic Dev.	Equity	Design	Health	TOTAL
37	Shared-use path	0.5	1	Peconic Ave / E Main St	Flanders Rd	Ostrander Ave	Southampton	0	25	N	18	17	16	20	18	3	**92**
26	Buffered bike lanes	6.2	1	Ponds Rd / County Road 104 / Old Riverhead Rd	Flanders Rd	S Perimeter Rd	Southampton	0	0	N	17	17	17	21	11	5	**87**
38	Shared-use path	2.2	1	Majors Path / N Sea Rd	Main Rd	Edge of Woods Rd	Southampton	0	0	N	17	13	11	19	18	5	**82**
36	Long term	5.7	2	Rail ROW	Shinnecock Canal	N Main St	Southampton	0	0	Y	16	13	11	18	18	6	**82**
49	Bike lanes and signage	1.6	2	Lake Ave	Flanders Rd	Center Dr S	Southampton	63	0	N	17	17	16	18	11	3	**82**
24	Shared-use path	0.3	2	Butter Ln	Maple Ln	Montauk Hwy	Southampton	0	0	N	17	11	15	19	18	2	**81**
120	Bike lanes and signage	0.4	1	Good Ground Rd	Springville Rd	Ponquogue Ave	Southampton	0	0	Y	17	11	15	20	11	6	**80**
92	Bike lanes and signage	1.0	2	Fanning Ave	Ponquogue Ave	Canoe Place Rd	Southampton	0	0	N	18	13	15	17	11	7	**80**
519	Bike lanes and signage	0.3	1	Ponquogue Ave	Montauk Hwy	Suffolk Rd	Southampton	0	0	N	17	11	15	20	11	6	**80**
30	Shared-use path	0.9	1	N Main St / Main St	County Road 39	Hampton Rd	Southampton	0	0	N	14	13	11	19	18	5	**80**
103	Buffered bike lanes	1.1	1	W Montauk Hwy	E Tiana Rd	Squiretown Rd	Southampton	0	0	Y	19	9	15	19	11	7	**79**
516	Bike lanes and signage	0.5	1	Suffolk Rd	Springville Rd	Ponquogue Ave	Southampton	0	0	N	16	11	15	19	11	6	**77**
348	Bike lanes and signage	0.1	2	Center Dr	Southampton Border	Nugent Dr	Southampton	0	0	N	15	17	16	16	11	3	**77**
933	Buffered bike lanes	5.6	1	Montauk Hwy	Halsey Rd	Town Line Rd	Southampton	0	27	N	19	13	15	14	11	5	**77**
472	Buffered bike lanes	1.4	1	E Montauk Hwy	Squiretown Rd	N Shore Rd	Southampton	0	0	Y	17	9	15	19	11	6	**77**
192	Install sidewalk on one side	0.7	2	Fanning Ave	Warner Rd	Canoe Place Rd	Southampton	0	0	N	10	11	15	16	18	6	**75**
73	Install sidewalk on one side	0.6	2	Springville Rd	Shore Rd	Bay Ave W	Southampton	0	0	N	12	9	11	19	18	6	**75**
184	Install sidewalk on one side	0.2	2	Old Riverhead Rd	77-55 Old Riverhead Rd	39 Old Riverhead Rd	Southampton	31	0	N	10	11	11	20	18	4	**74**
518	Bike lanes and signage	0.6	1	Shore Rd	E Tiana Rd	Springville Rd	Southampton	0	0	N	16	9	11	19	11	6	**72**
522	Bike lanes and signage	1.0	1	Argonne Rd E	Ponquogue Ave	Lynn Ave	Southampton	0	0	N	13	13	15	14	11	6	**72**
156	Bike lanes and signage	0.4	2	Springville Rd	W Montauk Hwy	Suffolk Rd	Southampton	0	0	N	12	9	11	20	11	6	**69**
118	Bike lanes and signage	0.2	2	School St	Montauk Hwy	Church Ln	Southampton	0	0	N	16	9	11	19	11	3	**69**
759	Bike lanes and signage	0.4	1	Madison St	Main St	Jermain Ave	Southampton	0	0	N	16	14	11	13	11	3	**69**
69	Bike lanes and signage	0.6	1	Old Riverhead Rd	S Perimeter Rd	Montauk Hwy	Southampton	31	0	N	10	11	11	20	11	5	**68**
112	Bike lanes and signage	0.5	2	Depot Rd	Station Rd	Montauk Hwy	Southampton	0	0	N	10	11	11	20	11	5	**68**

Suffolk County Hike + Bike Master Plan | Top 25 Projects: SOUTHOLD

											Prioritization Scoring Criteria						
ID	Proposed	Miles	Tier	Street	To	From	Town	County Route	State Route	EST	Safety	Connectivity	Economic Dev.	Equity	Design	Health	TOTAL
533	Bike lanes and signage	0.9	1	Main St	North Rd	Front St	Southold	0	0	N	15	16	16	18	11	4	**81**
534	Bike lanes and signage	0.4	1	Front St	9th St	3rd St	Southold	0	25	Y	15	16	16	17	11	4	**79**
685	Buffered bike lanes	9.7	1	Sound Ave	Old Neck Rd	Cox Neck Rd	Southold	0	0	Y	14	17	17	11	11	2	**72**
835	Bike lanes and signage	1.0	1	Main Rd	Chapel Ln	9th St	Southold	0	25	Y	6	15	11	20	11	5	**69**
800	Bike lanes and signage	0.2	1	Front St	3rd St	Main St	Southold	0	25	N	15	16	16	6	11	3	**67**
537	Bike lanes and signage	3.1	2	Main Rd	Love Ln	New Suffolk Rd	Southold	0	25	N	17	17	16	5	11	0	**67**
474	Bike lanes and signage	0.2	1	9th St	Front St	Flint St	Southold	0	0	N	6	15	11	18	11	4	**66**
829	Shared-use path	0.5	2	Existing Trail - Moores Woods	North Rd	Greenport Nature Study Area at Moores Ln	Southold	0	0	N	6	13	0	21	18	4	**62**
577	Bike lanes and signage	1.6	1	North Rd	Main St	Chapel Ln	Southold	48	0	Y	15	11	0	20	11	5	**61**
538	Bike lanes and signage	3.2	2	New Suffolk Ave	Main Rd	New Suffolk Rd	Southold	0	0	N	13	16	16	1	11	0	**58**
830	Shared-use path	0.2	2	Existing Trail - Moores Woods	Greenport Nature Study Area at Moores Ln	50-170 Moores Ln	Southold	0	0	N	0	13	0	21	18	5	**56**
539	Bike lanes and signage	5.1	2	Main Rd	S Harbor Rd	New Suffolk Ave	Southold	0	25	N	12	17	0	15	11	1	**55**
535	Bike lanes and signage	0.9	1	North Rd	Maple Ln	Main St	Southold	0	25	Y	11	9	0	21	11	3	**55**
452	Bike lanes and signage	0.3	2	Mill Ln	Middle Rd	Soundview Ave	Southold	0	0	N	6	13	0	18	11	0	**48**
633	Shared-use path	3.4	2	Aldrich Ln / Laurel Ln	Sound Ave	Wendy Dr	Southold	0	0	N	12	13	0	3	18	1	**47**
19	Shared-use path	0.4	2	Pipes Neck Rd	Main Rd	Brook Rd	Southold	0	0	N	9	0	0	16	18	2	**46**
70	Bike lanes and signage	6.9	1	Main Rd	Maple Ln	Dock Rd	Southold	0	25	Y	15	13	0	6	11	1	**45**
71	Bike lanes and signage	0.4	2	Lower Rd	Ackerly Pond Ln	S Harbor Rd	Southold	0	25	N	0	11	0	19	11	1	**41**
841	Bike lanes and signage	0.5	1	Chapel Ln / Utility ROW	North Rd	Utility ROW	Southold	0	0	Y	9	0	0	17	11	4	**41**
853	Bike lanes and signage	0.1	1	Main Rd	Chapel Ln	Utility Facility - 68532-69700 Main Rd	Southold	0	25	Y	0	3	0	20	11	3	**37**
182	Bike lanes and signage	0.1	2	Chapel Ln	North Rd	Main Rd	Southold	0	25	N	0	3	0	19	11	4	**36**
108	Bike lanes and signage	2.1	1	North Rd	Chapel Ln	Old North Rd	Southold	48	0	Y	14	3	0	5	11	3	**36**
258	Bike lanes and signage	1.5	1	Sound Ave	Southold Border	Cox Neck Rd	Southold	0	0	Y	4	15	0	3	11	1	**34**
852	Bike lanes and signage	1.7	1	Cox Ln / Oregon Dr / Depot Ln	EST Loop	EST Loop	Southold	0	0	Y	4	9	0	9	11	0	**33**
20	Shared-use path	0.8	2	Albertson Ln	Main Rd	North Rd	Southold	0	0	N	0	0	0	11	18	3	**32**

Linear project typologies

No.	Name	Description	Exclusions	Cost per LF	Cost per mi	Total Cost by Type
1	Bicycle route	Signs only, new posts	No overhead signs	$ 1.63	$ 8,580.00	$ 19,398.00
2	Bike boulevard	Sharrows or shoulder stencils, signs and speed humps	No shoulder or pavement work	$ 11.13	$ 58,760.00	$ 633,768.00
3	Bicycle lanes	New linear paint	No shoulder or pavement work	$ 2.62	$ 13,845.00	$ 11,099,610.00
4	Separated bicycle lanes	New linear paint, 3' buffer, with vertical delineators	No shoulder, pavement work or continuous barriers	$ 34.14	$ 180,266.27	$ 13,509,851.00
5	SUP/Sidepath	New asphalt path, approx. 10' wide with 1' clear on each side, includes all prep of subgrade, sawcutting and tack coat	No ROW acquisition, environmental impacts, bridge structures, retaining walls, drilling; minimal cut/fill. Doesn't include curbing, grading or turf establishment. NOTE: Prices have been volatile over the past 3 years.	$ 119.60	$ 631,488.00	$ 164,375,754.00
6	Sidewalks with trees planted adjacent to sidewalk in existing grass strip	New concrete curb with 5' wide concrete sidewalk, one side of street	No drainage work, tree pits, ROW acquisition, environmental impacts, bridge structures, retaining walls, drilling; minimal cut/fill or adjustments to utilities. NOTE: Prices have been volatile over the past 3 years.	$ 276.90	$ 1,462,032.00	$ 90,608,363.00
					Total:	**$ 280,246,744.00**

Linear Projects (~885 total)

The linear projects includes length in miles as well as project type.

The following project types are used:

- Bike boulevard (9 total)
- Bike lanes and signage (566 total)
- Buffered bike lanes (27 total)
- Install sidewalk on one side (144 total)
- Long term (these are probably 95% or more Shared-Use Paths, but are such enormous projects, that they wouldn't necessarily fall on even a ten year timeline, and likely won't be prioritized on our typical implementation timeline) (18 total)
- Shared-Use path (119 total)
- Signed Bike Route (1 total)

Linear project typologies

No.	Name	Description	Exclusions	Assumptions	Unit	Unit Price	Base cost (LF)	Base cost (mi)	Contingency @ 1.3 (LF)	Contingency @ 1.3 (LF)	Source	
1	Bicycle route	Signs only, new posts	No overhead signs	Sign every `700 LF	EA	$875.00	$1.25	$6,600.00	$1.63	$8,580.00	MUTCD/ NYSDOT Quick Estimator 2018	*No specific national guidance on spacing of route signage
2	Bike boulevard	Sharrows or shoulder stencils, signs and speed humps	No shoulder or pavement work	Stencil, sign and speed hump every 0.1 Miles	MILE	$45,200.00	$8.56	$45,200.00	$11.13	$58,760.00	NYSDOT TSMI 13-07/ NYSDOT Quick Estimator 2018	
3	Bicycle lanes	New linear paint	No shoulder or pavement work	2 continuous 4" edge lines, 5' wide, bike stencil at 0.1 mile intervals	MILE	$10,650.00	$2.02	$10,650.00	$2.62	$13,845.00	NYSDOT Quick Estimator 2018	Guidance says marking should be placed at regular intervals based on engineering judgement. An estimate was not required as some estimate is built into the unit cost of per mile.
4	Separated bicycle lanes	New linear paint, 3' buffer, with vertical delineators	No shoulder, pavement work or continuous barriers	5' wide, bike stencil at 0.1 mile intervals, 3 ft wide hatched buffer with 6 in wide stripe on the bicycle lane side of the buffer and 4 in wide stripe on the opposite side, delineators every 40 feet	MILE	$138,666.36	$26.26	$138,666.36	$34.14	$180,266.27	NYSDOT Quick Estimator 2018, flexible yellow bollards per NYSDOT Spec 665.10000011 weighted average 2019 price based on bid history	
5	SUP/Sidepath	New asphalt path, approx. 10' wide with 1' clear on each side, includes all prep of subgrade, sawcutting and tack coat	No ROW acquisition, environmental impacts, bridge structures, retaining walls, drilling; minimal cut/fill. Doesn't include curbing, grading or turf establishment. NOTE: Prices have been volatile over the past 3 years.	Base course/asphalt depths = 1.5"/3"	LF	$92.00	$92.00	$485,760.00	$119.60	$631,488.00	NYSDOT Quick Estimator 2018	
6	Sidewalks with trees planted adjacent to sidewalk in existing grass strip	New concrete curb with 5' wide concrete sidewalk, one side of street	No drainage work, tree pits, ROW acquisition, environmental impacts, bridge structures, retaining walls, drilling; minimal cut/fill or adjustments to utilities. NOTE: Prices have been volatile over the past 3 years.	Concrete curb, concrete course/crushed stone depths = 4"/6", new tree (2" Caliber Major Deciduous Tree) every 30 feet in existing greenspace	LF	$213.00	$213.00	$1,124,640.00	$276.90	$1,462,032.00	NYSDOT Quick Estimator 2018	

Point project typologies

Assumptions	Cost per project	Item 1 cost	(name)	Item 2 cost	(name)	Item 3 cost	(name)	
8 signs, 6 dbl posts, 16 bright sticks, Crosswalk: assume 700 LF of 4" striping per crosswalk. Includes application, removal and covering of pavement lines, letters, symbols, stop bars, crosswalks and any other markings, and any required cleaning and preparation of the surface to receive the markings. Curb Ramps: Includes demolition, saw cutting, excavation, disposal, fill, subbase material, compaction, construction of the new curb ramps, landings and associated curbing, detectable warning units, repairs to affected asphalt and concrete, topsoil, establishing turf on disturbed areas, and finish work NOTE: There are significant variations in the complexity and price of curb ramps. This figure represents an average.	$16,600.00	$7,000.00	8 signs / 12 posts / 16 bright sticks	$1,500.00	1 crosswalk	$8,100.00	2 ped ramps	
4 legs = 8 ped signals, 4 crosswalks, 8 ramps. Assumes ped poles needed for each location	$108,000.00	$69,600.00	8 ped heads	$6,000.00	4 crosswalks	$32,400.00	8 ped ramps	
One standard traffic signal 2 standard post mounted advanced warning signage	$128,750.00	$119,150.00	signal w 4 traffic heads / 2 ped heads	$1,500.00	1 crosswalk	$8,100.00	2 ped ramps	Estimated based on http://www.pedbikesafe.org/PEDSAFE/countermeasures.cfm
Each RRFB shall be a complete assembly consisting of supporting structure (pole, breakaway transformer base, sign, cabinet, and solar panel supports), indications, signage, cabinet, solar panel, and electrical components (wiring, solid-state circuit boards, etc.). Solar Powered.	$23,600.00	$14,000.00	RRFB	$1,500.00	1 crosswalk	$8,100.00	2 ped ramps	RRFB cost from pedbikesafe.org
One span wire + 2 posts, advanced warning signage	$84,680.00	$75,080.00	HAWK beacon w 4 HAWK heads / 2 ped heads	$1,500.00	1 crosswalk	$8,100.00	2 ped ramps	PHB cost from pedbikesafe.org

APPENDIX 6: PROJECT COST ESTIMATE TABLES

Suffolk County Hike + Bike Master Plan - Linear Project Cost Estimate Table

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Long term	4	$ 8,791,133.83	$$$$$	13.92	80
Long term	5	$ 519,415.93	$$$$	0.82	48
Bike lanes and signage	6	$ 9,967.89	$	0.72	41
Shared-use path	7	$ 158,334.25	$$$	0.25	35
Bike lanes and signage	8	$ 54,113.87	$$$	3.91	63
Shared-use path	9	$ 1,262,982.31	$$$$$	2.00	72
Buffered bike lanes	10	$ 481,013.50	$$$$	2.67	36
Bike lanes and signage	11	$ 17,777.67	$$	1.28	67
Shared-use path	12	$ 799,021.77	$$$$	1.27	58
Bike lanes and signage	13	$ 16,866.39	$$	1.22	16
Bike lanes and signage	14	$ 9,440.25	$	0.68	41
Shared-use path	15	$ 381,471.80	$$$$	0.60	42
Bike boulevard	16	$ 98,880.74	$$$	1.68	49
Bike lanes and signage	17	$ 14,922.42	$$	1.08	50
Shared-use path	18	$ 752,228.51	$$$$	1.19	27
Shared-use path	19	$ 230,392.08	$$$$	0.36	46
Shared-use path	20	$ 525,207.94	$$$$	0.83	32
Bike boulevard	22	$ 160,032.86	$$$	2.72	33
Shared-use path	23	$ 602,801.39	$$$$	0.95	73
Shared-use path	24	$ 158,920.27	$$$	0.25	81
Shared-use path	25	$ 872,135.45	$$$$	1.38	41
Buffered bike lanes	26	$ 1,114,907.23	$$$$$	6.18	87
Shared-use path	27	$ 1,125,999.94	$$$$$	1.78	38
Signed bike route	28	$ 19,397.75	$$	2.26	25
Shared-use path	29	$ 1,323,933.54	$$$$$	2.10	42
Shared-use path	30	$ 551,771.48	$$$$	0.87	80
Buffered bike lanes	31	$ 88,635.84	$$$	0.49	43
Install sidewalk on one side	32	$ 3,062,094.29	$$$$$	2.09	33
Shared-use path	33	$ 332,130.48	$$$$	0.53	44
Shared-use path	34	$ 1,257,381.02	$$$$$	1.99	33
Bike boulevard	35	$ 156,128.25	$$$	2.66	37
Long term	36	$ 3,630,033.12	$$$$$	5.75	82
Shared-use path	37	$ 305,315.61	$$$$	0.48	92
Shared-use path	38	$ 1,377,389.00	$$$$$	2.18	82
Buffered bike lanes	39	$ 274,797.90	$$$$	1.52	44
Shared-use path	40	$ 853,954.91	$$$$	1.35	37
Shared-use path	41	$ 24,874.94	$$	0.04	42
Shared-use path	42	$ 487,343.92	$$$$	0.77	31
Shared-use path	43	$ 988,449.16	$$$$	1.57	35
Shared-use path	44	$ 287,979.37	$$$$	0.46	25
Bike lanes and signage	45	$ 5,965.69	$	0.43	63
Bike lanes and signage	46	$ 31,828.96	$$	2.30	24
Bike lanes and signage	47	$ 9,715.84	$	0.70	23
Bike lanes and signage	48	$ 31,441.72	$$	2.27	28

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	49	$ 22,576.21	$$	1.63	82
Bike lanes and signage	50	$ 5,008.95	$	0.36	59
Bike lanes and signage	51	$ 16,690.84	$$	1.21	49
Bike lanes and signage	52	$ 114,938.56	$$$	8.30	80
Bike lanes and signage	53	$ 25,143.21	$$	1.82	24
Shared-use path	54	$ 180,114.90	$$$	0.29	22
Bike lanes and signage	55	$ 18,734.36	$$	1.35	35
Shared-use path	56	$ 895,159.50	$$$$	1.42	41
Shared-use path	57	$ 699,802.37	$$$$	1.11	58
Bike lanes and signage	58	$ 12,245.50	$$	0.88	50
Shared-use path	59	$ 5,557,871.38	$$$$$	8.80	70
Bike lanes and signage	60	$ 9,508.95	$	0.69	31
Bike lanes and signage	61	$ 12,072.09	$$	0.87	29
Bike lanes and signage	62	$ 6,866.59	$	0.50	24
Bike lanes and signage	63	$ 7,003.05	$	0.51	15
Bike lanes and signage	64	$ 19,000.32	$$	1.37	34
Shared-use path	65	$ 331,164.31	$$$$	0.52	45
Bike lanes and signage	66	$ 20,015.99	$$	1.45	21
Bike lanes and signage	67	$ 4,012.65	$	0.29	68
Shared-use path	68	$ 5,889,743.21	$$$$$	9.33	83
Bike lanes and signage	69	$ 7,664.47	$	0.55	68
Bike lanes and signage	70	$ 94,857.63	$$$	6.85	45
Bike lanes and signage	71	$ 5,718.37	$	0.41	41
Shared-use path	72	$ 437,822.00	$$$$	0.69	80
Install sidewalk on one side	73	$ 818,173.58	$$$$	0.56	75
Bike lanes and signage	74	$ 28,276.48	$$	2.04	39
Bike lanes and signage	75	$ 18,445.00	$$	1.33	45
Bike lanes and signage	76	$ 27,062.82	$$	1.95	28
Shared-use path	77	$ 2,298,376.42	$$$$$	3.64	29
Bike boulevard	78	$ 55,911.49	$$$	0.95	40
Shared-use path	79	$ 376,774.79	$$$$	0.60	64
Bike boulevard	80	$ 37,211.77	$$	0.63	45
Shared-use path	81	$ 66,499.48	$$$	0.11	41
Bike lanes and signage	82	$ 23,260.02	$$	1.68	31
Shared-use path	84	$ 2,864,789.58	$$$$$	4.54	80
Install sidewalk on one side	85	$ 996,193.52	$$$$	0.68	45
Bike lanes and signage	86	$ 24,554.80	$$	1.77	67
Bike lanes and signage	87	$ 9,945.44	$	0.72	48
Bike lanes and signage	88	$ 16,896.71	$$	1.22	56
Shared-use path	89	$ 2,717,867.39	$$$$$	4.30	66
Bike lanes and signage	90	$ 14,396.86	$$	1.04	19
Bike lanes and signage	91	$ 36,869.79	$$	2.66	46
Bike lanes and signage	92	$ 14,012.25	$$	1.01	80
Bike lanes and signage	93	$ 60,650.24	$$$	4.38	55
Bike lanes and signage	94	$ 55,538.66	$$$	4.01	83
Bike lanes and signage	95	$ 8,698.33	$	0.63	24

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	96	$ 11,274.12	$$	0.81	43
Bike lanes and signage	97	$ 28,020.76	$$	2.02	44
Bike lanes and signage	98	$ 14,961.32	$$	1.08	21
Bike lanes and signage	99	$ 3,990.84	$	0.29	29
Bike lanes and signage	100	$ 17,186.35	$$	1.24	48
Bike lanes and signage	101	$ 42,041.31	$$	3.04	80
Buffered bike lanes	102	$ 531,990.98	$$$$	2.95	64
Buffered bike lanes	103	$ 196,113.49	$$$	1.09	79
Shared-use path	104	$ 236,413.95	$$$$	0.37	46
Bike lanes and signage	105	$ 51,066.59	$$$	3.69	60
Bike lanes and signage	106	$ 30,286.08	$$	2.19	15
Bike lanes and signage	107	$ 18,411.50	$$	1.33	31
Bike lanes and signage	108	$ 29,321.08	$$	2.12	36
Bike lanes and signage	109	$ 5,062.26	$	0.37	82
Bike lanes and signage	110	$ 11,122.03	$$	0.80	25
Bike lanes and signage	112	$ 7,043.02	$	0.51	68
Bike lanes and signage	113	$ 10,128.52	$$	0.73	77
Bike lanes and signage	114	$ 14,909.68	$$	1.08	28
Bike lanes and signage	115	$ 31,953.71	$$	2.31	22
Bike lanes and signage	116	$ 31,757.80	$$	2.29	55
Bike lanes and signage	117	$ 30,172.55	$$	2.18	33
Bike lanes and signage	118	$ 2,898.10	$	0.21	69
Bike lanes and signage	119	$ 60,182.41	$$$	4.35	86
Bike lanes and signage	120	$ 5,338.23	$	0.39	80
Bike boulevard	121	$ 49,850.93	$$	0.85	33
Shared-use path	122	$ 66,844.90	$$$	0.11	52
Bike lanes and signage	123	$ 7,924.27	$	0.57	15
Bike lanes and signage	124	$ 49,798.80	$$	3.60	83
Bike lanes and signage	125	$ 27,623.41	$$	2.00	55
Bike lanes and signage	126	$ 7,758.23	$	0.56	21
Bike lanes and signage	127	$ 22,372.14	$$	1.62	58
Bike lanes and signage	128	$ 15,383.04	$$	1.11	26
Shared-use path	130	$ 2,601,023.17	$$$$$	4.12	21
Bike lanes and signage	131	$ 75,430.19	$$$	5.45	86
Bike lanes and signage	132	$ 53,028.56	$$$	3.83	86
Bike lanes and signage	133	$ 15,512.21	$$	1.12	47
Bike lanes and signage	134	$ 40,729.22	$$	2.94	56
Bike lanes and signage	135	$ 22,425.99	$$	1.62	23
Bike lanes and signage	136	$ 8,184.78	$	0.59	67
Install sidewalk on one side	137	$ 159,852.73	$$$	0.11	48
Shared-use path	138	$ 673,860.84	$$$$	1.07	55
Bike lanes and signage	139	$ 21,714.22	$$	1.57	80
Shared-use path	141	$ 1,118,775.72	$$$$$	1.77	44
Long term	142	$ 7,681,861.82	$$$$$	12.16	60
Bike lanes and signage	144	$ 15,733.04	$$	1.14	74
Shared-use path	145	$ 583,375.56	$$$$	0.92	25

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	146	$ 17,829.45	$$	1.29	32
Shared-use path	147	$ 123,741.34	$$$	0.20	90
Bike lanes and signage	148	$ 18,375.22	$$	1.33	27
Shared-use path	149	$ 1,493,336.51	$$$$$	2.36	40
Bike lanes and signage	150	$ 33,098.69	$$	2.39	23
Long term	151	$ 10,949,496.16	$ -	17.34	89
Bike lanes and signage	152	$ 21,570.79	$$	1.56	46
Shared-use path	153	$ 590,289.09	$$$$	0.93	21
Shared-use path	155	$ 1,144,433.14	$$$$$	1.81	83
Bike lanes and signage	156	$ 5,182.70	$	0.37	69
Shared-use path	157	$ 1,060,116.86	$$$$$	1.68	75
Bike lanes and signage	158	$ 18,867.55	$$	1.36	57
Bike lanes and signage	159	$ 33,132.47	$$	2.39	61
Bike lanes and signage	160	$ 17,419.36	$$	1.26	34
Bike lanes and signage	161	$ 49,530.35	$$	3.58	15
Buffered bike lanes	162	$ 452,599.93	$$$$	2.51	66
Bike lanes and signage	163	$ 60,170.10	$$$	4.35	34
Bike lanes and signage	165	$ 33,214.43	$$	2.40	60
Shared-use path	166	$ 4,081,060.54	$$$$$	6.46	86
Bike lanes and signage	167	$ 21,006.88	$$	1.52	59
Shared-use path	168	$ 361,377.22	$$$$	0.57	27
Bike lanes and signage	169	$ 11,787.40	$$	0.85	15
Bike lanes and signage	170	$ 19,526.85	$$	1.41	59
Bike lanes and signage	172	$ 7,139.11	$	0.52	33
Bike lanes and signage	173	$ 4,708.45	$	0.34	26
Install sidewalk on one side	174	$ 792,343.86	$$$$	0.54	54
Bike lanes and signage	175	$ 77,283.34	$$$	5.58	61
Install sidewalk on one side	176	$ 335,238.09	$$$$	0.23	28
Install sidewalk on one side	177	$ 150,533.74	$$$	0.10	29
Bike lanes and signage	178	$ 43,635.98	$$	3.15	76
Install sidewalk on one side	179	$ 228,521.45	$$$$	0.16	57
Shared-use path	180	$ 624,239.78	$$$$	0.99	34
Install sidewalk on one side	181	$ 204,155.22	$$$$	0.14	44
Bike lanes and signage	182	$ 1,896.36	$	0.14	36
Shared-use path	183	$ 514,253.52	$$$$	0.81	42
Install sidewalk on one side	184	$ 234,432.45	$$$$	0.16	74
Install sidewalk on one side	185	$ 140,137.67	$$$	0.10	60
Install sidewalk on one side	186	$ 72,359.76	$$$	0.05	56
Install sidewalk on one side	187	$ 76,585.77	$$$	0.05	68
Install sidewalk on one side	188	$ 835,745.74	$$$$	0.57	55
Install sidewalk on one side	189	$ 253,425.70	$$$$	0.17	60
Install sidewalk on one side	190	$ 925,341.98	$$$$	0.63	52
Install sidewalk on one side	191	$ 930,789.51	$$$$	0.64	23
Install sidewalk on one side	192	$ 1,089,447.77	$$$$$	0.75	75
Install sidewalk on one side	193	$ 474,863.61	$$$$	0.32	50
Bike lanes and signage	194	$ 22,683.09	$$	1.64	70

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Install sidewalk on one side	195	$ 121,544.71	$$$	0.08	79
Bike lanes and signage	196	$ 22,962.35	$$	1.66	67
Bike lanes and signage	197	$ 1,187.11	$	0.09	84
Bike lanes and signage	198	$ 1,163.80	$	0.08	55
Install sidewalk on one side	199	$ 377,410.40	$$$$	0.26	29
Install sidewalk on one side	200	$ 863,916.17	$$$$	0.59	37
Install sidewalk on one side	201	$ 189,751.29	$$$	0.13	42
Buffered bike lanes	202	$ 1,438,890.74	$$$$$	7.98	73
Bike lanes and signage	203	$ 5,869.53	$	0.42	45
Bike lanes and signage	204	$ 37,027.90	$$	2.67	60
Bike lanes and signage	205	$ 11,319.52	$$	0.82	80
Shared-use path	209	$ 197,516.82	$$$	0.31	90
Bike lanes and signage	210	$ 9,718.05	$	0.70	35
Shared-use path	211	$ 481,827.24	$$$$	0.76	50
Install sidewalk on one side	212	$ 663,926.28	$$$$	0.45	50
Install sidewalk on one side	213	$ 640,400.72	$$$$	0.44	34
Install sidewalk on one side	214	$ 1,887,614.89	$$$$$	1.29	61
Install sidewalk on one side	215	$ 1,624,083.63	$$$$$	1.11	62
Bike lanes and signage	216	$ 37,964.24	$$	2.74	65
Bike lanes and signage	217	$ 28,585.08	$$	2.06	74
Bike lanes and signage	218	$ 50,334.47	$$$	3.64	57
Bike lanes and signage	219	$ 131,600.46	$$$	9.51	74
Shared-use path	220	$ 245,477.70	$$$$	0.39	72
Bike lanes and signage	221	$ 42,080.08	$$	3.04	65
Bike lanes and signage	222	$ 26,541.56	$$	1.92	41
Install sidewalk on one side	223	$ 114,508.39	$$$	0.08	56
Install sidewalk on one side	224	$ 144,790.58	$$$	0.10	46
Install sidewalk on one side	225	$ 194,608.16	$$$	0.13	43
Install sidewalk on one side	226	$ 1,174,511.71	$$$$$	0.80	51
Bike lanes and signage	228	$ 49,075.26	$$	3.54	65
Bike lanes and signage	229	$ 45,193.82	$$	3.26	28
Bike lanes and signage	230	$ 25,007.81	$$	1.81	27
Bike lanes and signage	231	$ 32,052.42	$$	2.32	28
Bike lanes and signage	232	$ 44,154.06	$$	3.19	56
Bike lanes and signage	233	$ 12,090.70	$$	0.87	30
Bike lanes and signage	234	$ 64,825.47	$$$	4.68	71
Bike lanes and signage	235	$ 18,387.13	$$	1.33	39
Bike lanes and signage	237	$ 48,898.46	$$	3.53	46
Bike lanes and signage	238	$ 36,996.61	$$	2.67	62
Bike lanes and signage	239	$ 50,468.63	$$$	3.65	78
Bike lanes and signage	240	$ 56,757.58	$$$	4.10	61
Bike lanes and signage	241	$ 13,321.56	$$	0.96	27
Bike lanes and signage	242	$ 39,388.89	$$	2.84	72
Bike lanes and signage	244	$ 19,185.02	$$	1.39	41
Shared-use path	245	$ 306,725.09	$$$$	0.49	29
Bike lanes and signage	246	$ 5,522.81	$	0.40	46

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	247	$ 22,278.54	$$	1.61	53
Bike lanes and signage	248	$ 54,793.80	$$$	3.96	76
Bike lanes and signage	249	$ 38,457.95	$$	2.78	41
Bike lanes and signage	250	$ 42,394.08	$$	3.06	41
Bike lanes and signage	251	$ 22,949.47	$$	1.66	37
Bike lanes and signage	252	$ 50,876.92	$$$	3.67	18
Bike lanes and signage	253	$ 33,587.00	$$	2.43	30
Bike lanes and signage	255	$ 15,051.73	$$	1.09	41
Bike lanes and signage	256	$ 26,277.53	$$	1.90	67
Bike lanes and signage	257	$ 30,469.25	$$	2.20	43
Bike lanes and signage	258	$ 21,004.66	$$	1.52	34
Bike lanes and signage	259	$ 66,712.41	$$$	4.82	74
Bike lanes and signage	260	$ 16,714.51	$$	1.21	63
Bike lanes and signage	261	$ 64,612.54	$$$	4.67	85
Shared-use path	262	$ 224,049.42	$$$$	0.35	43
Shared-use path	263	$ 112,139.64	$$$	0.18	38
Install sidewalk on one side	264	$ 272,432.12	$$$$	0.19	46
Bike lanes and signage	265	$ 23,890.38	$$	1.73	78
Install sidewalk on one side	266	$ 133,595.07	$$$	0.09	80
Bike lanes and signage	267	$ 6,712.06	$	0.48	86
Bike lanes and signage	268	$ 18,302.54	$$	1.32	32
Install sidewalk on one side	269	$ 282,765.76	$$$$	0.19	60
Bike lanes and signage	270	$ 6,777.68	$	0.49	65
Install sidewalk on one side	272	$ 138,531.19	$$$	0.09	34
Install sidewalk on one side	273	$ 197,098.00	$$$	0.13	33
Install sidewalk on one side	274	$ 1,047,727.22	$$$$$	0.72	47
Install sidewalk on one side	275	$ 1,044,598.47	$$$$$	0.71	52
Install sidewalk on one side	276	$ 942,148.04	$$$$	0.64	42
Install sidewalk on one side	277	$ 73,664.92	$$$	0.05	27
Install sidewalk on one side	278	$ 203,374.50	$$$$	0.14	40
Install sidewalk on one side	279	$ 170,513.87	$$$	0.12	43
Bike lanes and signage	280	$ 24,176.42	$$	1.75	51
Install sidewalk on one side	281	$ 497,025.09	$$$$	0.34	78
Install sidewalk on one side	282	$ 405,674.41	$$$$	0.28	54
Install sidewalk on one side	283	$ 215,581.00	$$$$	0.15	83
Shared-use path	284	$ 654,758.33	$$$$	1.04	42
Install sidewalk on one side	286	$ 217,252.11	$$$$	0.15	42
Install sidewalk on one side	287	$ 595,905.24	$$$$	0.41	86
Install sidewalk on one side	288	$ 386,472.08	$$$$	0.26	72
Shared-use path	289	$ 50,905.83	$$$	0.08	68
Shared-use path	291	$ 99,862.25	$$$	0.16	51
Shared-use path	292	$ 60,189.46	$$$	0.10	53
Install sidewalk on one side	293	$ 274,306.44	$$$$	0.19	54
Bike lanes and signage	294	$ 6,085.79	$	0.44	67
Bike lanes and signage	295	$ 5,592.76	$	0.40	67
Bike lanes and signage	297	$ 38,867.21	$$	2.81	74

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Install sidewalk on one side	298	$ 212,320.67	$$$$	0.15	33
Install sidewalk on one side	299	$ 693,134.75	$$$$	0.47	41
Install sidewalk on one side	300	$ 270,591.42	$$$$	0.19	30
Install sidewalk on one side	301	$ 1,064,951.42	$$$$$	0.73	43
Install sidewalk on one side	302	$ 451,186.00	$$$$	0.31	65
Install sidewalk on one side	303	$ 1,138,085.18	$$$$$	0.78	38
Install sidewalk on one side	304	$ 605,281.25	$$$$	0.41	24
Install sidewalk on one side	305	$ 78,304.97	$$$	0.05	33
Install sidewalk on one side	306	$ 321,652.89	$$$$	0.22	35
Install sidewalk on one side	307	$ 393,231.05	$$$$	0.27	34
Install sidewalk on one side	308	$ 2,281,471.70	$$$$$	1.56	37
Install sidewalk on one side	309	$ 469,983.34	$$$$	0.32	48
Install sidewalk on one side	310	$ 50,138.19	$$$	0.03	59
Install sidewalk on one side	311	$ 69,000.89	$$$	0.05	60
Install sidewalk on one side	312	$ 253,835.07	$$$$	0.17	53
Bike lanes and signage	313	$ 64,321.52	$$$	4.65	67
Install sidewalk on one side	314	$ 225,078.36	$$$$	0.15	68
Install sidewalk on one side	315	$ 114,605.18	$$$	0.08	68
Install sidewalk on one side	316	$ 240,510.11	$$$$	0.16	30
Bike lanes and signage	317	$ 17,951.15	$$	1.30	23
Install sidewalk on one side	318	$ 538,862.60	$$$$	0.37	23
Install sidewalk on one side	319	$ 1,481,374.68	$$$$$	1.01	31
Install sidewalk on one side	320	$ 1,449,490.69	$$$$$	0.99	34
Shared-use path	322	$ 543,045.58	$$$$	0.86	80
Shared-use path	323	$ 176,750.97	$$$	0.28	72
Bike lanes and signage	324	$ 27,761.44	$$	2.01	60
Install sidewalk on one side	325	$ 332,261.39	$$$$	0.23	71
Shared-use path	326	$ 462,787.24	$$$$	0.73	73
Install sidewalk on one side	327	$ 1,437,959.64	$$$$$	0.98	43
Install sidewalk on one side	328	$ 961,182.24	$$$$	0.66	75
Install sidewalk on one side	329	$ 530,596.27	$$$$	0.36	49
Install sidewalk on one side	330	$ 760,433.55	$$$$	0.52	39
Install sidewalk on one side	331	$ 365,265.30	$$$$	0.25	43
Install sidewalk on one side	332	$ 566,955.54	$$$$	0.39	42
Install sidewalk on one side	333	$ 792,295.61	$$$$	0.54	41
Install sidewalk on one side	334	$ 900,509.37	$$$$	0.62	58
Bike lanes and signage	335	$ 31,297.18	$$	2.26	55
Install sidewalk on one side	336	$ 264,879.26	$$$$	0.18	29
Bike lanes and signage	337	$ 8,455.07	$	0.61	23
Bike lanes and signage	339	$ 15,503.77	$$	1.12	86
Bike lanes and signage	340	$ 20,168.98	$$	1.46	32
Buffered bike lanes	342	$ 1,020,928.96	$$$$$	5.66	54
Bike lanes and signage	343	$ 23,510.89	$$	1.70	53
Bike lanes and signage	344	$ 35,045.71	$$	2.53	37
Bike lanes and signage	345	$ 24,853.57	$$	1.80	66
Bike lanes and signage	346	$ 16,767.54	$$	1.21	35

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	347	$ 54,775.39	$$$	3.96	50
Bike lanes and signage	348	$ 1,308.59	$	0.09	77
Bike lanes and signage	349	$ 54,337.61	$$$	3.92	48
Bike lanes and signage	350	$ 15,355.77	$$	1.11	78
Bike lanes and signage	351	$ 17,312.76	$$	1.25	67
Bike lanes and signage	352	$ 25,066.65	$$	1.81	42
Bike lanes and signage	353	$ 19,382.86	$$	1.40	60
Bike lanes and signage	354	$ 23,564.88	$$	1.70	63
Bike lanes and signage	355	$ 10,415.69	$$	0.75	48
Bike lanes and signage	356	$ 4,166.32	$	0.30	57
Bike lanes and signage	357	$ 43,988.20	$$	3.18	48
Bike lanes and signage	358	$ 22,892.71	$$	1.65	32
Bike lanes and signage	359	$ 6,911.24	$	0.50	65
Shared-use path	360	$ 195,600.88	$$$	0.31	54
Bike lanes and signage	361	$ 37,649.54	$$	2.72	52
Bike lanes and signage	362	$ 27,320.48	$$	1.97	45
Bike lanes and signage	363	$ 28,224.00	$$	2.04	20
Bike lanes and signage	364	$ 32,276.29	$$	2.33	48
Bike lanes and signage	365	$ 32,261.34	$$	2.33	74
Bike lanes and signage	366	$ 13,677.14	$$	0.99	26
Bike lanes and signage	367	$ 26,262.58	$$	1.90	56
Bike lanes and signage	369	$ 21,472.63	$$	1.55	42
Bike lanes and signage	370	$ 37,304.80	$$	2.69	84
Bike lanes and signage	371	$ 23,344.61	$$	1.69	84
Bike lanes and signage	372	$ 36,143.06	$$	2.61	67
Bike lanes and signage	373	$ 20,415.14	$$	1.47	73
Bike lanes and signage	374	$ 17,683.39	$$	1.28	49
Install sidewalk on one side	375	$ 953,478.79	$$$$	0.65	55
Install sidewalk on one side	376	$ 311,316.32	$$$$	0.21	56
Install sidewalk on one side	377	$ 60,742.60	$$$	0.04	57
Bike lanes and signage	379	$ 23,836.52	$$	1.72	41
Bike lanes and signage	380	$ 36,703.10	$$	2.65	29
Install sidewalk on one side	381	$ 974,403.39	$$$$	0.67	37
Install sidewalk on one side	382	$ 830,782.14	$$$$	0.57	33
Install sidewalk on one side	383	$ 527,947.07	$$$$	0.36	39
Bike lanes and signage	384	$ 13,951.88	$$	1.01	26
Install sidewalk on one side	385	$ 658,105.93	$$$$	0.45	33
Install sidewalk on one side	386	$ 438,801.13	$$$$	0.30	32
Bike lanes and signage	387	$ 11,620.98	$$	0.84	23
Shared-use path	388	$ 1,981,628.35	$$$$$	3.14	74
Install sidewalk on one side	389	$ 520,438.07	$$$$	0.36	54
Bike lanes and signage	390	$ 24,353.35	$$	1.76	54
Install sidewalk on one side	391	$ 2,714,423.09	$$$$$	1.86	45
Bike lanes and signage	392	$ 33,034.17	$$	2.39	49
Install sidewalk on one side	393	$ 360,553.17	$$$$	0.25	69
Install sidewalk on one side	394	$ 322,332.73	$$$$	0.22	72

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Install sidewalk on one side	395	$ 66,103.00	$$$	0.05	69
Install sidewalk on one side	396	$ 74,213.18	$$$	0.05	51
Install sidewalk on one side	397	$ 137,589.49	$$$	0.09	51
Install sidewalk on one side	398	$ 62,795.30	$$$	0.04	27
Install sidewalk on one side	399	$ 443,491.32	$$$$	0.30	26
Install sidewalk on one side	400	$ 64,003.37	$$$	0.04	27
Install sidewalk on one side	401	$ 444,932.89	$$$$	0.30	38
Install sidewalk on one side	402	$ 1,234,254.72	$$$$$	0.84	44
Bike lanes and signage	403	$ 37,251.08	$$	2.69	36
Install sidewalk on one side	405	$ 559,741.88	$$$$	0.38	56
Bike lanes and signage	406	$ 12,218.09	$$	0.88	69
Install sidewalk on one side	407	$ 440,105.26	$$$$	0.30	60
Install sidewalk on one side	408	$ 452,327.85	$$$$	0.31	62
Install sidewalk on one side	409	$ 66,191.16	$$$	0.05	58
Shared-use path	410	$ 46,027.08	$$	0.07	44
Shared-use path	411	$ 18,257.52	$$	0.03	43
Bike lanes and signage	413	$ 19,420.80	$$	1.40	73
Bike lanes and signage	414	$ 26,360.88	$$	1.90	35
Shared-use path	415	$ 1,573,756.57	$$$$$	2.49	67
Shared-use path	416	$ 95,381.21	$$$	0.15	68
Install sidewalk on one side	417	$ 160,817.67	$$$	0.11	68
Install sidewalk on one side	418	$ 597,026.62	$$$$	0.41	68
Bike lanes and signage	419	$ 3,102.69	$	0.22	56
Bike lanes and signage	420	$ 8,443.87	$	0.61	73
Install sidewalk on one side	421	$ 2,414,487.51	$$$$$	1.65	91
Bike lanes and signage	422	$ 10,723.82	$$	0.77	42
Bike lanes and signage	423	$ 21,679.05	$$	1.57	31
Bike lanes and signage	425	$ 3,680.26	$	0.27	34
Shared-use path	426	$ 173,869.49	$$$	0.28	48
Bike lanes and signage	427	$ 44,047.73	$$	3.18	47
Bike lanes and signage	429	$ 14,722.77	$$	1.06	21
Bike lanes and signage	430	$ 14,731.50	$$	1.06	47
Bike lanes and signage	431	$ 13,898.58	$$	1.00	35
Bike lanes and signage	432	$ 34,196.32	$$	2.47	36
Bike lanes and signage	433	$ 23,231.77	$$	1.68	16
Bike lanes and signage	434	$ 20,614.51	$$	1.49	25
Bike lanes and signage	435	$ 26,881.73	$$	1.94	24
Bike lanes and signage	436	$ 34,423.24	$$	2.49	53
Install sidewalk on one side	438	$ 1,073,638.81	$$$$$	0.73	44
Bike lanes and signage	439	$ 14,604.54	$$	1.05	81
Install sidewalk on one side	440	$ 1,160,034.67	$$$$$	0.79	36
Shared-use path	441	$ 1,493,191.20	$$$$$	2.36	27
Shared-use path	442	$ 3,968,624.35	$$$$$	6.28	79
Bike lanes and signage	443	$ 29,987.72	$$	2.17	26
Bike lanes and signage	444	$ 45,184.68	$$	3.26	36
Long term	447	$ 1,184,103.15	$$$$$	1.88	73

Suffolk County Hike + Bike Master Plan - Linear Project Cost Estimate Table

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Long term	448	$ 3,246,126.17	$$$$$	5.14	65
Long term	449	$ 742,042.60	$$$$	1.18	51
Long term	450	$ 578,733.49	$$$$	0.92	36
Long term	451	$ 190,448.57	$$$	0.30	39
Bike lanes and signage	452	$ 4,013.14	$	0.29	48
Buffered bike lanes	454	$ 217,521.90	$$$$	1.21	40
Shared-use path	455	$ 538,100.40	$$$$	0.85	56
Bike lanes and signage	456	$ 3,605.89	$	0.26	82
Bike lanes and signage	457	$ 5,655.52	$	0.41	85
Bike lanes and signage	458	$ 15,462.51	$$	1.12	86
Bike lanes and signage	459	$ 15,073.47	$$	1.09	44
Buffered bike lanes	460	$ 1,238,185.90	$$$$$	6.87	75
Bike lanes and signage	461	$ 84,330.45	$$$	6.09	79
Bike lanes and signage	462	$ 62,158.10	$$$	4.49	37
Bike lanes and signage	463	$ 226,081.93	$$$$	16.33	70
Install sidewalk on one side	464	$ 1,163,881.28	$$$$$	0.80	52
Bike lanes and signage	469	$ 18,053.19	$$	1.30	47
Bike lanes and signage	470	$ 15,628.93	$$	1.13	64
Buffered bike lanes	472	$ 255,001.06	$$$$	1.41	77
Shared-use path	473	$ 128,400.46	$$$	0.20	47
Bike lanes and signage	474	$ 2,421.85	$	0.17	66
Bike lanes and signage	481	$ 9,006.80	$	0.65	51
Bike lanes and signage	482	$ 9,311.29	$	0.67	43
Bike lanes and signage	483	$ 25,521.32	$$	1.84	54
Bike lanes and signage	484	$ 28,901.58	$$	2.09	80
Bike lanes and signage	485	$ 16,804.09	$$	1.21	47
Bike lanes and signage	486	$ 15,879.11	$$	1.15	41
Shared-use path	488	$ 689,704.88	$$$$	1.09	56
Bike lanes and signage	489	$ 46,780.32	$$	3.38	42
Bike lanes and signage	490	$ 14,127.99	$$	1.02	42
Shared-use path	491	$ 1,825,025.52	$$$$$	2.89	82
Shared-use path	492	$ 1,051,939.03	$$$$$	1.67	31
Bike lanes and signage	493	$ 109,670.54	$$$	7.92	63
Bike lanes and signage	494	$ 40,826.28	$$	2.95	35
Bike lanes and signage	495	$ 53,844.04	$$$	3.89	34
Bike lanes and signage	496	$ 27,368.24	$$	1.98	36
Bike lanes and signage	497	$ 37,803.91	$$	2.73	51
Bike lanes and signage	498	$ 53,686.06	$$$	3.88	24
Bike lanes and signage	500	$ 83,873.57	$$$	6.06	45
Bike lanes and signage	501	$ 48,637.76	$$	3.51	49
Bike lanes and signage	502	$ 15,986.27	$$	1.15	12
Bike lanes and signage	503	$ 14,128.27	$$	1.02	11
Bike lanes and signage	504	$ 29,452.61	$$	2.13	64
Bike lanes and signage	505	$ 12,832.38	$$	0.93	64
Bike lanes and signage	506	$ 18,689.64	$$	1.35	60
Bike lanes and signage	507	$ 8,011.27	$	0.58	31

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	509	$ 12,018.64	$$	0.87	67
Bike lanes and signage	510	$ 1,065.46	$	0.08	59
Bike lanes and signage	511	$ 3,610.17	$	0.26	62
Bike lanes and signage	512	$ 5,645.10	$	0.41	15
Bike lanes and signage	513	$ 8,239.42	$	0.60	35
Bike lanes and signage	514	$ 2,532.72	$	0.18	57
Bike lanes and signage	515	$ 1,568.43	$	0.11	50
Bike lanes and signage	516	$ 6,650.72	$	0.48	77
Bike lanes and signage	517	$ 8,867.96	$	0.64	35
Bike lanes and signage	518	$ 7,854.20	$	0.57	72
Bike lanes and signage	519	$ 3,898.02	$	0.28	80
Bike lanes and signage	520	$ 2,582.66	$	0.19	45
Bike lanes and signage	521	$ 7,320.32	$	0.53	68
Bike lanes and signage	522	$ 13,614.56	$$	0.98	72
Shared-use path	523	$ 701,507.39	$$$$	1.11	43
Bike lanes and signage	524	$ 6,044.80	$	0.44	18
Bike lanes and signage	525	$ 15,908.87	$$	1.15	27
Bike lanes and signage	526	$ 9,389.35	$	0.68	28
Bike lanes and signage	528	$ 23,677.72	$$	1.71	30
Bike lanes and signage	529	$ 5,685.81	$	0.41	15
Bike lanes and signage	530	$ 12,536.68	$$	0.91	42
Bike lanes and signage	531	$ 15,801.02	$$	1.14	32
Bike lanes and signage	532	$ 1,732.95	$	0.13	20
Bike lanes and signage	533	$ 12,884.42	$$	0.93	81
Bike lanes and signage	534	$ 5,950.90	$	0.43	79
Bike lanes and signage	535	$ 12,538.63	$$	0.91	55
Bike lanes and signage	536	$ 9,411.75	$	0.68	31
Bike lanes and signage	537	$ 42,985.96	$$	3.10	67
Bike lanes and signage	538	$ 43,946.25	$$	3.17	58
Bike lanes and signage	539	$ 71,155.13	$$$	5.14	55
Bike lanes and signage	540	$ 12,938.43	$$	0.93	57
Bike lanes and signage	541	$ 6,336.87	$	0.46	85
Bike lanes and signage	542	$ 1,882.49	$	0.14	69
Bike lanes and signage	543	$ 10,051.25	$$	0.73	61
Bike lanes and signage	544	$ 6,365.85	$	0.46	55
Bike lanes and signage	545	$ 4,130.70	$	0.30	56
Shared-use path	546	$ 223,739.99	$$$$	0.35	93
Bike lanes and signage	547	$ 15,807.25	$$	1.14	62
Bike lanes and signage	548	$ 9,706.92	$	0.70	28
Bike lanes and signage	550	$ 6,435.38	$	0.46	30
Bike lanes and signage	551	$ 8,123.43	$	0.59	30
Bike lanes and signage	552	$ 6,377.59	$	0.46	26
Bike lanes and signage	553	$ 5,062.74	$	0.37	17
Bike lanes and signage	554	$ 876.38	$	0.06	14
Bike lanes and signage	555	$ 25,622.11	$$	1.85	67
Bike lanes and signage	556	$ 5,202.73	$	0.38	41

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	557	$ 26,484.38	$$	1.91	71
Bike lanes and signage	558	$ 16,420.59	$$	1.19	63
Bike lanes and signage	559	$ 19,318.90	$$	1.40	71
Bike lanes and signage	560	$ 5,627.30	$	0.41	56
Bike lanes and signage	561	$ 6,920.60	$	0.50	55
Bike lanes and signage	562	$ 9,583.32	$	0.69	43
Shared-use path	563	$ 1,031,611.43	$$$$$	1.63	50
Bike lanes and signage	564	$ 12,864.28	$$	0.93	37
Bike lanes and signage	565	$ 7,708.97	$	0.56	29
Bike lanes and signage	566	$ 4,466.88	$	0.32	20
Bike lanes and signage	567	$ 37,391.89	$$	2.70	59
Bike lanes and signage	568	$ 18,293.95	$$	1.32	43
Bike lanes and signage	569	$ 18,425.06	$$	1.33	70
Bike lanes and signage	570	$ 4,887.44	$	0.35	60
Bike lanes and signage	571	$ 4,979.98	$	0.36	38
Bike lanes and signage	572	$ 2,148.26	$	0.16	43
Bike lanes and signage	573	$ 2,793.10	$	0.20	33
Bike lanes and signage	574	$ 8,082.18	$	0.58	41
Bike lanes and signage	575	$ 594.25	$	0.04	13
Bike lanes and signage	576	$ 8,050.87	$	0.58	13
Bike lanes and signage	577	$ 22,145.63	$$	1.60	61
Bike lanes and signage	578	$ 7,052.12	$	0.51	25
Bike lanes and signage	579	$ 15,746.75	$$	1.14	43
Bike lanes and signage	581	$ 10,999.35	$$	0.79	25
Bike lanes and signage	582	$ 10,195.18	$$	0.74	71
Bike lanes and signage	583	$ 8,806.50	$	0.64	82
Bike lanes and signage	584	$ 21,422.78	$$	1.55	73
Bike lanes and signage	585	$ 4,397.32	$	0.32	48
Bike lanes and signage	586	$ 5,914.24	$	0.43	71
Bike lanes and signage	588	$ 17,451.90	$$	1.26	59
Bike lanes and signage	589	$ 10,714.44	$$	0.77	22
Bike lanes and signage	590	$ 5,923.38	$	0.43	30
Bike lanes and signage	591	$ 1,626.03	$	0.12	63
Bike lanes and signage	592	$ 8,030.86	$	0.58	63
Bike lanes and signage	593	$ 11,556.73	$$	0.83	30
Bike lanes and signage	596	$ 25,154.57	$$	1.82	87
Bike lanes and signage	597	$ 8,588.33	$	0.62	22
Bike lanes and signage	598	$ 9,319.87	$	0.67	37
Bike lanes and signage	599	$ 24,612.12	$$	1.78	43
Bike lanes and signage	600	$ 16,615.66	$$	1.20	35
Bike lanes and signage	601	$ 8,658.18	$	0.63	35
Bike lanes and signage	602	$ 16,485.66	$$	1.19	49
Bike lanes and signage	603	$ 10,392.22	$$	0.75	59
Bike lanes and signage	604	$ 5,224.81	$	0.38	39
Bike lanes and signage	605	$ 3,069.56	$	0.22	68
Bike lanes and signage	606	$ 8,839.27	$	0.64	24

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	607	$ 7,528.08	$	0.54	25
Bike lanes and signage	608	$ 3,882.62	$	0.28	40
Bike lanes and signage	609	$ 3,417.87	$	0.25	32
Bike lanes and signage	610	$ 11,956.07	$$	0.86	29
Bike lanes and signage	611	$ 11,219.72	$$	0.81	24
Bike lanes and signage	612	$ 24,882.10	$$	1.80	25
Bike lanes and signage	613	$ 44,481.77	$$	3.21	70
Bike lanes and signage	614	$ 12,283.85	$$	0.89	69
Bike lanes and signage	615	$ 15,875.37	$$	1.15	71
Bike lanes and signage	616	$ 8,609.96	$	0.62	20
Bike lanes and signage	617	$ 3,842.76	$	0.28	53
Bike lanes and signage	618	$ 3,530.45	$	0.25	63
Bike lanes and signage	620	$ 758.92	$	0.05	48
Bike lanes and signage	621	$ 3,605.89	$	0.26	52
Bike lanes and signage	622	$ 4,303.75	$	0.31	51
Bike lanes and signage	623	$ 963.64	$	0.07	52
Bike lanes and signage	624	$ 33,380.16	$$	2.41	47
Bike lanes and signage	625	$ 21,998.32	$$	1.59	76
Bike lanes and signage	626	$ 85,636.17	$$$	6.19	77
Bike lanes and signage	627	$ 17,051.09	$$	1.23	77
Bike lanes and signage	628	$ 17,886.22	$$	1.29	86
Bike lanes and signage	629	$ 3,084.69	$	0.22	35
Bike lanes and signage	630	$ 20,789.38	$$	1.50	42
Bike lanes and signage	631	$ 25,656.03	$$	1.85	72
Shared-use path	633	$ 2,172,116.71	$$$$$	3.44	47
Shared-use path	634	$ 504,875.29	$$$$	0.80	27
Bike lanes and signage	635	$ 15,298.59	$$	1.10	40
Bike lanes and signage	636	$ 1,200.73	$	0.09	37
Bike lanes and signage	637	$ 7,197.41	$	0.52	63
Bike lanes and signage	638	$ 2,876.46	$	0.21	40
Bike lanes and signage	639	$ 4,689.90	$	0.34	39
Bike lanes and signage	640	$ 10,872.70	$$	0.79	23
Bike lanes and signage	641	$ 38,163.88	$$	2.76	45
Bike lanes and signage	642	$ 14,518.28	$$	1.05	24
Bike lanes and signage	643	$ 2,957.13	$	0.21	16
Bike lanes and signage	644	$ 9,705.44	$	0.70	60
Bike lanes and signage	645	$ 30,038.39	$$	2.17	36
Bike lanes and signage	646	$ 33,746.08	$$	2.44	42
Bike lanes and signage	647	$ 2,677.44	$	0.19	65
Bike lanes and signage	648	$ 23,868.50	$$	1.72	59
Bike lanes and signage	649	$ 1,612.21	$	0.12	11
Bike lanes and signage	650	$ 11,812.57	$$	0.85	37
Bike lanes and signage	651	$ 40,188.30	$$	2.90	77
Bike lanes and signage	652	$ 16,863.76	$$	1.22	43
Bike lanes and signage	653	$ 16,928.84	$$	1.22	37
Buffered bike lanes	654	$ 317,953.64	$$$$	1.76	73

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	657	$ 30,483.78	$$	2.20	37
Bike lanes and signage	658	$ 4,246.77	$	0.31	16
Bike lanes and signage	659	$ 28,788.74	$$	2.08	32
Bike lanes and signage	660	$ 16,024.34	$$	1.16	49
Bike lanes and signage	661	$ 28,562.65	$$	2.06	39
Bike lanes and signage	662	$ 11,838.54	$$	0.86	33
Bike lanes and signage	663	$ 2,457.40	$	0.18	35
Bike lanes and signage	664	$ 2,345.80	$	0.17	38
Bike lanes and signage	665	$ 17,609.18	$$	1.27	37
Bike lanes and signage	667	$ 12,168.80	$$	0.88	33
Shared-use path	668	$ 37,621.84	$$	0.06	32
Bike lanes and signage	669	$ 4,100.71	$	0.30	32
Bike lanes and signage	670	$ 28,878.59	$$	2.09	55
Bike lanes and signage	671	$ 1,307.77	$	0.09	55
Bike lanes and signage	672	$ 25,968.79	$$	1.88	32
Bike lanes and signage	673	$ 6,745.52	$	0.49	36
Bike lanes and signage	674	$ 2,954.95	$	0.21	44
Bike lanes and signage	675	$ 27,482.60	$$	1.99	55
Bike lanes and signage	676	$ 19,441.98	$$	1.40	43
Bike lanes and signage	677	$ 11,057.81	$$	0.80	59
Bike lanes and signage	678	$ 13,573.39	$$	0.98	36
Bike lanes and signage	679	$ 9,703.12	$	0.70	26
Bike lanes and signage	680	$ 5,046.89	$	0.36	34
Bike lanes and signage	681	$ 20,174.66	$$	1.46	41
Bike lanes and signage	682	$ 92,489.58	$$$	6.68	49
Bike lanes and signage	683	$ 76,792.68	$$$	5.55	55
Buffered bike lanes	685	$ 1,744,795.48	$$$$$	9.68	72
Bike lanes and signage	686	$ 10,144.67	$$	0.73	30
Bike lanes and signage	687	$ 7,415.95	$	0.54	73
Bike lanes and signage	688	$ 13,298.40	$$	0.96	74
Bike lanes and signage	689	$ 8,570.40	$	0.62	57
Bike lanes and signage	690	$ 24,861.33	$$	1.80	79
Bike lanes and signage	691	$ 20,928.10	$$	1.51	87
Bike lanes and signage	692	$ 1,300.08	$	0.09	23
Bike lanes and signage	693	$ 12,562.87	$$	0.91	80
Bike lanes and signage	694	$ 18,940.38	$$	1.37	83
Bike lanes and signage	695	$ 12,593.84	$$	0.91	52
Buffered bike lanes	696	$ 171,215.28	$$$	0.95	42
Bike lanes and signage	697	$ 6,305.65	$	0.46	25
Bike lanes and signage	698	$ 36,433.67	$$	2.63	29
Bike lanes and signage	699	$ 11,201.92	$$	0.81	28
Bike lanes and signage	700	$ 3,052.31	$	0.22	42
Bike lanes and signage	701	$ 6,565.96	$	0.47	43
Bike lanes and signage	702	$ 25,024.42	$$	1.81	82
Buffered bike lanes	703	$ 158,627.11	$$$	0.88	25
Buffered bike lanes	704	$ 586,550.36	$$$$	3.25	41

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Buffered bike lanes	705	$ 278,172.48	$$$$	1.54	51
Bike lanes and signage	706	$ 2,133.31	$	0.15	53
Bike lanes and signage	707	$ 3,289.23	$	0.24	58
Bike lanes and signage	708	$ 16,497.43	$$	1.19	59
Bike lanes and signage	709	$ 28,133.32	$$	2.03	62
Bike lanes and signage	710	$ 587.73	$	0.04	77
Bike lanes and signage	711	$ 19,708.77	$$	1.42	41
Bike lanes and signage	712	$ 8,549.90	$	0.62	50
Bike lanes and signage	713	$ 3,698.95	$	0.27	43
Bike lanes and signage	714	$ 14,305.35	$$	1.03	31
Bike lanes and signage	715	$ 12,783.73	$$	0.92	19
Bike lanes and signage	716	$ 3,122.46	$	0.23	52
Bike lanes and signage	717	$ 6,824.78	$	0.49	48
Bike lanes and signage	718	$ 5,304.60	$	0.38	41
Bike lanes and signage	720	$ 16,805.89	$$	1.21	28
Bike lanes and signage	721	$ 7,208.75	$	0.52	14
Bike lanes and signage	722	$ 828.88	$	0.06	15
Bike lanes and signage	723	$ 2,927.37	$	0.21	26
Bike lanes and signage	724	$ 3,785.35	$	0.27	29
Bike lanes and signage	725	$ 13,552.66	$$	0.98	41
Bike lanes and signage	726	$ 14,427.46	$$	1.04	73
Bike lanes and signage	727	$ 26,367.11	$$	1.90	20
Bike lanes and signage	728	$ 3,788.62	$	0.27	31
Bike lanes and signage	729	$ 4,885.58	$	0.35	25
Bike lanes and signage	730	$ 3,563.47	$	0.26	37
Bike lanes and signage	731	$ 34,913.63	$$	2.52	76
Bike lanes and signage	732	$ 9,734.61	$	0.70	33
Bike lanes and signage	733	$ 714.14	$	0.05	58
Bike lanes and signage	734	$ 1,101.47	$	0.08	56
Bike lanes and signage	735	$ 5,751.32	$	0.42	61
Bike lanes and signage	736	$ 838.70	$	0.06	58
Bike lanes and signage	737	$ 657.72	$	0.05	54
Bike lanes and signage	738	$ 62,206.56	$$$	4.49	72
Bike lanes and signage	739	$ 30,213.11	$$	2.18	50
Bike lanes and signage	740	$ 4,172.90	$	0.30	30
Bike lanes and signage	741	$ 50,456.72	$$$	3.64	43
Bike lanes and signage	742	$ 6,375.30	$	0.46	20
Buffered bike lanes	743	$ 266,182.96	$$$$	1.48	36
Bike lanes and signage	744	$ 9,200.14	$	0.66	15
Bike lanes and signage	745	$ 12,083.67	$$	0.87	55
Bike lanes and signage	746	$ 8,946.32	$	0.65	48
Bike lanes and signage	747	$ 5,895.84	$	0.43	34
Bike lanes and signage	748	$ 297.05	$	0.02	23
Bike lanes and signage	749	$ 1,464.04	$	0.11	21
Bike lanes and signage	750	$ 2,889.15	$	0.21	20
Bike lanes and signage	751	$ 5,402.78	$	0.39	33

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	752	$ 31,946.37	$$	2.31	74
Bike lanes and signage	754	$ 34,829.59	$$	2.52	36
Bike lanes and signage	755	$ 1,149.96	$	0.08	30
Bike lanes and signage	756	$ 11,607.04	$$	0.84	16
Bike lanes and signage	757	$ 13,542.06	$$	0.98	21
Bike lanes and signage	758	$ 11,413.44	$$	0.82	52
Bike lanes and signage	759	$ 5,344.67	$	0.39	69
Buffered bike lanes	760	$ 393,986.35	$$$$	2.19	32
Bike lanes and signage	761	$ 9,754.33	$	0.70	81
Bike lanes and signage	762	$ 42,571.16	$$	3.07	58
Bike lanes and signage	763	$ 1,641.38	$	0.12	44
Bike lanes and signage	764	$ 9,626.91	$	0.70	57
Bike lanes and signage	765	$ 5,533.54	$	0.40	25
Bike lanes and signage	767	$ 41,054.16	$$	2.97	55
Bike lanes and signage	768	$ 12,260.88	$$	0.89	81
Bike lanes and signage	769	$ 16,552.81	$$	1.20	77
Bike lanes and signage	770	$ 25,572.82	$$	1.85	69
Bike lanes and signage	771	$ 5,051.56	$	0.36	50
Bike lanes and signage	772	$ 7,591.52	$	0.55	47
Bike lanes and signage	775	$ 6,622.35	$	0.48	41
Bike lanes and signage	776	$ 2,744.31	$	0.20	57
Bike lanes and signage	777	$ 4,028.62	$	0.29	30
Bike lanes and signage	778	$ 49,085.51	$$	3.55	47
Bike lanes and signage	779	$ 19,282.90	$$	1.39	32
Bike lanes and signage	780	$ 5,240.71	$	0.38	28
Bike lanes and signage	781	$ 5,698.96	$	0.41	20
Bike lanes and signage	782	$ 7,658.80	$	0.55	25
Bike lanes and signage	783	$ 16,365.76	$$	1.18	13
Bike lanes and signage	784	$ 2,167.01	$	0.16	11
Bike lanes and signage	785	$ 14,143.78	$$	1.02	12
Bike lanes and signage	786	$ 28,433.75	$$	2.05	15
Bike lanes and signage	787	$ 14,244.29	$$	1.03	18
Bike lanes and signage	789	$ 7,383.48	$	0.53	18
Bike lanes and signage	800	$ 2,815.38	$	0.20	67
Bike lanes and signage	801	$ 39,076.27	$$	2.82	42
Bike lanes and signage	802	$ 1,556.65	$	0.11	12
Bike lanes and signage	803	$ 2,610.24	$	0.19	54
Bike lanes and signage	804	$ 4,119.70	$	0.30	58
Bike lanes and signage	805	$ 5,250.19	$	0.38	15
Bike lanes and signage	806	$ 2,266.58	$	0.16	27
Bike lanes and signage	807	$ 17,346.26	$$	1.25	31
Bike lanes and signage	808	$ 22,736.95	$$	1.64	41
Bike lanes and signage	809	$ 15,624.22	$$	1.13	52
Bike lanes and signage	810	$ 2,810.96	$	0.20	58
Bike lanes and signage	813	$ 17,124.47	$$	1.24	71
Bike lanes and signage	814	$ 10,701.13	$$	0.77	80

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Bike lanes and signage	815	$ 3,083.54	$	0.22	83
Bike lanes and signage	816	$ 16,292.66	$$	1.18	56
Bike lanes and signage	819	$ 22,922.34	$$	1.66	44
Bike lanes and signage	820	$ 11,016.78	$$	0.80	18
Bike lanes and signage	824	$ 9,000.07	$	0.65	51
Bike lanes and signage	825	$ 15,851.69	$$	1.14	41
Bike lanes and signage	826	$ 26,232.54	$$	1.89	40
Install sidewalk on one side	827	$ 1,196,940.74	$$$$$	0.82	69
Install sidewalk on one side	828	$ 26,089.38	$$	0.02	40
Shared-use path	829	$ 310,942.17	$$$$	0.49	62
Shared-use path	830	$ 152,811.89	$$$	0.24	56
Bike lanes and signage	833	$ 56,002.06	$$$	4.04	88
Long term	834	$ 2,535,708.49	$$$$$	4.02	36
Bike lanes and signage	835	$ 13,916.99	$$	1.01	69
Bike lanes and signage	836	$ 138,252.99	$$$	9.99	75
Bike lanes and signage	837	$ 27,529.95	$$	1.99	50
Shared-use path	839	$ 2,348,289.23	$$$$$	3.72	52
Bike lanes and signage	841	$ 6,272.34	$	0.45	41
Bike lanes and signage	843	$ 6,127.59	$	0.44	18
Shared-use path	844	$ 801,105.68	$$$$	1.27	46
Shared-use path	845	$ 2,781,066.71	$$$$$	4.40	58
Shared-use path	846	$ 1,178,880.74	$$$$$	1.87	44
Shared-use path	847	$ 3,544,049.46	$$$$$	5.61	52
Shared-use path	848	$ 863,926.10	$$$$	1.37	60
Shared-use path	849	$ 1,006,768.69	$$$$$	1.59	55
Bike lanes and signage	852	$ 23,050.82	$$	1.66	33
Bike lanes and signage	853	$ 2,050.67	$	0.15	37
Shared-use path	855	$ 578,719.60	$$$$	0.92	45
Bike lanes and signage	858	$ 9,905.28	$	0.72	32
Bike lanes and signage	859	$ 22,204.75	$$	1.60	41
Bike lanes and signage	860	$ 8,239.98	$	0.60	27
Bike lanes and signage	861	$ 12,425.98	$$	0.90	41
Bike lanes and signage	862	$ 37,096.43	$$	2.68	37
Bike lanes and signage	863	$ 12,547.96	$$	0.91	41
Bike lanes and signage	864	$ 9,971.71	$	0.72	32
Bike boulevard	865	$ 19,693.94	$$	0.34	10
Bike lanes and signage	870	$ 10,029.05	$$	0.72	28
Bike lanes and signage	871	$ 8,916.18	$	0.64	26
Shared-use path	872	$ 442,347.87	$$$$	0.70	83
Bike lanes and signage	880	$ 21,910.13	$$	1.58	58
Bike lanes and signage	881	$ 1,129.08	$	0.08	70
Bike lanes and signage	882	$ 25,562.99	$$	1.85	63
Bike lanes and signage	883	$ 30,901.63	$$	2.23	73
Bike lanes and signage	884	$ 12,400.08	$$	0.90	71
Bike lanes and signage	885	$ 8,293.36	$	0.60	46
Bike lanes and signage	886	$ 5,292.00	$	0.38	45

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Bike lanes and signage	887	$ 3,770.23	$	0.27	31
Bike lanes and signage	888	$ 8,730.73	$	0.63	54
Bike lanes and signage	889	$ 6,814.83	$	0.49	21
Bike lanes and signage	890	$ 29,317.48	$$	2.12	65
Bike lanes and signage	891	$ 11,870.99	$$	0.86	58
Bike lanes and signage	892	$ 32,846.02	$$	2.37	69
Bike lanes and signage	893	$ 7,355.31	$	0.53	25
Bike lanes and signage	894	$ 10,657.22	$$	0.77	30
Bike lanes and signage	895	$ 11,768.54	$$	0.85	34
Bike lanes and signage	896	$ 12,671.61	$$	0.92	39
Bike lanes and signage	897	$ 2,067.86	$	0.15	72
Bike lanes and signage	898	$ 10,168.58	$$	0.73	22
Bike lanes and signage	899	$ 16,067.68	$$	1.16	35
Bike lanes and signage	900	$ 27,932.42	$$	2.02	70
Buffered bike lanes	901	$ 404,616.65	$$$$	2.24	52
Bike lanes and signage	902	$ 11,043.22	$$	0.80	42
Install sidewalk on one side	903	$ 136,461.83	$$$	0.09	30
Install sidewalk on one side	904	$ 72,202.45	$$$	0.05	29
Long term	907	$ 293,014.85	$$$$	0.46	47
Long term	909	$ 3,538,334.55	$$$$$	5.60	63
Shared-use path	910	$ 3,364,410.32	$$$$$	5.33	66
Long term	911	$ 2,236,073.81	$$$$$	3.54	50
Shared-use path	912	$ 865,852.14	$$$$	1.37	32
Shared-use path	914	$ 78,185.79	$$$	0.12	35
Shared-use path	915	$ 146,308.19	$$$	0.23	40
Install sidewalk on one side	916	$ 636,058.48	$$$$	0.44	29
Install sidewalk on one side	917	$ 796,612.99	$$$$	0.54	57
Install sidewalk on one side	918	$ 2,347,555.54	$$$$$	1.61	43
Bike boulevard	919	$ 46,104.04	$$	0.78	24
Buffered bike lanes	921	$ 11,269.22	$$	0.06	36
Bike boulevard	922	$ 9,953.59	$	0.17	35
Shared-use path	923	$ 38,099.12	$$	0.06	44
Bike lanes and signage	924	$ 26,897.65	$$	1.94	47
Bike lanes and signage	925	$ 7,427.04	$	0.54	42
Shared-use path	926	$ 505,885.67	$$$$	0.80	58
Shared-use path	927	$ 91,908.66	$$$	0.15	32
Shared-use path	929	$ 96,982.03	$$$	0.15	26
Install sidewalk on one side	930	$ 247,536.64	$$$$	0.17	50
Buffered bike lanes	933	$ 1,016,088.85	$$$$$	5.64	77
Install sidewalk on one side	934	$ 737,831.99	$$$$	0.50	27
Bike lanes and signage	935	$ 32,094.79	$$	2.32	77
Install sidewalk on one side	936	$ 369,489.11	$$$$	0.25	36
Install sidewalk on one side	937	$ 1,149,589.91	$$$$$	0.79	39
Shared-use path	938	$ 281,153.61	$$$$	0.45	28
Shared-use path	939	$ 2,620,239.54	$$$$$	4.15	52
Shared-use path	940	$ 521,586.35	$$$$	0.83	31

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Shared-use path	941	$ 850,077.57	$$$$	1.35	51
Long term	942	$ 407,165.78	$$$$	0.64	37
Shared-use path	943	$ 522,342.25	$$$$	0.83	47
Shared-use path	944	$ 1,007,450.70	$$$$$	1.60	46
Long term	945	$ 114,455.94	$$$	0.18	41
Shared-use path	946	$ 360,749.52	$$$$	0.57	47
Shared-use path	947	$ 285,375.74	$$$$	0.45	43
Shared-use path	948	$ 609,557.05	$$$$	0.97	46
Shared-use path	949	$ 49,167.21	$$	0.08	36
Shared-use path	950	$ 112,687.14	$$$	0.18	47
Buffered bike lanes	951	$ 41,407.70	$$	0.23	35
Bike lanes and signage	952	$ 1,627.15	$	0.12	40
Shared-use path	954	$ 175,380.00	$$$	0.28	45
Shared-use path	955	$ 2,328,965.63	$$$$$	3.69	55
Bike lanes and signage	956	$ 16,313.84	$$	1.18	31
Bike lanes and signage	957	$ 10,961.67	$$	0.79	28
Install sidewalk on one side	958	$ 567,477.49	$$$$	0.39	49
Bike lanes and signage	959	$ 4,924.74	$	0.36	47
Install sidewalk on one side	960	$ 1,702,053.79	$$$$$	1.16	42
Bike lanes and signage	961	$ 5,405.28	$	0.39	41
Install sidewalk on one side	962	$ 547,485.66	$$$$	0.37	46
Install sidewalk on one side	963	$ 166,860.25	$$$	0.11	39
Install sidewalk on one side	964	$ 297,200.40	$$$$	0.20	51
Install sidewalk on one side	965	$ 91,161.06	$$$	0.06	54
Install sidewalk on one side	966	$ 4,442,632.92	$$$$$	3.04	87
Install sidewalk on one side	967	$ 1,953,625.79	$$$$$	1.34	52
Shared-use path	968	$ 4,651,982.78	$$$$$	7.37	39
Bike lanes and signage	969	$ 12,035.47	$$	0.87	74
Install sidewalk on one side	970	$ 1,933,084.09	$$$$$	1.32	40
Install sidewalk on one side	971	$ 1,320,119.86	$$$$$	0.90	48
Install sidewalk on one side	972	$ 128,600.33	$$$	0.09	55
Install sidewalk on one side	973	$ 50,200.62	$$$	0.03	55
Buffered bike lanes	974	$ 465,299.70	$$$$	2.58	72
Install sidewalk on one side	975	$ 383,897.44	$$$$	0.26	72
Long term	976	$ 775,827.21	$$$$	1.23	87
Install sidewalk on one side	977	$ 129,259.71	$$$	0.09	62
Shared-use path	978	$ 312,032.75	$$$$	0.49	64
Buffered bike lanes	979	$ 151,199.05	$$$	0.84	51
Shared-use path	980	$ 1,266,480.70	$$$$$	2.01	73
Shared-use path	981	$ 262,328.96	$$$$	0.42	57
Bike lanes and signage	982	$ 7,864.44	$	0.57	29
Shared-use path	983	$ 164,417.37	$$$	0.26	68
Install sidewalk on one side	984	$ 792,731.29	$$$$	0.54	53
Bike lanes and signage	985	$ 16,072.38	$$	1.16	35
Install sidewalk on one side	986	$ 139,644.09	$$$	0.10	79
Install sidewalk on one side	987	$ 36,510.59	$$	0.02	77

Suffolk County Hike + Bike Master Plan - Linear Project Cost Estimate Table

Project Type	Project ID	Project Cost	Order of Magnitude	Length_Miles	Impact Score
Install sidewalk on one side	988	$ 825,618.24	$$$$	0.56	27
Install sidewalk on one side	989	$ 48,312.70	$$	0.03	25
Install sidewalk on one side	990	$ 329,910.44	$$$$	0.23	62
Install sidewalk on one side	991	$ 313,659.96	$$$$	0.21	70
Install sidewalk on one side	992	$ 574,911.92	$$$$	0.39	43
Long term	993	$ 256,062.70	$$$$	0.41	48
Install sidewalk on one side	994	$ 636,676.92	$$$$	0.44	28
Buffered bike lanes	995	$ 191,898.85	$$$	1.06	23

APPENDIX 7: SAFETY BENEFITS INFORMATION CONT'D

PEDESTRIAN INFRASTRUCTURE SAFETY BENEFITS*

- Marked crosswalks are **best used in combination with other treatments** such as curb extensions, raised crossing islands, traffic signals, roadway narrowing, enhanced overhead lighting, and traffic calming measures.
- Traffic and roadway factors found to be related to a greater frequency of pedestrian crashes included **higher pedestrian volumes, higher traffic volumes, and a greater number of lanes.**
- The presence of a **raised median or raised crossing island was associated with a significantly lower pedestrian crash rate** at multi-lane sites with both marked and unmarked crosswalks.
- On **two-lane roads**, there were **no significant differences in the pedestrian crash rate at intersections** with marked or unmarked crosswalks.
- On multi-lane roads (>2 traffic lanes and >12,000 vehicles per day), a marked crosswalks **by itself** at an uncontrolled intersection, **without other substantial improvements****, was associated with a higher pedestrian crash rate compared to an unmarked crosswalk.
- **Motorists failing to yield represented a large percentage of pedestrian crashes** in both marked and unmarked crosswalks. More pedestrian-friendly roadway designs may be helpful in reducing pedestrian crashes.
- Although installing marked crosswalks alone may not be the final solution to safe pedestrian crossings, **the safety needs of pedestrians must not be ignored**. Updates to engineering designs, enforcement programs, education programs, and legislation may help provide safer pedestrian crossings.
- One study found no evidence of more aggressive crossing behavior or less vigilance by pedestrians when crossing at a marked crosswalks vs. unmarked, i.e., **no evidence that crosswalks created a "false sense of security."**
- **Vehicle speeds are reduced when motorists approached marked crossings** vs. unmarked crossings and in some cases motorists had higher yielding behavior.

*Pedestrian crossing safety information was obtained from the following sources: 1) Federal Highway Administration. 2002. Safety Effect of Marked Crosswalks VS. Unmarked Crosswalks at Uncontrolled Locations: Executive Summary and Recommended Guidelines by Zegeer 2) Pedestrian and Bicycle Information Center. 2014. Evaluation of Pedestrian-Related Roadway Measures: A Summary of Available Research by Zegeer, C., Stewart, R., Huang, H., and Lagerway, P.

**Includes new traffic signals (if warranted), Pedestrian Hybrid Beacons, Median Refuge Islands and Rectangular Rapid Flashing Beacons (RRFBs)

APPENDIX 8: BIKE SHARE STATION GUIDELINES

BIKE SHARE DESIGN GUIDANCE

By the end of 2019, three Suffolk County bike share programs were on the ground, including systems in Patchogue, Babylon, and Hampton Bays. Each community featured 25 shared bicycles at 5-7 stations placed at important destination. These systems, along with Riverhead, will relaunched in early spring 2020. Although Zagster is the chosen equipment provider for each program, this does not preclude a different equipment provider from being selected by other Towns in the future. This may be the reality as Suffolk County becomes more bike friendly and additional towns and villages decide that bike share is a way to improve sustainable mobility and promote bicycling locally. Since the initial launch in Minneapolis and Montreal in 2008, bike share has proven to be an effective way to increase bicycle ridership, enhance transportation options and to do so safely. Shared bike systems—both dock-based and dock-less—throughout North America have an impeccable safety record, with fewer than ten fatalities after well over a hundred million trips. In the Boston area alone, there has yet to be a single bike share fatality since the 2011 launch with over five million trips taken.

This section provides site planning guidance to the towns and village intending to launch bike share in the near future. Because all vendors' equipment uses solar power, wireless communications and GPS technologies, installation of bike share does not require excavation or hardwiring. The stations—either heavy dock-based stations or Zagster's simple collections of bike racks—can be moved, relocated, or expanded easily to meet demand, or to accommodate temporary events.

Station locations should be highly visible and accessible and need to consider other modes of travel (e.g., they should not impede pedestrian movement, be placed in bus zones or block building entrances). Station sites also need to be reasonably accessible by motor vehicle, which allows vans or small trucks to both install the station, and to provide re-balancing of bicycles during peak periods.

The physical space occupied by a bike share station varies depending on the equipment selected and the number of racks or docking points at each station. For dock-based systems such as Citibike in New York City, modules generally come in 2.5-foot, 5-foot or 10-foot lengths that accommodate one to four parking spots. For all equipment options, six feet of station depth is needed to accommodate the length of a parked bicycle within the station. In some cases, orienting racks or docks at a 45-degree angle can save 12"-18" of station depth. Additional space is also required behind the bike to allow users to pull the bike out from the station and reorient it in the desired direction of travel. The example diagram shown below is for a typical dock-based

Zagster / Pace bike share sidewalk station in Rochester, NY

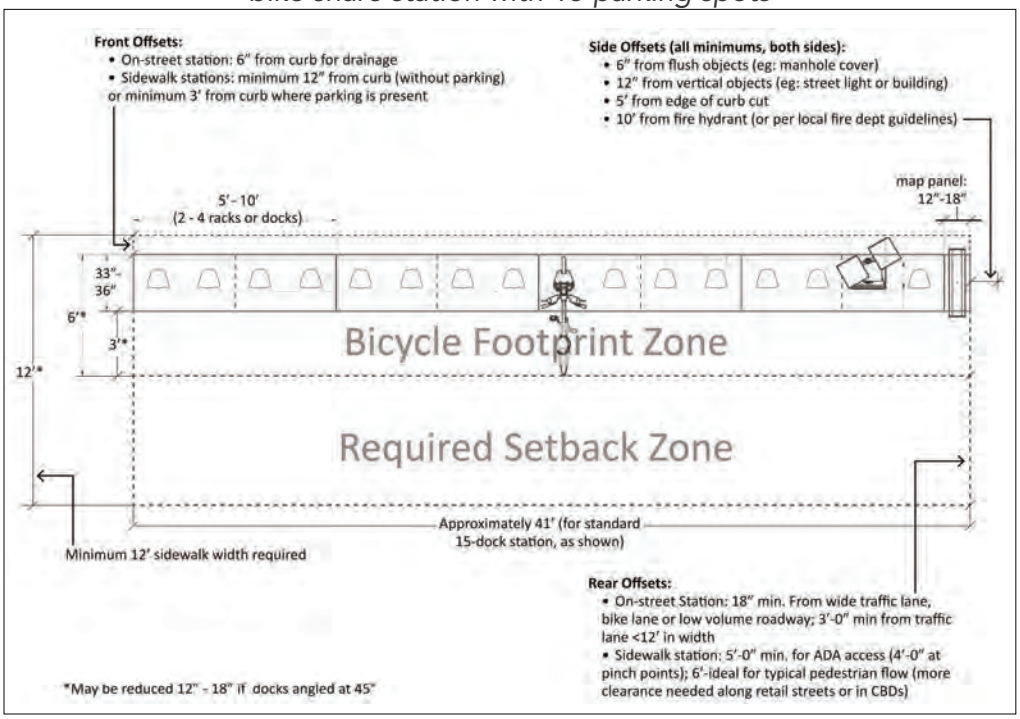
station with 15 docks or racks, plus a payment kiosk and map panel. The overall footprint would be roughly 41 feet in length by six feet in width. The diagram also illustrates key front, side and rear offset dimensions (e.g. hydrants, manhole covers, traffic lanes, curbs and vertical objects).

If a dock-based system is ever launched on Long Island, fifteen docking points or racks would like be considered the average size for bike share stations in Suffolk County, especially when at a Long Island RR station, next to a college campus or in a popular business district. Outside of those key destinations, bike share stations are likely to be smaller.

There are three typical station-placement scenarios in the participating communities: on-street stations, off-street sidewalk stations and off-street stations in public parks or on private property. In all cases, care must be taken to accommodate the concerns of abutters. This frequently comes in the form of worries related to possible noise impacts, maintenance issues, potential vandalism, pedestrian safety (i.e. sidewalk riding) and loss of parking (on-street station sites only).

- **On-street station sites**: Because bicycles are considered vehicles, there is a certain logic to placing bike share stations on-street. Doing so requires careful consideration of the spatial requirements to ensure a safe and comfortable environment for users however. Because 15-dock stations require approximately 41' of space, the removal of two automobile parking spaces can be expected. In some cities, many business owners consider the bike share stations to be beneficial by bringing additional customers to the district, along with branding an area as "green". For seasonal systems in the Northeast (including Suffolk County), stations are typically removed before snow becomes a likelihood in late November or December. While New York's system remains year-round, in Boston and elsewhere, bike share stations are removed in late November/early December and re-installed in mid/late March. Other considerations for

Diagram showing the spacing and offset needs for a generic, dock-based bike share station with 15 parking spots



on-street installations include:

- » **Protection:** some cities/towns require little to no protection, whereas others require engineering treatments such as painted end treatments and flexible delineator posts. Typically, on-street station installation next to a bike lane or buffer is preferred, but depending on the volume and speed of traffic, parking lanes eight feet wide can be acceptable for on-street installations.
- » **Orientation:** typical bike share station orientation is to place the front wheels adjacent to the curb, so bikes can be removed and repositioned to join the flow of adjacent traffic. However, stations can be rotated so the rear wheel points to the curb, allowing users to access a bike without having to back out into motor vehicle traffic. This can be an effective strategy, especially when there is not a buffer or bike lane immediately adjacent to the station. It's important, however that at least 18" (24"-30" ideally) be left between the edge of the rear wheel and the curb so there is space for maneuvering.

Many on-street stations in New York have been located adjacent to striped bike lanes

- » **Clear zones:** stations cannot be placed in off-peak parking lanes (that convert to moving traffic lanes during peak hours), or in other clear zones. Potential impacts to bus stops, loading zones, and other curbside uses needs to be considered as well.

- **Off-street sidewalk station sites**: Placing bike share stations on sidewalks creates a comfortable environment for users to access a bike without concern for passing traffic. With bikes parked, the stations themselves are typically six feet deep. At a minimum, station footprints require an additional five feet for pedestrian passage to meet ADA requirements. It is expected that sidewalk installations of bike share station will occur without the need for permanent changes to the sidewalk. In some cases however, small pieces of street furniture such as trash bins or benches may need to be relocated in order to provide the needed space at a key location.
- **Off-street park station sites:** stations in public parks will require consultation with the relevant Town or Village agency. For stations on privately-owned lands, agreements will need to be negotiated between the owner/operator and the individual land owner. For stations on private property, it is critical that the sites be visible from an adjacent public street and publicly accessible at all times.

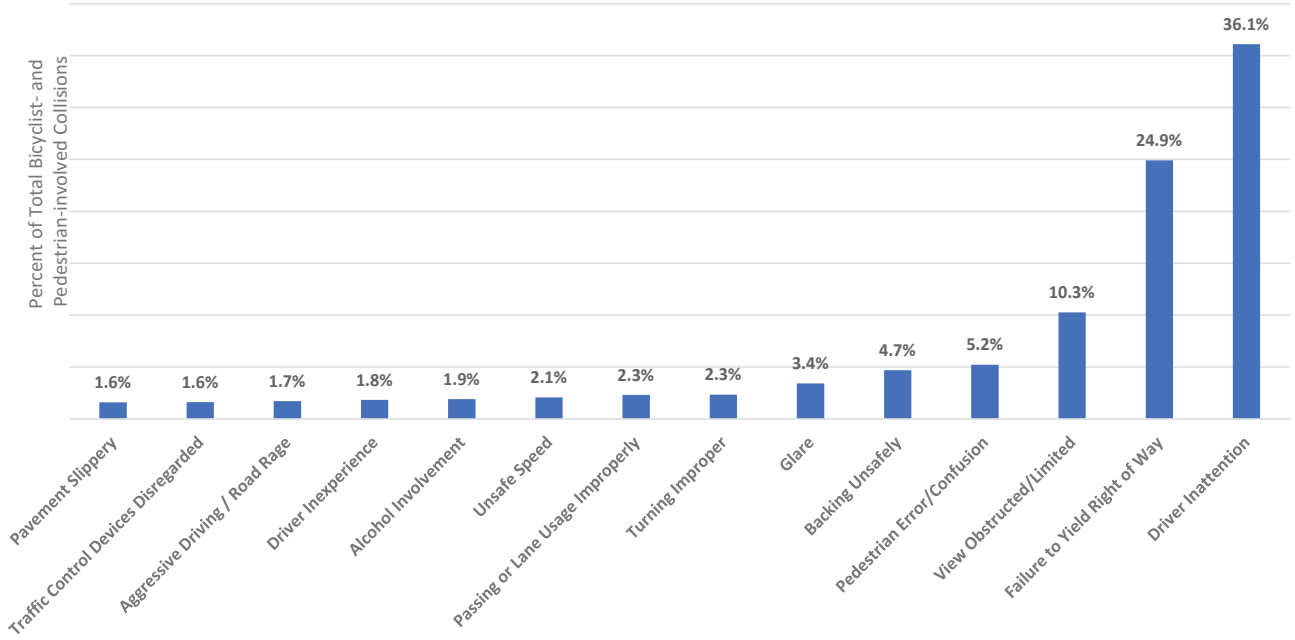
APPENDIX 9: CRASH ANALYSIS

Factors that contributed to the crash range from glare and slippery pavement to unsafe speed and aggressive driving behavior. The following bar chart displays the percent that each factor was relevant in contributing to a bicycle or pedestrian-involved crash. For legibility of the bar chart, any factors that contributed 1% or less to the total crashes was removed. Additionally, any crashes with "Not Applicable, Not Entered, and Unknown" factor entries were removed from the chart as well.

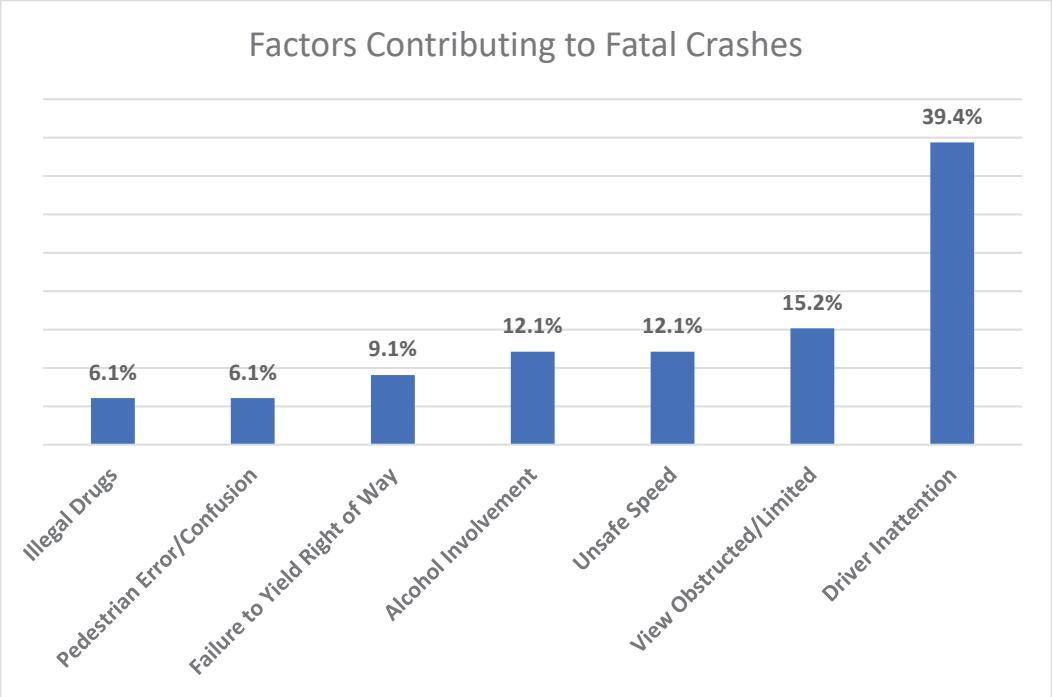
Using the available data, the team analyzed the factors that contributed to fatal crashes. Similar to the above chart, the chart on the following page removed all those factors that contributed less than 1% to the total. Any fatal crashes with "Not Applicable, Not Entered, and Unknown" in the factor field were removed from the chart as well.

Driver Inattention is clearly an important factor when it comes to bicycle and pedestrian crashes in Suffolk County. Driver Inattention contributed to 36% of all crashes and 39% of fatalities. Additional significant factors that contributed to both fatalities and all crashes are Failure to Yield Right of Way, View Obstructed/Limited, Unsafe Speed, Alcohol Involvement, and Pedestrian Error/ Confusion. The four factors that contributed the most to pedestrian and bicyclist fatalities appear to be the result of the poor decision making on the part of the driver. (While the majority of cases of alcohol involvement resulting in a crash was due to driver impairment, the dataset structure includes examples where the pedestrian or bicyclist was under the influence of alcohol, not the driver.) Encouraging safe driving practices and outlawing the use of handheld electronic devices while behind the wheel are examples of ways to

Factors Contributing to Bicyclist- and Pedestrian-involved Collisions (NYSDOT, 2014-2018)



Factors Contributing to Fatal Bicyclist- and Pedestrian-involved Collisions (NYSDOT, 2014-2018)



help curb driver behavior leading to bike and pedestrian crashes. Additionally, expansion of the sidewalk and trail networks and introducing more buffered and separated bike lanes and shared-use paths will separate motor vehicle traffic from more vulnerable pedestrian and bicycle facilities.

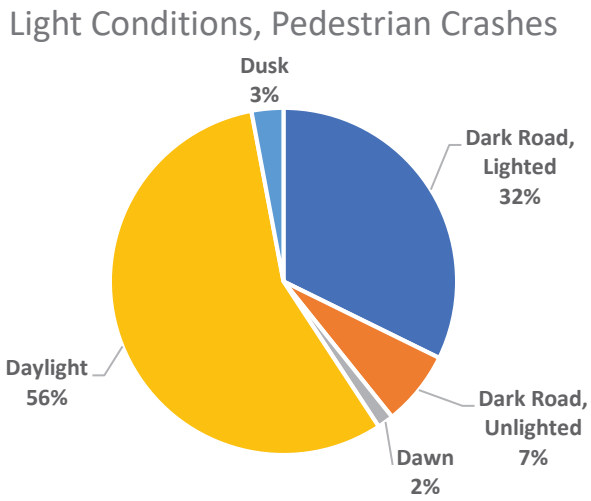
To inform future policy and infrastructure recommendations related to pedestrian and bicycle safety, the crash data was analyzed by lighting conditions at the time and site of the crashes. A majority of the crashes, 56% for pedestrians and 75% for bicyclists, occurred during daylight conditions. This is likely because the average pedestrian or bicyclist is more likely to be out using roads and sidewalks during the day than at night.

Consistent with the higher volume of pedestrian-involved crashes versus bicyclist-involved crashes, there were nearly twice as many pedestrian crashes on dark roads with street lights than there were for bicyclists. The analysis indicates that all non-motorists are vulnerable to crashes at many different times throughout the day and in various lighting conditions.

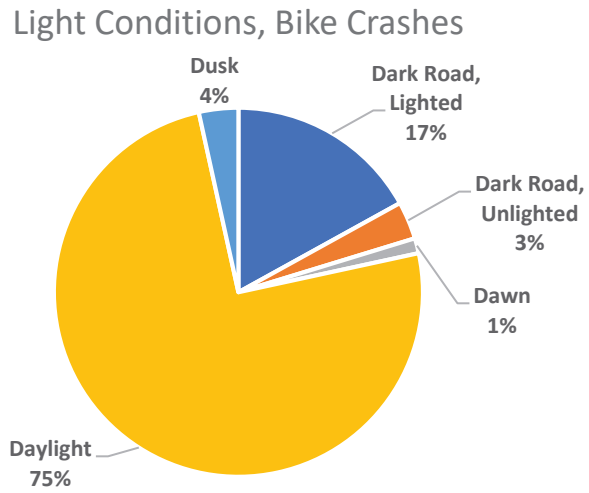
Additional analysis into crash locations (intersection versus not at an intersection) can be useful to inform and prioritize project recommendations. The pie charts indicate the percent of bicycle-involved crashes by location type and pedestrian-involved crashes by location type. All crashes where location type was "Unknown" were removed from the pie charts.

The data indicates that more pedestrian crashes happened along roadway segments (not at intersections) when compared to bicycle-involved crashes.

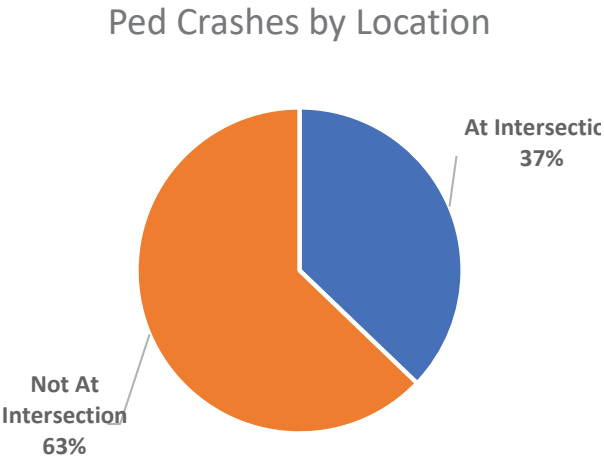
Pedestrian-involved Collisions by Lighting Condition
(NYSDOT, 2014-2018)



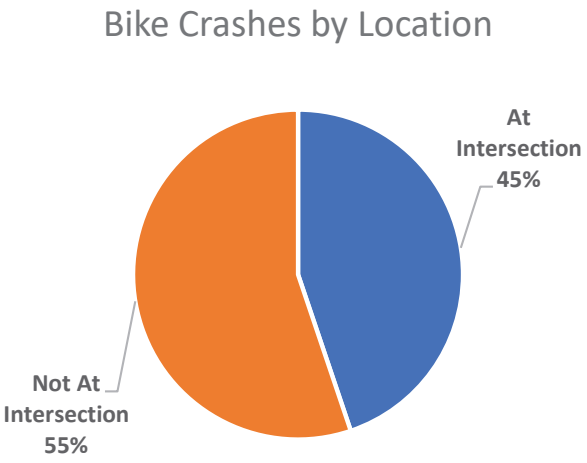
Bicyclist-involved Collisions by Lighting Condition
(NYSDOT, 2014-2018)



Pedestrian-involved Collisions by Roadway Location
(NYSDOT, 2014-2018)



Bicyclist-involved Collisions by Roadway Location
(NYSDOT, 2014-2018)



The Tri-State Transportation Campaign released an article in 2017 that analyzed the same set of crash data (excluding the information for 2017 and 2018 analyzed in this report.) The non-profit policy advocacy organization performed a crash-per-mile analysis and found that "NY Route 25 (also known as Middle Country Road, Jericho Turnpike and Front Street) was Suffolk County's most dangerous road for walking or biking. There were 224 crashes along this corridor between 2014 and 2016 that resulted in 206 injuries and nine fatalities ." While NY 25 had the most crashes per mile, it was not the deadliest road in the County. SR-110 which is also known as New York Avenue, Walt Whitman Road and Broadway was the location of "141 total crashes between 2014 and 2016 but had 10 fatalities."

The next highest crash-per-mile roadways are shown in the table below:

Roadways with the Highest Bicyclist- and Pedestrian-involved Crashes per Mile[30]

STREET NAME	CRASHES	INJURIES	FATALITIES	CRASHES/MILE
CR-13 (5th Avenue, Wicks Rd, Crooked Hill Rd)	67	59	5	9.0
CR-100 (Suffolk Ave)	63	62	4	8.9
SR-27A (Montauk Highway, Merrick Rd)	103	102	2	5.8
SR-112 (Medford Ave, Patchogue Rd)	61	54	4	4.5

APPENDIX 10: OPERATIONS AND MAINTENANCE

OPERATIONS

Operations policies can include establishing hours of operation, seasonal schedules, selection and planting of slow growing native plants and mechanical trimming as needed, (reducing the application of chemicals can reduce a recurring maintenance cost), permitted uses and users: bicycles, pedestrians, ATVs, horses, cross country skiing, etc.; and user fees: manned booths, park rangers or parking fees. Operational tasks may include: updates to trail information provided on-trail (kiosks and maps) or on websites and social media; collecting fees; managing trail parking areas; safety and enforcement and other key functional requirements. Operations also includes managing occasional closure of sections of the trail for utility maintenance and repair.

MAINTENANCE

Maintenance includes daily, weekly, monthly and annual activities essential to keeping the trail and its amenities safe and usable. Maintenance activities include everything from resurfacing and mowing, to sign replacement and painting, to green landscaping and xeriscaping. Landscaping should be designed with slow growing native plants (low-maintenance) to avoid the need for mowing to the greatest extent practicable. (A well-designed meadow or natural area in its appropriate place would be an asset and potentially free up maintenance costs for other priorities.) Maintaining trails creates costs accommodated by the operating agency. Both the Long Island Greenbelt Trail Conference (LIGBT) and CLIMB perform trail maintenance of their respective hiking and mountain biking routes. There exists an excellent opportunity to use both the LIGBT and CLIMB advocacy groups as a model to enlist users to volunteer in trail upkeep. For heavier maintenance tasks they are usually able to tap Town, Suffolk County, and New York State Parks Recreation & Historic Preservation for assistance (downed trees, trail grading and restoration, etc.)

The section below provides strategies and best practices for a number of factors, all of which are essential to the long-term operation and maintenance of on and off-road recreational trails.

INVENTORY AND MANAGE FEATURES AND ASSETS

For off-road trail segments, fixed assets may include trees and other natural features, and above/below ground infrastructure (power lines). For on-road or more urban segments through which the trail alignment passes, fixed assets may include roadway crossings (width and type), pedestrian and vehicular traffic control devices, and signage and pavement markings. The key is to determine the list of fixed assets in coordination with the various involved responsibility entities and clarify maintenance responsibilities as soon as possible.

CLIMB has a real time trail status map on their website and encourages users to download the Trailforks application which uses crowd-sourced data to report conditions and share information. (Note: One drawback to utilizing this method is that any information uploaded to Trailforks is then privately owned by that organization.)

ESTABLISHING MAINTENANCE COSTS

LABOR

Labor can be accommodated via a dedicated budget, cost allocation through an existing entity (departments of recreation or public works) or contracted out via competitive bid.

Agencies such as New York State Parks Recreation & Historic Preservation, New York

State Department of Transportation, and Suffolk County Public Works have existing maintenance contracts that could be leveraged to provide more efficient streams of labor for trail maintenance.

SERVICE AND MATERIALS COSTS

Trails constructed using state and federal funds will have specific contractor and materials procurements processes. For example, if an off-road trail facility was located entirely within a State Park, New York State Parks Recreation & Historic Preservation would be tasked with completing these evaluations as part of their existing maintenance and repairs schedule.

Where new or replacement materials are necessary, industry best practices involve designing specifications for materials with the longest life-cycle that also require minimal maintenance. For decorative or custom branded amenities or signage, it is generally advisable to order extra replacement materials in bulk at the time of construction to minimize future single purchase costs. Responsible entities should maintain comprehensive records for all costs to better estimate and plan for future costs.

MAINTENANCE

Creating and sticking to an annual routine maintenance schedule will inevitably reduce future major reconstruction work. Responsible parties should complete bi annual facility evaluations (in the spring and fall) to determine needs and schedules for major and minor repairs. Minor repairs may include replacing/repair of trail amenities (benches, lighting, and trash receptacles), filling of cracks and sealing surfaces. Major repairs may include trail regrading or resurfacing. A routine maintenance program would include: tree/brush clearing; culvert/drainage cleaning/clearing; planting/pruning and general landscape care; kiosk, map and signage updates; and trash removal.

EXPOSURE

Because the Suffolk County Hike + Bike Master Plan includes both on and off- road segments through diverse conditions and terrains, specific exposure conditions will vary considerably. Heavy vehicles represent the primary offenders for wear and tear along on-road segments while weather and other environmental factors like downed trees represent common exposure issues along off-road segments. Responsible parties which may include either public sector agencies like Suffolk County Department of Public Works or non-profit advocacy groups such as East Hampton Trails Preservation Society should inventory specific environments for each trail segment, including exposure to hot sun or snow/ice conditions, which can effect surface conditions; proximity to wetlands and water bodies, which increase the risk of damage/closure due to flooding; and alignment within heavily forested or landscaped areas, which carry the need for tree/brush clearing to clear the travel way. On-road trails, including dedicated or shared bicycle lanes or bike boulevards would be subject to exposure from cross travel by cars, trucks and other heavy vehicles and may require additional annual surface maintenance.

CASE STUDY

The following case study highlights a recent example of a successful operations and maintenance

The Albany Hudson Electric Trail (AHET) is an approximately 36-mile shared-use pedestrian and bicycle trail from the City of Hudson located on the western border of Columbia County, New York to the City of Rensselaer in Rensselaer,

County. The majority of the trail will run off-road along the former Albany Hudson Electric Trolley right-of-way (now owned and actively operated by Niagara Mohawk Power Corporation, aka: National Grid). However, since the trolley ceased operating in the late 1920's, several short sections of public roadway and in some cases buildings/structures have been built on the old rail line. As such, in some short segments of the trail route will run along local roadways.

When completed, the AHET will connect New York's Mid-Hudson Valley with the Capital Region filling in a key link in the Empire State Trail. The AHET traverses Columbia and Rensselaer Counties, the Cities of Hudson and Rensselaer, the Towns of Greenport, Stockport, Stuyvesant, Kinderhook, Chatham, Nassau, Schodack and East Greenbush and the Villages of Kinderhook, Valatie, and Nassau. The engineering design, environmental review, permitting and construction of the AHET are entirely funded by New York State drawing upon state funds appropriated for the Empire State Trail initiative.

OPERATIONS AND MAINTENANCE

Operation and maintenance responsibilities for the AHET will be managed via a collaborative partnership between the Hudson River Valley Greenway (HRVG), County, Town and Village governments, and interested trail groups and volunteers. The HRVG has drafted a detailed Trail Maintenance Plan[29] and licensing agreement that includes specific communications protocol (planning and coordination meetings), safety restrictions and requirements, and the frequency and responsibility for routine maintenance activities. The Trail Maintenance Plan applies only to off-road sections of the AHET. Maintenance of on-road sections of the AHET remains the responsibility of the state agency, county, town, village, or city that owns the specific road section.

This case study provides a very high-level summary of that Plan (additional detail may be found at ahettrail.org).

Off-road sections of the AHET are located along a privately owned and actively operating/managed electric transmission utility corridor. As such, HRVG's proposed Trail Maintenance Plan will require National Grid's review/approval. When approved by National Grid, the Plan and License Agreements will allow HRVG to contract with local governments and non-for profit (NFP) groups to perform routine maintenance along the off-road sections of the AHET. The local governments and NFP groups (known as "Trail Managers" in the Plan) would enter into a formal agreement with HRVG and provide insurance and liability protection to National Grid and to the HRVG.* National Grid will continue to manage their operational and maintenance needs along the utility corridor. The AHET would be closed to public use during National Grid utility maintenance program events.

HRVG will retain financial responsibility for funding and implementing "capital maintenance" requirements along the entire length of the AHET. Each spring, HRVG will complete an end-to-end inspection of the AHET to identify necessary capital repairs, which may include: trail resurfacing (asphalt and stonedust), maintaining bridges installed as part of the project, replacement of safety fencing, installation and replacement of signage, repairing culverts, installation of pavement markings, and/or improvements to roadway shoulders or sidewalks. Individual HRVG staff will be assigned responsibility for year-round trail oversight. Their contact information will be provided to National Grid, and municipalities through which the trail runs to ensure that site specific maintenance issues are identified and resolved.

Regular maintenance responsibilities for the off-road sections of the AHET would be accommodated through maintenance agreements with municipalities along the trail corridor and volunteer organizations. Routine maintenance activities are divided into two frequencies: "required" and "enhanced". "Required" maintenance includes grass mowing and lawn maintenance at least four times per year. However, the Plan notes that during growing season, an "enhanced" mowing schedule (every two weeks) is "ideal", if staffing resources are available. The Plan includes details on location and extent of routine maintenance activities, including: the narrow 3 to 4-foot grass shoulders along either side of the trail and in designated parking areas, weed whacking, landscaping and trimming, removal of fallen tree branches and limbs, trash and debris removal, and other minor repairs. The Trail Maintenance Plan include safety protocols, restrictions on vehicles and motorized equipment (essential given that this is an active electric transmission corridor), requirements for safety training and protective gear.

Local police and EMS providers would be responsible for the majority of safety and emergency service needs along the trail, though strategic assistance would be provided by New York State law enforcement agencies. While HRVG expressly prohibits the use of herbicides and pesticides along the Trail, National Grid is exempted from this restriction.

The AHET will include nine Trailhead parking areas along the 36-mile route, each with its own unique configuration and requirements. Several currently operational trailhead/parking areas are located within municipal parks or state-owned property and these would continue to be maintained by the state or municipal owner. New construction trailhead/parking areas located on National Grid's property will be maintained by HRVG and Trail Manager partners.

*As of November 2019, a number of Towns and Villages have indicated they are willing to maintain their sections of the AHET Trail. Several other towns have declined to participate at this time. A new 501(c)(3) non-profit organization, the Columbia Friends of the Electric Trail (CFET), has formed to assist in maintaining significant portions of the AHET Trail in Columbia County.

Sample Trail Maintenance Responsibility Matrix

	Local Municipality *Parks + Rec or Dept. of Public Works*	**County**	**State**	**Volunteer Group (Specify)**
Selective Mechanical Trimming / Invasive Species Control	*May - Sept.: 1 x per week*			
Trash/Debris Removal				*Year-round: 1 x per week*
Signage, Mapping, Information Kiosks		*Monthly site visit: repair as needed*		*Weekly social media updates re: user information*
Gates and Fencing		*Monthly site visit: repair as needed*		
Lighting	*Monthly site visit: repair as needed*			
Drainage/Culvert Clearing		*Monthly site visit: repair as needed*		
Amenities (picnic tables, benches, kiosks)			*Monthly site visit: repair as needed*	
Seasonal requirements (leaves, brush, snow)		*May - Sept.: 1 x per week*		
Surface repair			*Annual evaluation: regular maintenance repair as needed*	
Major Reconstruction / Resurfacing	*Annual evaluation: regular maintenance repair as needed*			
Culvert Replacement			*Annual evaluation: regular maintenance repair as needed*	
Communications / Website Maintenance	*Daily for emergency or unanticipated closures*			*Weekly social media updates re: user information*
Safety Patrol		*Regular weekend patrols*		*Daily for general safety*
Emergency Response	*Establish response protocol as part of operations agreement*			

ENDNOTES

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6 Taft. B. Impact speed and a pedestrian's risk of severe injury or death. Accident Analysis and Prevention. 2013, 50: 871-878.
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10 2019 County Health Rankings and Roadmaps, a Robert Wood Johnson Foundation program. https://www.countyhealthrankings.org/sites/default/files/state/downloads/CHR2019_NY.pdf
11 In the context of the Hike + Bike Master Plan, "underserved communities" includes neighborhoods and groups of people who are lower income and are typically more dependent on transit, bicycling, and walking than the average household in Suffolk County.
12 Guidelines from the Centers for Disease Control and Prevention can be found at: https://www.cdc.gov/cancer/dcpc/prevention/policies_practices/physical_activity/guidelines.htm
13 American Community Survey, Table B01003: Total Population: 5-Year Estimates
14 American Community Survey, Table B15003: Educational Attainment for the Population 25 years and over: 5-Year Estimates
15 Source: American Community Survey, Table B03002: Race: 5-Year Estimates
16 Source: American Community Survey, Table B19301: Per Capita Income in the Last 12 Months: 5-Year Estimates
17 Source: American Community Survey, Table S1701: Poverty Status in the Past 12 Months
18 County Health Rankings. University of Wisconsin Population Health Institute and Robert Wood Johnson Foundation.
19 County Health Rankings. University of Wisconsin Population Health Institute and Robert Wood Johnson Foundation.
20 Source: American Community Survey, Table B08301: Means of Transportation to Work: 5-Year Estimates
21 Source: American Community Survey, Table B08141: Means of Transportation to Work by Vehicles Available: 5-Year Estimates
22 NACTO, Urban Bikeway Design Guide, Second Edition.
23 https://news.stonybrook.edu/oncampus/winners-announced-in-inaugural-wolf-ride-bike-share-challenge/
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27 http://www.pedbikesafe.org/PEDSAFE/countermeasures.cfm
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29 https://ahettrail.org/wp-content/uploads/2019/12/AHET-Trail-Maintenance-Plan-Final-12-30-19.pdf
30 Hall, Ryan. Posted September 7, 2017. "As Students Return to School, Analysis Identifies Most Dangerous Roads for Walking and Biking on Long Island." http://blog.tstc.org/2017/09/07/as-students-return-to-school-analysis-identifies-most-dangerous-roads-for-walking-and-biking-on-long-island/ (Original Data Source used for Mr. Hall's Article: https://newsite.tstc.org/resources/were-walking-and-biking-here/)